Cencon Version 5 System Reference Manual

Kaba Mas Welcome

Kaba Mas, part of the world-wide Kaba group, is the world's leading manufacturer and supplier of high security, electronic safe locks. Its complete line of self-powered, battery, and mechanical locks meets virtually every safe lock requirement. Kaba Mas is dedicated to satisfying end-user needs for security, safety, and convenience. We welcome you to the world of Kaba Mas security and Cencon®.

Manual Conventions

Trademarks

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Release Notes 4.1.1

Release Notes 4.1.2

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Firmware Release Notes

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Manual Conventions

The Cencon Reference Manual is a comprehensive guide that contains information on the procedures you need to work with Cencon locks. This manual provides detailed information on Cencon features and step-by-step procedures for using the software. Some conventions that are followed are:

- The Smart Keys needed for a particular operation will be shown beside the flowcharts that describe the operation.
- The screens shown in the manual that speak to inserting a key in a reader may depict either the use of the 2-port USB Key Box or the 4-port Key Reader in association with the PCI card.
- Input to the PC will be shown in **bold type**.
- The screen samples may not look exactly as they do on your system depending on which version of the Windows operating system you are using. Some samples in this document are from Windows XP and some are from Windows Vista.
- Highlighted items:

Note
Indicates a point to consider.

Important Note
Indicates information that is very important to know.

Helpful Hint
Indicates a technique or method that works well.

Caution
Indicates the need for care and caution to be observed during a procedure or process.

Warning
Indicates the possibility of loss of data or system integrity.

Before reading the Cencon Getting Started Guide, you should be familiar with basic Windows concepts and techniques. For detailed information, refer to your Windows documentation.

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Cencon Version 5 System Reference Manual

Cencon / CenTran Release Notes

Version 4.1.0

Notes

- Translation of different versions of Cencon has to be completely redone. There are potential changes to the resource files and to the XML string translation files that will not be correct or compatible between different versions of Cencon.

General Operations

- **Changes / New Features**

    - Replaced outdated DemoShield CD installation interface with HTML based installer.

    - Added Cencon main screen icon and report menu item to open URL for Kaba Mas web site technical support.

    - Added Favorites group to Cencon main screen. Support is provided to drag-drop icons to and from the Favorites group, or to add and delete icons using a right click menu on the icon.

    - Added attempt to search for an existing Cencon database installation under the selected database catalog, and if one is found, it will fill in the user option for the database schema. This is to help prevent customers from becoming confused about database schema.

    - Added check during startup of application to determine if the full version of the .NET 4 framework is correctly installed on the host system. Displays a warning if not installed and exits before attempting to load libraries from the .NET 4 framework.

- **Fixed Issues**

    - Corrected operation of various keyboard hot key accelerator operations.

    - Corrected check for a valid database before giving the user the opportunity to create the first user logon.

    - Eliminated flickering from Cencon main frame form.

    - Corrected display issue during database checks and logon. Dialogs were potentially hidden behind database check status form.

    - Corrected slow load times of 64 bit application versions.

    - Corrected MapPoint sessions not started by Cencon being closed when Cencon is closed.

User Operations

- **Changes / New Features**

    - Added search items for users to the 'Find Users' dialog of the Cencon User Operations report:

        - Added search item for users who have exceeded their permitted total number of lock dispatches.
        - Added search item for user dispatch enabled starting date and ending date range.
        - Added search item for user key model.
        - Added search item for user is legacy import flag.

    - Added button to generate a random combination for Bank Mode users to the 'Add a New User' dialog.

    - Revised database operations for renaming a user to no longer require the internal creation of a temporary user while renaming a user. The database manipulation for renaming a user has been set up in a stored procedure called CENPWDV4_1_CHANGE_USERID for efficiency.

    - Added new table column: Is Legacy Import

      This is a flag indicating that the lock is an import from a legacy version of Cencon, such as the CenBank 4 software. If a bank mode user key is marked as being a legacy import, then reinitialization of the bank mode user key is not permitted, as security data unavailable from the legacy system would be lost.

- **Fixed Issues**

  - Corrected drop down list in 'Add a New User' dialog showing disabled roles. Disabled roles are no longer shown in the drop down for user type in the 'Add a New User' dialog.
  - Restricted users to performing query of the user, user history, or user archive tables to querying only roles for which they are authorized. Previously a blank query would result in users from other roles.
  - When using Change Multiple Users to edit region, region control is active, and one or more special supervisors is being affected, a warning is displayed that setting the region will not affect special supervisors.
  - Added additional check to ReInitKey form to check for legacy CenBank keys being reinitialized without available correct security data (not available for import from CenBank). This is based on the Is Legacy Import flag being set for the user.
  - Corrected initial placement of Create First Logon Form when first displayed.
  - Corrected memory leak of database object not being cleaned up in Create First Logon Form.
  - Fixed errors with restoring Windows logon users from the User History Report to the active user table.

- **Open Issues**

  - The User Operations report sort of the user type is based off of the numeric security level identifier for the user. The user role is not being used in the sort. This is to be changed in a following version of Cencon / CenTran.

<div align="center">

Lock Related Functions

</div>

- **Changes / New Features**

  - Added operation to display the routes containing the selected lock to the Lock Operations report and Lock report.
  - Added new table columns to the Lock database table:

    - Time Zone - This is the time zone that the lock was initialized to. Previously this value was not saved when a lock was initialized with a daylight savings time table.
    - Low Battery Date - This is the date/time that a close seal was received that indicated that the Cencon Gen 2 lock had a low clock battery. It is cleared upon receiving close seal indicating that the Cencon Gen 2 lock no longer has a low clock battery.
    - Duress Date - This is the date/time that a close seal was received that indicated that the Cencon Gen 2 lock had been opened under duress. It is cleared upon receiving close seal indicating that the Cencon Gen 2 lock was not opened under duress.
    - Is Legacy Import - This is a flag indicating that the lock is an import from a legacy version of Cencon, such as the CenBank 4 software.
  - Added the following fields to the Lock report:

    - Address 1
    - Address 2
    - City
    - State / Province
    - Postal Code
    - Country
    - Time Zone
    - Low Battery Date - This is the date/time that a close seal was received that indicated that the Cencon Gen 2 lock had a low clock battery. It is cleared upon receiving close seal indicating that the Cencon Gen 2 lock no longer has a low clock battery.
    - Duress Date - This is the date/time that a close seal was received that indicated that the Cencon Gen 2 lock had been opened under duress. It is cleared upon receiving close seal indicating that the Cencon Gen 2 lock was not opened under duress.
    - Is Legacy Import - This is a flag indicating that the lock is an import from a legacy version of Cencon, such as the CenBank 4 software.

- Added support for dynamically setting the lock name the same as the lock serial number while filling out fields in the 'Activate Lock' dialog.
- Removed support for lock groups.
- Added support for bank mode users to be independently set for different locks on one SA key while filling out fields in the 'Activate Lock' dialog. Optionally, the bank mode users can still be all set the same for the locks in the 'Activate Lock' dialog.
- Added dedicated 'Select User' dialog for use when browsing for a user, instead of making use of the User Operations report.
- In the 'Activate Locks' dialog, if the bank branch selection is changed and a bank mode lock is currently selected to edit the properties, the bank user selection tab will be brought to the front.
- Added Google Maps and Bing Maps as available options for mapping lock locations.
- Added search items for locks to the 'Find Locks' dialog of the Lock Operations / Lock report:

  - Added search item for lock time zone ID.
  - Added search item for lock is legacy import flag.
- Added 'Print' operation to the Shelve Locks dialog. This will create an HTML based Lock Summary report which can be used to save or print the locks set up for being shelved along with the dispatched user combinations.

- **Fixed Issues**

  - Made 'Add to Route' operation work the same as 'Add to Collection'. The selected lock is added to the open route lock list if one is open, otherwise the 'Select Route' dialog is displayed.
  - The 'Activate Locks' dialog browse for user operation should not show DS1963 based lock users if a Gen 1 lock is in the list of locks being activated. This has been corrected.
  - The 'Activate Locks' dialog message displaying the bank key limits properly displays the available number based off of the lock model.

    - Gen 1 lock: "You can add __ more bank users with a total limit of 32".
    - Gen 2 lock: "You can add __ more bank users with a total limit of 100."
  - The 'Add Users to Bank Locks' dialog no longer adds more users than is allowed for the lock when selecting 'Add All'. Additionally a message at the bottom of the dialog displays the available number based off of the lock model.

    - Gen 1 lock: "You can add at most __ more bank mode users to the lock." with a total limit of 32.
    - Gen 2 lock: "You can add at most __ more bank mode users to the lock." with a total limit of 100.
  - The 'Activate Locks' dialog lock activation in single mode grays out the second user entry text box and browse button, if the selected lock mode being activated is in single mode.
  - The 'Verify Shelve Locks' dialog now displays the number and mode of locks shelved in the same manner as the 'Activate Locks' dialog shows locks activated.
  - The 'Export Locks to XML' dialog now displays the number and mode of locks exported in the same manner as the 'Activate Locks' dialog shows locks activated.
  - The 'Activate Locks' dialog now dynamically updates data in the lock list as the user enters in data for the currently selected lock.
  - Allowing the dispatch of a DS1963 user key to a Gen 1 lock for activating or shelving a lock has been corrected.
  - The Lock Serial Communications Audit report now saves its location and size for next time it is opened.
  - The Lock Dispatch, Reassign, and Close dialogs are all now resizable, due to screen resolution issues when remoting in from a separate system in Windows.
  - Locks with international addresses will correctly map using the Google, Bing, and MapQuest options. Added proper support for Country portion of lock address. If you are using the Microsoft MapPoint software, that software only supports specific areas depending on the version purchased.
  - Changed usage of the user's combination count. This value is now dynamically updated based off of the currently dispatched locks. If any of the following operations are done affecting a user, the user's combination count will automatically be corrected:

    - Dispatch

- Reassign
- Close
- Force Delete
- Restored Delete
- Replace
- Undo Replace
- Unassign
- Force Close

- Corrected operation for updating descriptive data for a lock not also updating the data in open lock log records. This could result in left over references to Regions and Customer IDs in the open lock log that does not match the lock. The referenced Regions and Customer IDs could not be renamed or deleted until the lock was closed out.

- Lock Report, Open Lock Report, and Collection Lock Reports don't give user any prompts before adding locks to a route, which must have its lock listing open. These now prompt like Lock Operations now.

- Show only DS1994 key users in selection list for Shelve Locks form when Gen1 lock is being shelved. Reject in Shelve Locks form processing DS1963 users selected for dispatch to shelve locks that include a Gen1 lock.

- Corrected dispatch issue with route lock report dispatching to the wrong route name if it was open to another route previously to the current one.

- The following lock operations were not properly checking the dispatch limit from the user authorizations for the user being dispatched for the operation:

  - Activate
  - Update Activate
  - Shelve

- When shelving a lock, if the FLM key that your attempt to dispatch to is disabled, you will get a message stating 'Shelve Successful' but it will then fail for the key not being active. This has been corrected.

- Corrected display of menu items based off of authorizations for current user. Restricted users were being displayed some menu items that they were not authorized to use.

- Corrected unauthorized lock modes from being displayed in the various lock reports. Previously if a user was not authorized to query for a certain lock mode, and they did not specify a lock mode in their search criteria, they would see all the lock modes. This is now limited to just what lock modes the user is authorized for.

- Fixed unassigned Open Call specification does not cause the Flags tab to be painted in lock searches.

- Fix incorrect column sorts in Log History, and Log Archive reports.

- Added scrollbars to remote serial connect tab pages.

- Fixed Deleted Lock History table context menu had Undo Replacement for unauthorized users.

- Fixed issue with Close Lock form not closing a lock with the close seal unless the lock was looked up from the database first. The close seal was being cleared when just the lock serial number and the close seal was entered, and Close was selected. The entered close seal is now being read from the form before attempting to look up the lock and update the form.

- Fixed an error with the calculation of memory space needed for activating locks on a single red SA (DS1996) key. If more locks were selected than the key would hold, the data written to the key to activate the locks would be corrupted.

- Corrected issue with removing locks from Activate Lock dialog lock list while the list is scrolled resulting in an error.

- **Open Issues**

  - If an existing shelved lock serial number is selected as a replacement lock, the Replace Lock operation is not automatically delete the shelved entry for the replacement lock and place it in the lock history table. Instead, it displays a warning, and the shelved entry has to be manually deleted before proceeding.

  - A database deadlock can occur if two database operations involving the route lock table occur within 2-3 milliseconds of each other. This issue is being evaluated. One of the operations will fail, and the matching database transaction be rolled back. The work around is to retry the failed operation. This should occur very infrequently, due to the timing required.

- The Microsoft MapPoint Europe / North America mapping option is not supported by the 64 bit version of the Cencon software. The Microsoft MapPoint software is only available in 32 bit. A 64 bit version is not currently available.

Lock Collection Operations

- **Changes / New Features**

  - Added menu options to Lock Collections report that were available from the Lock Operations Report, to include:

    - Add To Route
    - Rename Lock
    - Add Users to a Bank Mode Lock
    - Remove Users from a Bank Mode Lock
    - Initialize a Key to Resynchronize Lock (Gen2)
    - Cancel a Resynchronize Lock Operation (Gen2)
    - Resynchronize the Database with Lock Data (Gen2)

  Additionally, menu separators were added to be more consistent with other lock reports.
  - Added search filter to Lock Collections report.
  - Implemented search filter to be able to query Lock Collections report, as well as search based off of data related to the locks contained by the different lock collections.

- **Fixed Issues**

  - In the Collection Listing report, you had to manually refresh the report to see the locks that were added to the collection. This has been changed to automatically refresh the report when a lock is added to the collection.

Route Operations

- **Changes / New Features**

  - Added search filter to Route and Archived Route reports.
  - Implemented search filter to be able to query the Route and Archived Route reports, as well as search based off of data related to the locks contained by the different routes.
  - Added support for restoring multiple routes at a time from the Archived Route Report.
  - Added support for restoring multiple routes from archive in Route Archive report.

- **Fixed Issues**

  - Corrected Route Listing Report row selection with mouse left down click toggling selection upon left up click.
  - Corrected error with archiving routes. The error was related to route names that had SQL control characters in them, and had to be re-parsed.
  - Corrected consistency of operations menu and context menu.
  - Corrected left up click toggling row selection in Route Listing report.
  - Fixed Route Selection dialog for adding locks to a route did not resize it's controls correctly when the dialog was resized.
  - Fixed Cencon Lock Serial Communications form not remembering position between times it is opened.

Region Operations

- **Changes / New Features**

  - Added search filter to Region report.

Bank Branch Operations

- **Changes / New Features**

o Added search filter to Bank Branch report.

<div align="center">**Customer Operations**</div>

- **Fixed Issues**

  o Change icon on customer information modified message to informational from warning.

<div align="center">**Reporting Operations**</div>

- **Changes / New Features**

  o Fields in the key report for a bank user key that do not apply have been removed:

    ▪ Combinations Currently Dispatched
    ▪ Total Number of Combinations Issued
    ▪ Maximum Number of Allowed Combinations
    ▪ User Enabled Starting Date

  o Added column headers to tab delimited and CSV text file export.
  o Updated the way searches for lock modes can be conducted, to allow combinations of different lock modes to be searched for.
  o Color coded search dialog page tabs to indicate if a tab has a search selection made. Search Dialog Tabs with a search selection made are shaded green.
  o A new feature to do statistical analysis of the activity log and archived activity log has been added, under a new icon named Reporting. This can be used to generate statistics and graphs on the following types of events:

    ▪ Dispatches
    ▪ Force Delete of Unshelved Lock
    ▪ Manager Force Close w/o Seal
    ▪ Lock Activations
    ▪ Lock Shelves

- **Fixed Issues**

  o Updated Edit menu between different reports for consistency of user interface. The arrangement of menu items in the Edit menu was not consistent between reports.
  o Disabled copy menus if no row or rows are selected in a report.
  o When a report or other dialog was minimized, and the icon for the report or dialog was selected from the Cencon main screen, the report or dialog would remain minimized. This has been corrected. If an icon for a report or dialog is selected, and that item is already open but minimized, the report or dialog will be brought back up to the front.
  o Key Report for Lock Time Set Key has been updated to match formatting used by Lock Serial Communications Audit report.
  o Corrected report 'File->Save' vs. 'File->Save As' behavior. 'File->Save' would always work as 'File->Save As'. This has been corrected.
  o Display of time values now indicates if the time was during DST.
  o Changed Audit, Audit Archive, Lock Log History, Archived Lock Log History, Deleted Lock History, User History, Archived User History and Archived Route search pull downs to use information from the selected table. It was possible for regions, customers, etc, to be referenced in the history tables that have since been deleted.
  o Fixed sort order for search form drop-downs that get their information from individual tables and removed extraneous blank entry.
  o Changed search forms that are used for more than one report to display the help for the appropriate report.
  o Corrected how report menu items are updated, so that opening menus by sliding the cursor over or by using the arrow keys works properly.

Fixed issue with sort of description field in Audit Report and Audit Archive Report not being intuitive.

- Corrected sort by customer number being present in some reports, where that column is no longer displayed.
- Corrected closing an archive dialog with the close button closing the parent report.
- Changed the Key Report to display lock audit dumps even if there is invalid data. The invalid audit records are highlighted in yellow.

- **Open Issues**

  - The Audit report and Archived Audit reports sort the description field based off of the event type. This is due to the description field being dynamically generated based off of the event type. The description field is not an actual database field.

<p align="center">Authorizations</p>

- **Changes / New Features**

  - Added a Category column to the Authorization Definition report. The Authorization Definition report now displays Name, Type, and Category.

- **Fixed Issues**

  - Performance improvements have been made to the 'Add Operations to Role' dialog. The method used by the dialog to query data from the Cencon database was inefficient, and this has been corrected.
  - 'Edit Operation Data' is now disabled for operations that do not have any settings to be edited. The Close FLM / Route operation and Dispatch FLM / Route operation are the only ones that can be edited.
  - There is not a separate Authorization Operation for creating a Windows Logon User, rather than a key based user.

<p align="center">CenTran</p>

- **Changes / New Features**

  - CenTran will now multi-thread incoming transaction processing. If multiple transactions are awaiting processing, they will be processed simultaneously. This greatly improves performance if multiple transactions are being sent from different sources.
  - Modified XML parsing used in CenTran to cache pre-parsed schema, instead of re-parsing it with each received file. This reduces the overhead of the XML processing of received transactions, and improves performance.
  - Added support for new lock table fields in CenTran transactions and schema:

    - Time Zone
    - Low Battery Date - This is the date/time that a close seal was received that indicated that the Cencon Gen 2 lock had a low clock battery. It is cleared upon receiving close seal indicating that the Cencon Gen 2 lock no longer has a low clock battery.
    - Duress Date - This is the date/time that a close seal was received that indicated that the Cencon Gen 2 lock had been opened under duress. It is cleared upon receiving close seal indicating that the Cencon Gen 2 lock was not opened under duress.
    - Is Legacy Import - This is a flag indicating that the lock is an import from a legacy version of Cencon, such as the CenBank 4 software.

  - Added support for new user table fields in CenTran transactions and schema:

    - Is Legacy Import - This is a flag indicating that the lock is an import from a legacy version of Cencon, such as the CenBank 4 software.

  - Added check during startup of application to determine if the full version of the .NET 4 framework is correctly installed on the host system. Displays a warning if not installed and exits before attempting to load libraries from the .NET 4 framework.

- **Fixed Issues**

  - Corrected case insensitivity issue for Region, CustomerID, and Bank Branch name in CenTran transactions.

Changed CenTran to look up and use the database's representation of Region, Customer ID, and Bank Branch Names when updating user, lock, and route records. This ensures that the text case matches the other entries in the database.

- Corrected error with CenTran force close on Close Route operation. Corrected IfForcedClosed value being properly converted from XML input, to accept either 1 or 'true' as valid.

- Corrected the LED usage for prompting for keys.

- Corrected issue with ASCII extended data values being invalid for XML data output by CenTran.

- Fixed issue with zero length files being left in the input queue. These files are now automatically deleted after the specified timeout for processing received files.

- Corrected unauthorized lock modes from being returned in the various lock table queries. Previously if a user was not authorized to query for a certain lock mode, and they did not specify a lock mode in their search criteria, they would see all the lock modes. This is now limited to just what lock modes the user is authorized for.

CenconDBSetupUtility

- **Changes / New Features**

  - Added attempt to search for an existing Cencon database installation under the selected database catalog, and if one is found, it will fill in the user option for the database schema. This is to prevent customers from becoming confused about database schema, and attempting multiple database setups under different schema.

  - Will now re-set up database table default column values and default constraints. If a default column constraint is not set up correctly on the Cencon database, it will set it up.

  - Now has the option to resize the database files used for the selected database catalog. This is to improve performance, rather than having multiple resize events occur during database operations.

  - Added both 32 Bit and 64 Bit versions of the CenconDBSetupUtility to the install disk. There were performance differences between the two versions, depending on the type of operating system the host computer was.

  - Greatly improved performance of setting audit event strings in the Audit / Audit Archive tables. This was through the addition of an Audit Event Name table (CENAUDEVENTNAME), which maps audit event codes to audit event names.

  - Added support for User Configuration table (CENPWDCONFIG). This table is used for user specific configuration settings.

  - Added support for new database views and indexes to support new Cencon / CenTran functionality.

    - Authorization Operation Name / Authorization Definition View and Index
    - User / Lock Log Dispatch Index

  - Added support for correcting additional possible invalid data values:

    - Invalid Region references.
    - Invalid Customer references.
    - Duplicate User Key Serial Number records.
    - Duplicate User ID records.
    - Duplicate Lock Log records.
    - Duplicate Region records.
    - Duplicate Customer records.
    - Setting Customer ID references that are spaces to NULL.
    - Setting Region references that are spaces to NULL.

  - Added reporting support for new tables and views.

  - Added support to the import of data from legacy file formats for Cencon and CenBank to set a flag **Is Legacy Import** on imported users and locks. This is a flag indicating that the lock is an import from a legacy version of Cencon, such as the CenBank 4 software. If a bank mode user key is marked as being a legacy import, then reinitialization of the bank mode user key is not permitted, as security data unavailable from the legacy system would be lost.

  - Added check during startup of application to determine if the full version of the .NET 4 framework is correctly installed on the host system. Displays a warning if not installed and exits before attempting to load libraries from the .NET 4

framework.

- Added support to remove leading / trailing spaces from string fields that are used in indexes.
- Changed user interface when selecting database catalog to display dropdown list of catalogs for selection, instead of being typed in.
- Added support for displaying what constraints were dropped / added.
- Added support to automatically configure the ODBC connection with the created catalog.

- **Fixed Issues**

  - Added check during startup of application to determine if the full version of the .NET 4 framework is correctly installed on the host system. Displays a warning if not installed and exits before attempting to load libraries from the .NET 4 framework.
  - Modified check for Cencon database version in the CenconDBSetupUtility to correctly check build level of the database.
  - Added check in CenconDBSetupUtility to prevent maintenance option from being run on a non-matching version database.
  - Changed creation of schema to match usage of schema in Microsoft SQL 2005 and later. A database schema is no longer required to be associated with a user.
  - Corrected incompatibility with using a case sensitive database collation on the selected Microsoft SQL database. The database might or might not be case sensitive, depending on the selected database collation.
  - Corrected error with import of legacy users in CenconDBSetupUtility. Password was being incorrectly encrypted, even though blank.
  - Modified CenconDBSetupUtility to require admin privileges to allow ODBC connections to be set up correctly.
  - Corrected issue with CenBank imports allowing blank user names. Added support to CenconDBSetupUtility to generate automatic name if left blank from legacy CenBank software.

CenconDriverInstaller

- **Changes / New Features**

  - Updated installation of 32 Bit / 64 Bit Cencon Key Box and Cencon PCIO card driver versions to 10.21.
  - Added check during startup of application to determine if the full version of the .NET 4 framework is correctly installed on the host system. Displays a warning if not installed and exits before attempting to load libraries from the .NET 4 framework.

- **Open Issues**

  - The driver installer does not upgrade the previous Cencon Key Box / Cencon PCIO card driver versions 10.10 to 10.21. The Cencon / CenTran software maintains compatibility back to driver version 10.10.

CenconDBEstimator

- The Cencon Database Estimator has been removed from the Cencon / CenTran 4.1 installation as being unneeded.

Documentation

- **Fixed Issues**

  - Fixed titles on pages in the History section and Appendices of the Reference manual.

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Cencon / CenTran Release Notes

Version 4.1.1

Lock Related Functions

- **Changes / New Features**

    - Updated lock serial numbers for Cencon Gen 2 locks to the following lock ranges:

Lock Serial Number Start	Lock Serial Number End
1	105299
662227	670000
680001	700099
847704	850000
875224	877499
937001	939999
941000	4 billion

Locks that do not fall into these ranges of locks are Cencon Gen 1 locks.

Cencon Gen 2 locks are color coded on the reports in Cencon. Light blue indicates a fully activated Gen 2 lock. Light gray indicates a Cencon Gen 2 lock activated as Cencon Gen 1 lock.

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Cencon / CenTran Release Notes

Version 4.1.2

CenTran Related Functions

- **Changes / New Features**

    - Changed CenTran validation to allow use of a 0000 company number.

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Cencon / CenTran Release Notes

Version 4.1.3

Lock Related Functions

- **Fixed Issues**

    - Modified database access to correct possible database deadlock while updating the lock dispatch log table. This involved a change to how record locking was being done during dispatch, reassign, and close database transactions. Also modified the Cencon database view CENPWD_LOGDISPATCH to be set as WITH (NOLOCK) to prevent the view from causing unnecessary locking with operations unrelated to the user dispatches.

    - Modified database access to improve performance over a wide area network. This primarily affects wait times for loading drop down menus.

    - Modified the lock shelve, shelve from pending shelve, force shelve, delete, and force delete operations to remove entries for the affected lock from any routes.

Route Operations

- **Fixed Issues**

    - Corrected Route Lock Report properly displaying the route name in the title and on printed reports. The route name was not being displayed. The route name is now added to the default title for the Route Lock Report for display of the report and for printing. The default title is first, then a dash separator, and then followed by the route name.

Cencon Version 5 System Reference Manual

Cencon / CenTran Release Notes

Version 4.1.5.2580 (BETA)

Notes

- Translation of different versions of Cencon has to be completely redone. There are potential changes to the resource files and to the XML string translation files that will not be correct or compatible between different versions of Cencon.

General Operations

- **Changes / New Features**

    - Removed usage of groups with locks. The group field has been replaced by using regions.
    - Removed customer number from display in various dialogs. The customer number field usage has been replaced by customer name.
    - Updated tool tips for user entry in various dialogs.
    - Added support for using an Oracle database management system to host a Cencon database.
    - Removed separate definition of database schema and catalog in database connection settings.

- **Fixed Issues**

    - Corrected various issues with import of legacy files from previous version of Cencon and Cenbank software.
    - Corrected field length limits for user entry in various dialogs.
    - Corrected various issues with support for translation.

User Operations

- **Changes / New Features**

    - Added bank user search on find lock forms.

- **Fixed Issues**

    - Fixed allowing spaces in bank user ID in add new user dialog.
    - Fixed allowing spaces in bank combination in add new user dialog.
    - Changed Windows authentication based logon users to be upper case for better compatibility with case sensitive database installations, such as Oracle.
    - Fixed search window to display lock serial number as a search field.

Lock Related Functions

- **Fixed Issues**

    - Fixed lock serial numbers not having leading zeros out to 6 or 9 digits, depending on serial number size.
    - Fixed importing xml files issue about users and user locks not being correctly inserted.
    - Added UI fixes to Import XML file including clear form.
    - Fixed search window to display Userid as a search field.

Route Operations

- **Fixed Issues**

    - Fixed problem with restoring a deleted route.

Region Operations

- **Fixed Issues**

    - Changed Regions to only be upper case for better compatibility with case sensitive database installations, such as Oracle.

Bank Branch Operations

- **Fixed Issues**

    - Fixed underscores allowed in bank branch dialog.

CenTran

- **Changes / New Features**

    - Changed CenTran to operate as a Windows service.
    - Added management support for CenTran through a HTML5/CSS3 web interface.
    - Added an web service implementation for CenTran, with a subset of functionality from the XML file transactions.
    - Added support for remote administration of a Cencon Gen 2 or higher lock across a network. These functions are used by CenTran Agent services installed at ATMs for managing attached Cencon locks.

CenTran Configuration Manager

- **New Product**

    - The CenTran Configuration Manager is installed with the CenTran service to facilitate installing, starting, stopping, and uninstalling the CenTran service. It is used to assist users in managing the CenTran service, where CenTran no longer has a direct user interface.

CenTran Agent

- **New Product**

    - The CenTran Agent is a Windows service for installation at ATMs. It supports communications with a Cencon Gen 2 or higher lock connected by USB to the ATM console computer. It supports the following functions:
        - Remote management of the Gen 2 lock across the ATM communications network.
        - Notification of events occurring at the Cencon Gen 2 or higher lock to installed ATM software.
        - Reading current lock status upon command from installed ATM software.
        - Notification of events occurring at the Cencon Gen 2 or higher lock to a CenTran web service to update the Cencon database with the audit of events.
        - Automatic closure of dispatched calls in the Cencon database by accessing a CenTran web service.

CenconDBSetupUtility

- **Changes / New Features**

    - Added support for using an Oracle database management system to host a Cencon database.
    - Added various user interface enhancements and additional data checking.
    - Regions are folded to upper case.
    - Userids are folded to upper case.
    - Empty routes are deleted.
    - Remove duplicate regions
    - Duplicate Userids are deleted.

User must be database server admin to run db setup utility.

CenconDriverInstaller

- **Changes / New Features**

    ○ Added support for the Cencon USB Interface Box driver installation.

    ○ Added support for a silent driver installation, to support the Cencon Agent silent installation.

- **Open Issues**

    ○ The driver installer does not upgrade the previous Cencon Key Box / Cencon PCIO card driver versions 10.10 to 10.21. The Cencon / CenTran software maintains compatibility back to driver version 10.10.

Documentation

- **Changes / New Features**

    ○ Added documentation for Cencon Gen 2 Swing Bolt lock.

Cencon Version 5 System Reference Manual

Cencon / CenTran Release Notes

Version 4.1.5.2722 (BETA)

Notes

- Translation of different versions of Cencon has to be completely redone. There are potential changes to the resource files and to the XML string translation files that will not be correct or compatible between different versions of Cencon.

General Operations

- **Changes / New Features**

    - Completely rewrote the Cencon reports under the .NET user interface libraries. The Cencon reports had been implemented under the Microsoft Foundation Classes (MFC) for user interface. The change to using .NET allowed for better error reporting from within the Cencon reports. The reports were the last Cencon user interface item to still be using the older Microsoft Foundation Classes (MFC).
    - Added support for Oracle to require only a limited access logon. Database access to Oracle no longer supports a separate schema, by customer request. The ODBC database access to Oracle must be using a default schema that contains the Cencon database.

- **Fixed Issues**

    - Corrected some user interface issues for adding locks to new routes and new collections.
    - Various small user interface corrections.

Lock Related Functions

- **Changes / New Features**

    - Added support for displaying network address column for locks in various reports, including search and sort support.
    - Added support for additional ranges of Gen 2 lock serial numbers under a million:

Lock Serial Number Start	Lock Serial Number End
1	105299
662227	670000
680001	700099
847704	850000
875224	877499
937001	939999
941000	4 billion

    Any lock serial numbers over a million automatically indicate a Cencon Gen 2 lock, and are not compatible with software prior to Cencon / CenTran 4.0.
    Note - This change was also included in the Cencon / CenTran 4.1.1 patch release.

- **Fixed Issues**

    - Corrected issue with replace lock. The flag for unassigned was not being cleared on new lock being added to the database, if the lock being replaced was unassigned.

Route Operations

- **Fixed Issues**

o Added foreign key to Route Lock table in Cencon database to ensure data integrity.

Activity Log Operations

- **Changes / New Features**

    o Added support for searching by event type.

CenTran

- **Changes / New Features**

    o Added support for Lock Log Query Operations under web service:
        ▪ Read lock log data by lock name / mode.
        ▪ Read lock log data by lock serial number / mode.
        ▪ Query lock log data.
        ▪ Query lock log data count.
        ▪ Query lock log history data.
        ▪ Query lock log history data count.
        ▪ Query lock log archive data.
        ▪ Query lock log archive data count.
    o Added web service handler for cross domain browser request headers.
    o Changed web service calls to POST as appropriate, instead of GET, for proper implementation of REST model of web service.
    o Added dedicated web service end point for CenTran Agent support, to operate at a lower level of authentication.
    o Added initial HTTPS support for web service access using security certificates for encryption.
    o Added example configuration files for setting up CenTran operations to install.
    o Implemented CenTran support for outputting lock combinations in a format suitable for display.
    o Added support for Oracle to require only a limited access logon. Database access to Oracle no longer supports a separate schema, by customer request. The ODBC database access to Oracle must be using a default schema that contains the Cencon database.

- **Fixed Issues**

    o Fixed check to installer HTA files to evaluate if CenTran installer had already been run.
    o Corrected an issue with CenTran reading an excessive number of lock audit records to evaluate events at a lock over remote communications. This fix speeded up how fast the lock events are evaluated.

CenTran API

- **Changes / New Features**

    o Added support for User Name / Password based authentication.
    o Added support for Windows Active Directory based authentication.

CenTran Configuration Manager

- **Changes / New Features**

    o Added initial support for creating self signed certificates for easy configuration of CenTran secure communications across HTTPS.

CenTran Agent

- **Changes / New Features**

- Added statistics support for number of bytes sent to / received from the lock.

CenTran Web Client Template

- **New Product**

    - Adds HTML based client interface for CenTran web service operations. This is used as a light weight web browser replacement for Cencon. The intent is to facilitate customer integration of CenTran into their business systems through a web browser interface. This is an initial partial implementation of this product, to be distributed on the CenTran installation CD.
    - Provided support for transactions not supported by CenTran web service as CenTran file based transactions. This is implemented using a proxy through the deployed web server. The web server has to be co-located with CenTran for this to operate correctly.
    - Adds a Javascript API for support the CenTran web service transactions.

CenconDBSetupUtility

- **Changes / New Features**

    - Added additional reporting of DBMS driver and operating system.
    - Added support for Oracle to require only a limited access logon. Database access to Oracle no longer supports a separate schema, by customer request. The ODBC database access to Oracle must be using a default schema that contains the Cencon database.

Documentation

- **Changes / New Features**

    - Updated Cencon documentation for user interface changes.
    - Updated Cencon / CenTran Getting Started Guide with Oracle support changes.
    - Removed PDF versions of older documentation.
    - Updated CenTran Getting Started Guide for changes in setup with certificates.

Cencon Version 5 System Reference Manual

Cencon / CenTran Release Notes

Version 4.1.5.2769 (BETA)

Notes

- Translation of different versions of Cencon has to be completely redone. There are potential changes to the resource files and to the XML string translation files that will not be correct or compatible between different versions of Cencon.

General Operations

- **Changes / New Features**

  - Added Oracle instantclient drivers to Cencon / CenTran installation.

- **Fixed Issues**

  - Corrected overly long string copy operations into limited size fields possibly resulting in an exception under Cencon / CenTran.

Lock Related Functions

- **Fixed Issues**

  - Corrected error with activation of Cencon Gen 2 lock with serial number under a million being activated using a red SA key. The wrong combination was being dispatched, as for a Cencon Gen 1 lock instead of a Cencon Gen 2 lock. This error was only present in the Cencon / CenTran 4.1.5.2722 Beta. It was not present in previous versions.

CenTran

- **Changes / New Features**

  - Enable CenTran to use a key box managed by the Cencon Key Box Agent.

  - Added additional field to result record for transactions to indicate if a failed transaction was appropriate to be retried or not. This is for support of the CenTran Agent operations at an ATM.

  - Added file based support and web service support for the following transactions:
    - Add user key based on specified remote communications to a Cencon USB Key Box
    - Edit user key based on specified remote communications to a Cencon USB Key Box
    - Read user key based on specified remote communications to a Cencon USB Key Box
    - Delete User

  - Added file based support for the following transactions:
    - Query Lock Status Across Network
    - Query Lock Audits Across Network
    - Evaluate Lock Event Across Network

    These items were previously only available under web service based transactions.

  - Added web service support for the following transactions:
    - Change User Name
    - Read User Data By Name
    - Read User Data By Key Serial Number
    - Update User Data

    These items were previously only available under file based transactions.

  - Changed fields for identifying lock remote communications access to allow support for future alternate methods of

connecting.

- **Fixed Issues**

    - Updated CenTran schema because of ip addresses being passed by anyURI data type was not being validated.
    - Removed CenTran support for changing Bank Mode user bank branch. This would invalidate the data on the user's key.
    - Added support directly under CenTran for automatically setting up URL access control list registration.
    - Added support directly under CenTran for automatically setting up SSL certificate registration.
    - Added metadata line to CenTran HTML management interface to not go into configuration mode when accessed by Internet Explorer in intranet.

CenTran API

- **Changes / New Features**

    - Added support for new transactions to match CenTran.
    - Changed fields for specifying lock remote communications to match CenTran.

CenTran Configuration Manager

- **Fixed Issues**

    - Removed usage / support for NCrypt encryption library due to compatibility requirement back to Windows Server 2003. This limits the self signed certificate creation to older encryption libraries, which is not as secure. The requirement to continue to support Windows Server 2003 was by customer request.
    - Updated CenTran Configuration Manager to open CenTran browser URL for management interface based on certificate name set.

CenTran Agent

- **Changes / New Features**

    - Added support for additional field in result record for transactions to indicate if a failed transaction was appropriate to be retried or not.

CenTran Keybox Agent

- **New Product**

    - Service to support remote CenTran access to a Cencon USB Keybox across a network.

CenTran Web Client Template

- **Changes / New Features**

    - Added Lock Report and Route Report web client support.

CenconDriverInstaller

- **Changes / New Features**

    - Updated to Jungo driver level 11.0.0 for support of USB devices. This replaces Jungo driver level 10.2.1 from previous releases of Cencon / CenTran. This driver can not be used by earlier releases of software. This software release requires the install / update of the Jungo driver. Note - An update to the Jungo driver level 11.1.0 for the next release is pending.
    - The updated Jungo driver level 11.0.0 adds Windows 8 compatiblity, as well as various bug fixes.

Documentation

- **Changes / New Features**

  - Updated the CenTran Programming Guide to match the new transactions for User Key transactions, etc.
  - Updated Cencon / CenTran Getting Started Guide Oracle documentation.

Cencon Version 5 System Reference Manual

Cencon / CenTran Release Notes

Version 4.1.5.2810 (BETA)

Notes

- Translation of different versions of Cencon has to be completely redone. There are potential changes to the resource files and to the XML string translation files that will not be correct or compatible between different versions of Cencon.

General Operations

- **Fixed Issues**

  - Corrected report titles not being printed from reports.

  - Corrected issue where main Cencon window remained on top of various report windows, such as Lock Report and User Operations.

  - Corrected .NET 4 launch condition requirement for install for Cencon 32/64 bit. This was improperly set to .NET 3.5 SP1.

  - Added the install file for updating operating system Root Certificate Authority cerficates to TrustedRootCAUpdates directory on the install image for support of driver installation on legacy or out of date operating systems.

Lock Related Functions

- **Fixed Issues**

  - Modified database SQL operations to avoid database deadlocks for lock dispatch, reassign, close, assign, and unassign. Also modified database view for user number of lock dispatches with log table to avoid database deadlocks. Evaluation of database deadlocks for Oracle is still pending for a following beta release.

  - Updated database SQL operations to use a forward only cursor when possible to improve wide area network operations. Evaluation of forward only cursors with Oracle is still pending for a following beta release.

Route Operations

- **Fixed Issues**

  - Corrected force shelve lock, force delete lock, serial shelve lock, shelve lock and shelve pending lock operations not removing the affected lock from entries in the route lock table.

CenTran

- **Changes / New Features**

  - Added support for using named pipe to communicate configuration settings with the CenTran service. The user interface for the CenTran Configuration Manager has been updated to include all of the CenTran management operations. Note - This provides an alternate method of managing CenTran, instead of using the CenTran web management interface. Due to SSL not working correctly on Windows Server 2003, the web management interface is not available.

- **Fixed Issues**

  - Corrected CenTran threads for web service support not immediately cleaning up web service objects upon thread closing. Web service objects were being cleaned up upon thread object finalizer, which would occur later.

  - Corrected default values for event log limit for CenTran. The correct values are a limit of 50000 entries with a granularity of 1000 entries for truncating the event log.

  - Corrected .NET 4 launch condition requirement for install for CenTran 32/64 bit. This was improperly set to .NET 3.5 SP1.

o Updated CenTran usage of SQL compact for event logging to version SQL Compact 4 SP1

CenTran Configuration Manager

- **Changes / New Features**

  o Added support for using named pipe to communicate configuration settings with the CenTran service. The user interface for the CenTran Configuration Manager has been updated to include all of the CenTran management operations. Note - This provides an alternate method of managing CenTran, instead of using the CenTran web management interface. Due to SSL not working correctly on Windows Server 2003, the web management interface is not available.

  o Added support for limited self signed certificates to be generated for compatiblity with Windows Server 2003. Note - SSL for Windows Server 2003 is not operating correctly with the limited certificates available to be generated on Windows Server 2003.

CenTran Agent

- **Fixed Issues**

  o Corrected CenTran Agent install so it is for all users.

Cencon Keybox Agent

- **Fixed Issues**

  o Corrected Cencon Keybox Agent install so it is for all users.

CenconDriverInstaller

- **Changes / New Features**

  o Updated to Jungo driver level 11.1.0 for support of USB devices. This replaces Jungo driver level 10.2.1 and 11.0.0 from previous releases of Cencon / CenTran. This driver can not be used by earlier releases of software. This software release requires the install / update of the Jungo driver.

  o The updated Jungo driver level 11.0.0 and 11.1.0 adds Windows 8 compatiblity, as well as various bug fixes.

Documentation

- **Changes / New Features**

  o Added release notes for Cencon / CenTran 4.1.3 branch release to ongoing beta release.

  o Updated CenTran Getting Started Guide with updated user interface for managing CenTran.

- **Fixed Issues**

  o Added missing image file for Cencon Getting Started Guide documentation for database setup.

Cencon Version 5 System Reference Manual

Cencon / CenTran Release Notes

Version 4.1.5.2818 (BETA)

Notes

- Translation of different versions of Cencon has to be completely redone. There are potential changes to the resource files and to the XML string translation files that will not be correct or compatible between different versions of Cencon.

General Operations

- **Changes / New Features**

    - Expiration of BETA releases:

    Cencon now recognizes a fixed life for a beta release of 180 days after the date of creation by Kaba Mas. Upon Cencon beta expiration, Cencon logon will be prohibited. Cencon will warn the user of impending beta expiration via popup messages.

    CenTran now recognizes a fixed life for a beta release of 180 days after the date of creation by Kaba Mas. Upon CenTran beta expiration, audit records reporting the CenTran beta expiration will be generated at CenTran startup.

Lock Related Functions

- **Fixed Issues**

    - Corrected operation to set time for a lock across a network not updating the lock record with a changed time zone id.

CenTran

- **Changes / New Features**

    - Added support for using a local system named pipe to communicate with the CenTran service. This is to support applications running on the same computer as the CenTran service, with minimal configuration required. The CenTran API has been updated to support this communications method.

    Note: CenTran web service transactions that are HTTP GET operations will default to the default dispatcher ID when operating across a named pipe, as there is not a field to pass the dispatcher ID. This will be re-examined in a future release.

    - Added support for the following remote lock management transactions to CenTran and the CenTran API:

        - Remote Lock Activate
        - Remote Lock Add Users
        - Remote Lock Delete Users
        - Remote Lock Shelve
        - Remote Lock Set Time
        - Remote Lock Set Single Dual Access
        - Remote Lock Resynchronize Dispatching
        - Remote Lock Resynchronize Users
        - Remote Lock Reboot

- **Fixed Issues**

    - Corrected evaluation of CenTran's check for security data being correct. The reason for the security information not being set up correctly was not being correctly identified.

- **Fixed Issues**

  - Corrected the method by which the named pipe for communications of configuration data to CenTran was being opened and closed. The named pipe communications were not being closed properly and were timing out.
  - Corrected CenTran Configuration Manager not updating the display of data after setting the default dispatcher.

Cencon Version 5 System Reference Manual

Cencon / CenTran Release Notes

Version 4.1.5.2829 (BETA)

Notes

- Translation of different versions of Cencon has to be completely redone. There are potential changes to the resource files and to the XML string translation files that will not be correct or compatible between different versions of Cencon.

General Operations

- **Changes / New Features**

  - Enabled double buffering on Cencon .NET DataGridView based reports to improve repaint performance.

CenTran

- **Changes / New Features**

  - Added support for the read key transaction to update the returned user record with the data as read from the key.
  - Added support for the read key transaction to return the user audit records from the key. Note: These audit records are a different format from the audit records being returned from the Cencon audit table or the lock.
  - Added support for the following user table query transactions to CenTran web service and the CenTran API. Note: These user table query transactions were previously only supported by XML file based operations.

    - User Table Query
    - User Table Query Count
    - User History Table Query
    - User History Table Query Count
    - User Archive Table Query
    - User Archive Table Query Count

  - Added additional support for CenTran BETA expiration:

    When a transaction is initiated in a BETA version of CenTran that is within 60 days of expiration, an entry will be posted to the Cencon database audit table and to the event log stating that the CenTran BETA installation is near expiration.

    When a transaction is initiated in a BETA version of CenTran that is past the BETA expiration date, an entry will be posted to the Cencon database audit table and to the CenTran event log stating that the CenTran BETA installation has expired. The requested transaction will be halted and a return code indicating failure due to the CenTran BETA expiration will be returned to the transaction initiator.

- **Fixed Issues**

  - Corrected a runtime error from occurring when displaying the Event Log via the CenTran Configuration Manager after the remote transaction "Set Lock Time Across Network" has been executed against a shelved lock.
  - Corrected the html links being generated as part of the CenTran RSS Feed for lock events / errors.

CenconDBSetupUtility

- **Changes / New Features**

  - Added primary key to legacy configuration database table for support of hot database backups.
  - Added primary key to log archive database table for support of hot database backups.

Cencon Version 5 System Reference Manual

Cencon / CenTran Release Notes

Version 4.1.5.2849 (BETA)

Notes

- Translation of different versions of Cencon has to be completely redone. There are potential changes to the resource files and to the XML string translation files that will not be correct or compatible between different versions of Cencon.

General Operations

- **Changes / New Features**

    - Cencon Lock Operations report will automatically refresh and display the correct status after the Verify Shelve Locks action.
    - Cencon reports can be refreshed using the F5 key.
    - Ctrl-F will initiate the Find function on Cencon reports.

CenTran

- **Changes / New Features**

    - Added support to CenTran to accept and use persistent agent connections. This is to avoid network connectivity issues with clients running a Cencon Keybox Agent or an ATM console computer running a CenTran ATM Agent being behind a firewall.
    - Added support for CenTran to check BETA expiration dates of CenTran ATM Agents and Cencon Keybox Agents.
    - Added support for the following route transactions to CenTran web service and the CenTran API. Note: These route transactions were previously only supported by XML file based operations.

        - Add a Route
        - Read a Route
        - Update a route
        - Delete a Route
        - Add Locks to a Route
        - Read Locks on a Route
        - Delete Locks from a Route
        - Dispatch All Locks on a Route
        - Dispatch Locks on a Route
        - Reassign All Locks on a Route
        - Reassign Locks on a Route
        - Close Locks on a Route
        - Route Table Query
        - Route Table Query Record Count
        - Route Lock Table Query
        - Route Lock Table Query Record Count

    - Added support for the following activity log transactions to CenTran web service and the CenTran API. Also added support for additional search fields with activity log table searches. Note: These activity log transactions were previously only supported by XML file based operations.

        - Activity Log Table Query

- Activity Log Table Query Record Count
- Activity Log Archive Table Query
- Activity Log Archive Table Query Record Count

- Added support for the following region transactions to CenTran web service and the CenTran API. Note: These region transactions were previously only supported by XML file based operations.

  - Region Table Query
  - Region Table Query Record Count

- **Fixed Issues**

  - Corrected update route correctly auditing changing a route customer ID.

  - Corrected web service search of log and lock tables not checking the mode restrictions for the user authorization to restrict what mode of lock data is returned.

  - Corrected file based transactions not checking the following user authorization attributes:
    - Current dispatcher for transaction authorization role not having log on authorization set.
    - Current dispatcher for transaction being disabled from logging on.
    - Current dispatcher for transaction being outside of their enabled start / end period for access.

  - Failed transactions were not always being audited. Several instances of this have been corrected.

  - Corrected an error with the lock sequence being used incorrectly when closing a lock dispatched on a route under the web service processing. This error did not affect closing locks using file transaction processing.

  - Corrected CenTran API not returning the record counts correctly from user table query record count transactions.

  - Corrected the default dispatcher ID set for use with CenTran having to be upper case for use with Oracle.

CenTran Agent

- **Changes / New Features**

  - Added support to initiate and maintain a persistent network connection with CenTran. This is to avoid network connectivity issues with the client being behind a firewall.

Cencon Keybox Agent

- **Changes / New Features**

  - Added support to initiate and maintain a persistent network connection with CenTran. This is to avoid network connectivity issues with the client being behind a firewall.

Cencon Version 5 System Reference Manual

Cencon / CenTran Release Notes

Version 4.1.5.2954 (BETA)

Notes

- Translation of different versions of Cencon has to be completely redone. There are potential changes to the resource files and to the XML string translation files that will not be correct or compatible between different versions of Cencon.

General Operations

- **Changes / New Features**

    - Added support for caching dialog combobox drop down data at Cencon startup. All drop down selections of region, bank branch, and customer entries now have a button beside of them in dialogs to refresh the cached data as needed.
    - Updated dialog box drop downs for region, customer id, and bank branch to allow typing with suggestions from the list of possible items. Users with very large sets of data were having problems selecting items due to the size of the drop down list.
    - Made database query speed tuning improvements for sets of strings, to improve performance of retrieving large lists of strings from the database. This affects the loading of dialogs.
    - Improved performance of database checks at Cencon startup, by making them operate in parallel (multi-threaded) to hide network latencies for the individual database queries for checking each table. Each database table check operates in it's own thread.
    - Changed versioning of Cencon Reference Manual and CenTran 4 Programming Guide documentation to be versioned based off of the program version.
    - Added text description of error codes to Cencon audit report record description display.
    - Added javascript fix for frame index scroll positon when reloading documentation page for Cencon Reference and CenTran programming guide.
    - Removed upper case SQL constraint for Cencon database region table.

Lock Related Functions

- **Changes / New Features**

    - Added support for Cencon Remote Shelve Change Key database configuration setting to control if a change key is required to be in the lock for a remote shelve to be done. This is to require that some is at the lock for the lock to be remotely shelved. This affects the remote shelve operation in Cencon and the remote shelve transaction in CenTran.
    - A lock can now be added to the Shelve Locks dialog via the use of a search dialog. Additional locks can now be added to the list of the Shelve Locks dialog after the initial selection of locks. The Shelve Locks dialog is now accessible from the Locks section of the main Cencon panel.

- **Fixed Issues**

    - Updated database query used during lock dispatch operations to correctly get the user dispatched combo count for from the log table, without interfering with table locking.
    - Modified Cencon so that the Key Report for an SA shelve key with multiple locks, written in old versions of Cencon, will display all locks.
    - Modified Cencon so the Key Report for an SA "init/shelve/add bank user/delete bank user" key will display the correct value for the "Number of Locks On Key" value, even when multiple locks are contained on the SA key.
    - Fixed missing lock reboot after serial close of FLM mode lock from Cencon Lock Serial Communications dialog.
    - Modified Cencon so that on the Activate dialog, the Branch Users column of the Bank Users tab in the Activate Locks dialog will be refreshed when either the Region or the Bank Branch Name fields are changed.

- o Modified Cencon so that:

    - On the key report for SA Shelve Key, the title for the column reporting the action date and time is labeled as Lock Shelve Date instead of Lock Activation Date.
    - On the key report for SA Initialization and Shelve Keys, the date and time reported for the action performed at each lock is now accurate.

- o Modified the Cencon lock rename function so that locks assigned to a route can be renamed.

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Caution

The CenTran XML Schema (CentranTransac.xsd) has grown larger than the previous default namespace buffer sizes used by the CenTran web service. The example configuration files for CenTran have been modified to demonstrate setting up the needed buffer sizes used by the CenTran web service.

If you are using a previous CenTran configuration file, you will need to adjust the specified buffer sizes in the same manner as the new example configuration files, or use one of the new example configuration files and adjust as needed.

</div>

CenTran

- **Changes / New Features**

    - o Added support for Cencon Remote Shelve Change Key database configuration setting to control if a change key is required to be in the lock for a remote shelve to be done. This is to require that some is at the lock for the lock to be remotely shelved. This affects the remote shelve operation in Cencon and the remote shelve transaction in CenTran.

    - o Moved CenTran service named pipe configuration from being internally set up in a fixed manner to being set up under configuration file.

    - o Added support for the following query transactions to CenTran web service and the CenTran API:

        - Authorization Definition Query
        - Authorization Definition Query Count
        - Authorization Operation Name Query
        - Authorization Operation Name Query Count
        - Authorization Role Query
        - Authorization Role Query Count
        - Bank Branch Query
        - Bank Branch Query Count
        - Customer Query
        - Customer Query Count

    - o Added support for the following data management transactions to CenTran web service and the CenTran API:

        - Bank Branch Add
        - Bank Branch Update
        - Bank Branch Read
        - Bank Branch Delete
        - Customer Add
        - Customer Update
        - Customer Read
        - Customer Delete

- Region Add
- Region Update
- Region Read
- Region Delete

- Added support for the following key transactions to CenTran web service and the CenTran API:

  - Read Key Information

- Added support for the following lock management transactions to CenTran web service and the CenTran API:

  - Delete Shelved Lock

- Added support for the following lock remote management transactions to CenTran web service and the CenTran API:

  - Set Lock Open Delay Window Across Network

- Removed overwrite flag option on Customer Add as being unnecessary.

- **Fixed Issues**

  - The buffer sizes for the CenTran web service had to be adjusted due to the size of the CenTran XML schema. See the above warning note about the CenTran configuration files having to define larger buffer sizes for the CenTran web service.
  - Made connection pool threads stop more gracefully and completely (stop open TCP connections and clear connection pool thread pointers).
  - Corrected errors with Bank Branch back end functions, including incorrect check for authorization.
  - Added fault reporting for exceptions for the CenTran web service. Previously there would not be a web service response containing defails of the fault.
  - Corrected manner that XML validation was being done between threads in CenTran. The previous manner of sharing the xml reader settings was unsafe. Sharing the xml schema set is thread safe. Changed XML validation for files to use Microsoft XML parser.
  - Removed duplicate code for CenTran processing of dispatcher authorization.
  - Corrected audits created for error for updating lock.
  - Corrected audits created for error for unassigning lock.

CenTran Agent

- **Changes / New Features**

  - Frame the agent details structure sent to CenTran by the agents to allow us to know whether the transmission failed.
  - Update CenTran Agent and Cencon Key Box Agent documentation to switch from frames to using CSS.
  - Added CenTran persistent connection information to CenTran Agent installation documentation.
  - Enable changing of persistent connection parameters in the CenTran Agents with the change configuration command and display with the agent status command.

- **Fixed Issues**

  - Ensure that the CenTran and Cencon Key Box Agents wait for a device to be attached, so they know when to open their pass-through ports.
  - Fix connection-closed check in pass-through processing for agents that was not being called frequently enough.
  - Added proper key box agent screen shots, delete unused images and update documentation for all three agents.

CenTran Agent for .Net 3.5

- **Changes / New Features**

  - Made the .NET 3.5 CenTran Agent reinstaller script check whether the driver needs to be replaced.
  - Change .NET 3.5 CenTran Agent documentation to use CSS rather than frames for left-side navigation

- **Fixed Issues**

    - Ensure that the CenTran and Cencon Key Box Agents wait for a device to be attached, so they know when to open their pass-through ports.

    - Fix connection-closed check in pass-through processing for agents that was not being called frequently enough.

    - Added proper key box agent screen shots, delete unused images and update documentation for all three agents.

Cencon Keybox Agent

- **Changes / New Features**

    - Frame the agent details structure sent to CenTran by the agents to allow us to know whether the transmission failed.

    - System tray application displays the persistent connection identifier for the key box agent.

    - Made the install/service activation functions atomic for the key box agent.

    - Replace the Cencon Key Box Agent System Tray Monitor icon with one that actually looks like a key box.

    - Add a Programs menu entry for starting the Cencon Key Box System Tray Monitor on installation.

    - Update CenTran Agent and Cencon Key Box Agent documentation to switch from frames to using CSS.

- **Fixed Issues**

    - Ensure that the CenTran and Cencon Key Box Agents wait for a device to be attached, so they know when to open their pass-through ports.

    - Fix connection-closed check in pass-through processing for agents that was not being called frequently enough.

    - Added proper key box agent screen shots, delete unused images and update documentation for all three agents.

Cencon API

- **Fixed Issues**

    - Updated CenTran SOAP API to have client connection clean up in function to handle possible exception occurring.

    - Corrected error with XML validation error list not being cleared between calls to CenTran API.

CenTran XML Input Output Example

- **Changes / New Features**

    - Update CentranXMLInputOutputExample to allow the specification of TcpClient connections for remote lock and key box operations.

    - Added support for new transactions as described above for CenTran.

Cencon Database Setup Utility

- **Fixed Issues**

    - Corrected CenconDBSetupUtility not properly handling non default schema for Microsoft SQL database.

    - Change table names used in uppercasing Windows logon IDs in CenconDBSetupUtility to include schema qualification as appropriate for database.

Cencon Version 5 System Reference Manual

Cencon / CenTran Release Notes

Version 4.1.5.3097

Notes

- Translation of different versions of Cencon has to be completely redone. There are potential changes to the resource files and to the XML string translation files that will not be correct or compatible between different versions of Cencon.

General Operations

- **Changes / New Features**

    - Added support for Oracle to require only a limited access logon. Database access to Oracle no longer supports a separate schema, by customer request. The ODBC database access to Oracle must be using a default schema that contains the Cencon database.

    - Added Oracle instantclient drivers to Cencon / CenTran installation.

    - Completely rewrote the Cencon reports under the .NET user interface libraries. The Cencon reports had been implemented under the Microsoft Foundation Classes (MFC) for user interface. The change to using .NET allowed for better error reporting from within the Cencon reports. The reports were the last Cencon user interface item to still be using the older Microsoft Foundation Classes (MFC).

    - Removed usage of groups with locks. The group field has been replaced by using regions.

    - Removed customer number from display in various dialogs. The customer number field usage has been replaced by customer name.

    - Updated tool tips for user entry in various dialogs.

    - Added support for using an Oracle database management system to host a Cencon database.

    - Removed separate definition of database schema and catalog in database connection settings.

    - Cencon reports can be refreshed using the F5 key.

    - Ctrl-F will initiate the Find function on Cencon reports.

    - Updated database SQL operations to use a forward only cursor to improve wide area network operations. This improves performance and allows compatibility with newer Microsoft runtime libaries for Windows 8. Because of using forward only database cursors, large reports on Cencon that do not fit into memory can not be scrolled through to load records as needed. Only the initial set of records that could fit into the client system memory will be loaded and can be accessed.

    - Improved threading of Cencon reports to allow simultaneous report operations.

    - Made database query speed tuning improvements for sets of strings, to improve performance of retrieving large lists of strings from the database. This affects the loading of dialogs.

    - Improved performance of database checks at Cencon startup, by making them operate in parallel (multi-threaded) to hide network latencies for the individual database queries for checking each table. Each database table check operates in it's own thread.

    - Added support for caching dialog combobox drop down data at Cencon startup. All drop down selections of region, bank branch, and customer entries now have a button beside of them in dialogs to refresh the cached data as

needed.

- Updated dialog box drop downs for region, customer id, and bank branch to allow typing with suggestions from the list of possible items. Users with very large sets of data were having problems selecting items due to the size of the drop down list.

- Expiration of BETA releases:

  Cencon now recognizes a fixed life for the Version 4 beta release of 180 days after the date of creation by Kaba Mas. Upon Cencon beta expiration, Cencon logon will be prohibited. Cencon will warn the user of impending beta expiration via popup messages.

  CenTran now recognizes a fixed life for the Version 4 beta release of 180 days after the date of creation by Kaba Mas. Upon CenTran beta expiration, audit records reporting the CenTran beta expiration will be generated at CenTran startup.

- Corrected compatibility issue with Microsoft SQL DATETIME format. This would only occur with French set as the language for SQL Server system messages and French_CI_AI set as the database collation. This may be a potential Microsoft SQL server bug.

- **Fixed Issues**

  - Corrected various issues with import of legacy files from previous version of Cencon and Cenbank software.
  - Corrected field length limits for user entry in various dialogs.
  - Corrected various issues with support for translation.
  - Corrected overly long string copy operations into limited size fields possibly resulting in an exception under Cencon / CenTran.
  - Corrected report titles not being printed from reports.
  - Corrected .NET 4 launch condition requirement for install for Cencon 32/64 bit. This was improperly set to .NET 3.5 SP1.
  - Added the install file for updating operating system Root Certificate Authority cerficates to TrustedRootCAUpdates directory on the install image for support of driver installation on legacy or out of date operating systems.
  - Enabled double buffering on Cencon .NET DataGridView based reports to improve repaint performance.
  - Corrected Cencon main window not receiving user focus when application is first being run.

- **Known Issues**

  - There is a possibility of a database deadlock when using Oracle as your Database Management System (DBMS). This can possibly occur if multiple database operations are happening simultaneously from multiple Cencon clients or from CenTran with multiple simultaneous transactions. This will be resolved in the next software release. Note - Previous database deadlock issues involving Microsoft SQL have been resolved in this release.

User Operations

- **Changes / New Features**

  - Added bank user search on find lock forms.
  - Added lines to the user key report for legacy FLM, Route and Bank keys to indicate the time the key was read and the amount of drift.

- **Fixed Issues**

  - Fixed allowing spaces in bank user ID in add new user dialog.
  - Fixed allowing spaces in bank combination in add new user dialog.
  - Changed Windows authentication based logon users to be upper case for better compatibility with case sensitive database installations, such as Oracle.

Lock Related Functions

- **Changes / New Features**

  - Added support for displaying network address column for locks in various reports, including search and sort support.
  - Added support for additional ranges of Gen 2 lock serial numbers under a million:

Lock Serial Number Start	Lock Serial Number End
1	105299
662227	670000
680001	700099
847704	850000
875224	877499
937001	939999
941000	4 billion

    Any lock serial numbers over a million automatically indicate a Cencon Gen 2 lock, and are not compatible with software prior to Cencon / CenTran 4.0.

    Note - This change was also included in the Cencon / CenTran 4.1.1 patch release.

  - Added support for Cencon Remote Shelve Change Key database configuration setting to control if a change key is required to be in the lock for a remote shelve to be done. This is to require that some is at the lock for the lock to be remotely shelved. This affects the remote shelve operation in Cencon and the remote shelve transaction in CenTran.
  - A lock can now be added to the Shelve Locks dialog via the use of a search dialog. Additional locks can now be added to the list of the Shelve Locks dialog after the initial selection of locks. The Shelve Locks dialog is now accessible from the Locks section of the main Cencon panel.

- **Fixed Issues**

  - Fixed lock serial numbers not having leading zeros out to 6 or 9 digits, depending on serial number size.
  - Fixed importing xml files issue about users and user locks not being correctly inserted.
  - Added UI fixes to Import XML file including clear form.
  - Fixed search window to display Userid as a search field.
  - Fixed search window to display lock serial number as a search field.
  - Corrected some user interface issues for adding locks to new routes and new collections.
  - Corrected issue with replace lock. The flag for unassigned was not being cleared on new lock being added to the database, if the lock being replaced was unassigned.
  - Modified database SQL operations to avoid database deadlocks for lock dispatch, reassign, close, assign, and unassign. Also modified database view for user number of lock dispatches with log table to avoid database deadlocks. Evaluation of database deadlocks for Oracle is still pending for a following release.
  - Corrected operation to set time for a lock across a network not updating the lock record with a changed time zone id.
  - Cencon Lock Operations report will automatically refresh and display the correct status after the Verify Shelve Locks action.
  - Updated database query used during lock dispatch operations to correctly get the user dispatched combo count for from the log table, without interfering with table locking.
  - Modified Cencon so that the Key Report for an SA shelve key with multiple locks, written in old versions of Cencon, will display all locks.
  - Modified Cencon so the Key Report for an SA "init/shelve/add bank user/delete bank user" key will display the correct value for the "Number of Locks On Key" value, even when multiple locks are contained on the SA key.

- Fixed missing lock reboot after serial close of FLM mode lock from Cencon Lock Serial Communications dialog.
- Modified Cencon so that on the Activate dialog, the Branch Users column of the Bank Users tab in the Activate Locks dialog will be refreshed when either the Region or the Bank Branch Name fields are changed.
- Modified Cencon so that:

    - On the key report for SA Shelve Key, the title for the column reporting the action date and time is labeled as Lock Shelve Date instead of Lock Activation Date.
    - On the key report for SA Initialization and Shelve Keys, the date and time reported for the action performed at each lock is now accurate.

- Modified the Cencon lock rename function so that locks assigned to a route can be renamed.
- Fixed a issue with remote communications to the Cencon Gen 2 lock. The check for the Cencon Gen 2 lock being available for doing remote communications was sometimes timing out. Additionally, the delayed responses from previous checks with the lock were being interpreted as errors in communications. The communications timeout for checking for the Cencon Gen 2 lock responding has been extended and any delayed responses are now being handled correctly.
- Fixed possible serial communications exception with Cencon / CenTran with the lock, where the lock network connection can be occupied by another application connecting at the same time as Cencon / CenTran.
- Fixed Cencon serial resync bank users operation with the Lock Serial Operations form from trying to download users from lock with 0 users, causing exception in the progress bar.
- Changed the serial activate of lock to save state of lock if fails to receive response for activate from lock. If the lock receives the command but the connection prevents the response from being received by Cencon / CenTran, the lock might actually be activated. If not, the lock can be deleted back from the database. If the lock was actually activated, the user is not locked out from the lock.
- The remote serial shelve of the lock was not allowing a shelve if the lock was dispatched. Fixed serial shelve of lock to also close the lock if it is dispatched. If the option to require a change key or remote administration enabled at the lock is selected in Cencon / CenTran, then the lock must have been dispatched and opened in order to insert the change key or to enable remote administration.

Route Operations

- **Fixed Issues**

    - Fixed problem with restoring a deleted route.
    - Added foreign key to Route Lock table in Cencon database to ensure data integrity.
    - Corrected force shelve lock, force delete lock, serial shelve lock, shelve lock and shelve pending lock operations not removing the affected lock from entries in the route lock table.

Activity Log Operations

- **Changes / New Features**

    - Added support for searching by event type.
    - Added text description of error codes to Cencon audit report record description display.

Bank Branch Operations

- **Fixed Issues**

    - Fixed underscores allowed in bank branch dialog.

CenTran

- **Changes / New Features**

    - Changed CenTran to operate as a Windows service.
    - Added an web service implementation for CenTran, matching the XML file transactions. This web service implementation supports HTTPS operations for REST and SOAP protocol web service calls. It also supports local named pipe communications. The web service authenticates users based off of either user name / password or windows authentication.

        The setup of the CenTran web service is done primarily by editing the CenTran configuration file. The configuration file defines the web service endpoints and settings to be used by CenTran.

        Setup of self signed security certificates for CenTran is supported by the CenTran Configuration Manager, however use of a certificate authority server is recommended.

        The CenTran service continues to support XML file transactions and legacy file transactions.

    - Added management support for CenTran through a HTML5/CSS3 web interface.
    - Added RSS support for the CenTran web service for being notified of lock errors.
    - Added support for using named pipe to communicate configuration settings with the CenTran service. The user interface for the CenTran Configuration Manager has been updated to include all of the CenTran management operations. Note - This provides an alternate method of managing CenTran, instead of using the CenTran web management interface. Due to SSL not working correctly on Windows Server 2003, the web management interface is not available.
    - Implemented CenTran support for outputting lock combinations in a format suitable for display.
    - Added support for Oracle to require only a limited access logon. Database access to Oracle no longer supports a separate schema, by customer request. The ODBC database access to Oracle must be using a default schema that contains the Cencon database.
    - Added file based support and web service support for the following user transactions:

        - Add user key based on specified remote communications to a Cencon USB Key Box
        - Edit user key based on specified remote communications to a Cencon USB Key Box
        - Read user key based on specified remote communications to a Cencon USB Key Box
        - Read key information based on specified remote communications to a Cencon USB Key Box
        - Delete User

    - Added support for the read key transaction to update the returned user record with the data as read from the key.
    - Added support for the read key transaction to return the user audit records from the key. Note: These audit records are a different format from the audit records being returned from the Cencon audit table or the lock.
    - Added support for remote administration of a Cencon Gen 2 or higher lock across a network. Added support for the following remote lock management transactions to CenTran and the CenTran API:

        - Query Lock Status Across Network
        - Query Lock Audits Across Network

- Evaluate Lock Event Across Network
- Remote Lock Activate
- Remote Lock Add Users
- Remote Lock Delete Users
- Remote Lock Shelve
- Remote Lock Set Time
- Remote Lock Set Single Dual Access
- Remote Lock Set Lock Open Delay Window
- Remote Lock Resynchronize Dispatching
- Remote Lock Resynchronize Users
- Remote Lock Reboot

- Added support for Cencon Remote Shelve Change Key database configuration setting to control if a change key is required to be in the lock for a remote shelve to be done. This is to require that some is at the lock for the lock to be remotely shelved. This affects the remote shelve operation in Cencon and the remote shelve transaction in CenTran.

- Added support for the following lock management transactions to CenTran web service and the CenTran API:

    - Delete Shelved Lock

- Added support for the following bank branch transactions to CenTran and the CenTran API:

    - Bank Branch Query
    - Bank Branch Query Count
    - Bank Branch Add
    - Bank Branch Update
    - Bank Branch Read
    - Bank Branch Delete

- Added support for the following region transactions to CenTran and the CenTran API:

    - Region Add
    - Region Update
    - Region Read
    - Region Delete

- Removed overwrite flag option on Customer Add as being unnecessary.

- Added the following additional fields to the output lock records:

    - NetworkAddress
    - NetworkPort
    - DisplayIssuedComboUser1Seq1
    - DisplayIssuedComboUser1Seq2
    - DisplayIssuedComboUser1Seq3
    - DisplayIssuedComboUser2Seq1
    - DisplayIssuedComboUser2Seq2
    - DisplayIssuedComboUser2Seq3
    - CloseSealLength
    - BankModeUserNameArray

- Added the following additional fields to the output audit records:

    - GroupName
    - Description

- auditPK
- User1Key
- User2Key
- LogonKey
- LockTransactionCategory
- LockTransactionType
- LockTransactionEvent
- LockCloseSeal
- LockFullSealCount
- IsLockClockBatteryIsLow
- IsLockDuressComboUsed
- IsLockCloseSealValid
- LockAbbreviatedDeviceID
- LockOpenTime
- LockCloseTime
- IsPossibleLockErrorOrIntrusion
- LockAuditIndex
- DatabaseLockAuditIndex
- ClientIPAddress
- LockIPAddress

Many of these additional fields is to support saving remotely network connected lock audit trails in the Cencon database.

- Added support for Cencon Gen 2 Locks being dispatched, reassigned, and closed using the CenTran legacy binary file transactions. This is limited to identifying locks by lock names that are no longer than 10 characters and do not contain any international characters. Any Cencon Gen 2 Locks with lock serial numbers a million or higher will have their lock serial number reported back as 000000, since the longer serial numbers will not fit within the fields of the legacy binary file transactions.

  See Appendix D of the CenTran 4 Programming Reference Manual for details of using the legacy binary file transactions with Cencon Gen 2 locks.

- **Fixed Issues**

  - Fixed check to installer HTA files to evaluate if CenTran installer had already been run.
  - Corrected an issue with CenTran reading an excessive number of lock audit records to evaluate events at a lock over remote communications. This fix speeded up how fast the lock events are evaluated.
  - Added support directly under CenTran for automatically setting up URL access control list registration.
  - Added support directly under CenTran for automatically setting up SSL certificate registration.
  - Added metadata line to CenTran HTML management interface to not go into configuration mode when accessed by Internet Explorer in intranet.
  - Corrected CenTran threads for web service support not immediately cleaning up web service objects upon thread closing. Web service objects were being cleaned up upon thread object finalizer, which would occur later.
  - Corrected .NET 4 launch condition requirement for install for CenTran 32/64 bit. This was improperly set to .NET 3.5 SP1.
  - Updated CenTran usage of SQL compact for event logging to version SQL Compact 4 SP1
  - Corrected evaluation of CenTran's check for security data being correct. The reason for the security information not being set up correctly was not being correctly identified.
  - Corrected a runtime error from occurring when displaying the Event Log via the CenTran Configuration Manager after the remote transaction "Set Lock Time Across Network" has been executed against a shelved lock.

Corrected the html links being generated as part of the CenTran RSS Feed for lock events / errors.

o Corrected update route correctly auditing changing a route customer ID.

o Corrected web service search of log and lock tables not checking the mode restrictions for the user authorization to restrict what mode of lock data is returned.

o Corrected file based transactions not checking the following user authorization attributes:

  ▪ Current dispatcher for transaction authorization role not having log on authorization set.

  ▪ Current dispatcher for transaction being disabled from logging on.

  ▪ Current dispatcher for transaction being outside of their enabled start / end period for access.

o Failed transactions were not always being audited. Several instances of this have been corrected.

o Corrected CenTran API not returning the record counts correctly from user table query record count transactions.

o Corrected the default dispatcher ID set for use with CenTran having to be upper case for use with Oracle.

o Added fault reporting for exceptions for the CenTran web service. Previously there would not be a web service response containing defails of the fault.

o Corrected audits created for error for updating lock.

o Corrected audits created for error for unassigning lock.

o Corrected CenTran Service startup at computer operating system startup not able to start processing because of not being able to access the database. The CenTran Service will retry to start processing in the event of the database being unreachable, the Cencon Keybox not being ready yet on the USB bus, or the Cencon Keybox not being present.

o Corrected CenTran potentially reading an input transaction file while the file is still being written by the 3rd party application. CenTran will now poll for the input transaction file being available for exclusive access, and then read the transaction file. This allows a much lower delay time to be set for CenTran before attempting to read an input transaction file. It also ensures that an input transaction file is read correctly by CenTran.

o Fixed the Evaluate Lock Event Across Network transaction from preventing access to the key box for other concurrent transactions with CenTran.

o Fixed possible exception from CenTran when cleaning up the remote serial connection for operations with a lock across a network.

CenTran Configuration Manager

- **New Product**

  o The CenTran Configuration Manager is installed with the CenTran service to facilitate installing, starting, stopping, and uninstalling the CenTran service. It is used to assist users in managing the CenTran service, where CenTran no longer has a direct user interface.

  o Added support for using named pipe to communicate configuration settings with the CenTran service. The user interface for the CenTran Configuration Manager has been updated to include all of the CenTran management operations. Note - This provides an alternate method of managing CenTran, instead of using the CenTran web management interface. Due to SSL not working correctly on Windows Server 2003, the web management interface is not available.

  o Added initial support for creating self signed certificates for easy configuration of CenTran secure communications across HTTPS.

  o Added support for limited self signed certificates to be generated for compatiblity with Windows Server 2003. Note - SSL for Windows Server 2003 is not operating correctly with the limited certificates available to be generated on Windows Server 2003.

- **Fixed Issues**

  o Corrected the method by which the named pipe for communications of configuration data to CenTran was being

opened and closed. The named pipe communications were not being closed properly and were timing out.

- ○ Corrected CenTran Configuration Manager not updating the display of data after setting the default dispatcher.

CenTran API

- **Changes / New Features**

  - ○ Added support for new transactions to match CenTran.
  - ○ Added support for CenTran web service across HTTPS / REST, SOAP, and local named pipe.
  - ○ Added support for web service User Name / Password based authentication.
  - ○ Added support for web service Windows Active Directory based authentication.

- **Fixed Issues**

  - ○ Updated CenTran SOAP API to have client connection clean up in function to handle possible exception occurring.
  - ○ Corrected error with XML validation error list not being cleared between calls to CenTran API.

CenTran XML Input Output Example

- **Changes / New Features**

  - ○ Update CentranXMLInputOutputExample to allow the specification of TcpClient connections for remote lock and key box operations.
  - ○ Added support for new transactions as described above for CenTran.

CenTran Web Client Template

- **New Product**

  - ○ Adds HTML based client interface for CenTran web service operations. This is used as a light weight web browser replacement for Cencon. The intent is to facilitate customer integration of CenTran into their business systems through a web browser interface. This is an initial partial implementation of this product, to be distributed on the CenTran installation CD.
  - ○ Provided support for transactions not supported by CenTran web service as CenTran file based transactions. This is implemented using a proxy through the deployed web server. The web server has to be co-located with CenTran for this to operate correctly.
  - ○ Adds a Javascript API for support the CenTran web service transactions.

Cencon Database Setup Utility

- **Changes / New Features**

    - Added support for using an Oracle database management system to host a Cencon database. Added support for Oracle to require only a limited access logon. Database access to Oracle no longer supports a separate schema, by customer request. The ODBC database access to Oracle must be using a default schema that contains the Cencon database.

    - Updated warning for database version. SQL Server 2008 R2 and higher or Oracle 10g and higher is supported. Older database versions are not supported.

    - The User must be database server admin to run CenconDBSetupUtility against Microsoft SQL.

    - Added various user interface enhancements and additional data checking.

    - Windows logon Userids are folded to upper case.

    - Empty routes are deleted.

    - Remove duplicate regions.

    - Duplicate Userids are deleted.

    - Added additional reporting of DBMS driver and operating system.

    - Added primary key to legacy configuration database table for support of hot database backups.

    - Added primary key to log archive database table for support of hot database backups.

- **Fixed Issues**

    - Removed usage / support for NCrypt encryption library due to compatibility requirement back to Windows Server 2003. This limits the self signed certificate creation to older encryption libraries, which is not as secure. The requirement to continue to support Windows Server 2003 was by customer request.

    - Updated CenTran Configuration Manager to open CenTran browser URL for management interface based on certificate name set.

    - Corrected CenconDBSetupUtility not properly handling non default schema for Microsoft SQL database.

    - Change table names used in uppercasing Windows logon IDs in CenconDBSetupUtility to include schema qualification as appropriate for database.

CenconDriverInstaller

- **Changes / New Features**

    - Updated to Jungo driver level 11.1.0 for support of USB devices. This replaces Jungo driver level 10.2.1 and 11.0.0 from previous releases of Cencon / CenTran. This driver can not be used by earlier releases of software. This software release requires the install / update of the Jungo driver.

    - The updated Jungo driver level 11.0.0 and 11.1.0 adds Windows 8 compatiblity, as well as various bug fixes.

Documentation

- **Changes / New Features**

    - Updated Cencon documentation for user interface changes.

    - Updated the CenTran Programming Guide to match the new transactions.

    - Updated Cencon / CenTran Getting Started Guide with Oracle support changes.

Updated CenTran Getting Started Guide with updated user interface for managing CenTran.

- ○ Removed PDF versions of older documentation.
- ○ Updated CenTran Getting Started Guide for changes in setup with certificates.
- ○ Changed versioning of Cencon Reference Manual and CenTran 4 Programming Guide documentation to be versioned based off of the program version.
- ○ Added javascript fix for frame index scroll positon when reloading documentation page for Cencon Reference and CenTran programming guide.
- ○ Added Appendix E - Lock Audit Data to describe the lock audit data returned by CenTran.

- **Fixed Issues**

  - ○ Fixed bad reference links to related lock operations from software operation entries. Added missing references for related Gen 2 Swing Bolt lock operations from software operation entries.

Cencon Version 5 System Reference Manual

Cencon / CenTran Release Notes

Version 5.0.0.3159

Notes

- Translation of different versions of Cencon has to be completely redone. There are potential changes to the resource files and to the XML string translation files that will not be correct or compatible between different versions of Cencon.

General Operations

- **Fixed Issues**

    - Fixed Oracle database possible deadlock issue that could occur under heavy load. Removed CENPWD_LOGDISPATCH database view from usage under Oracle, as it caused deadlocks. Previous Beta versions of Cencon and CenTran used the CENPWD_LOGDISPATCH database view, and will not be compatible with the updated database architecture.

    - Improved database calls used to update user records for dispatch and close. Previously, extraneous columns were also being updated when they did not need to be.

    - Added VC C++ 2005 Runtime install to directories for Oracle Instantclient ODBC driver install, and updated Getting Started Guide documentation to run the VC C++ 2005 Runtime install as part of setting up the Oracle ODBC drivers.

Lock Related Functions

- **Fixed Issues**

    - Export Selected Locks to XML : Summary Report Missing Descriptive Text.
      The Summary Report generated after exporting locks to XML from the Lock Report interface will contain the correct text.
      The word "sucessfully" is changed to "successfully" in several sets of message text.

    - Changed the end time/date specification of the date ranges in the search dialogs for the Cencon functions to be inclusive. This includes the following search dialogs:
        - Open Lock Log
        - Activity Report
        - Archived Activity Report
        - Lock Log History
        - Archived Lock Log History

CenTran

- **Changes / New Features**

    - Added support for returning management information on persistent connections from CenTran Agent services to CenTran.
    - Added support for setting retry flag in response for certain database errors for CenTran evaluate lock event.

- **Fixed Issues**

    - Changed all remote lock reboots to be done only on command. Having remote lock operations potentially reboot the lock interferred with following operations by the CenTran Agent.
    - Added support to CenTran to automatically remove dead agent persistent connections from agent connection pool.
    - Corrected invalid link in CenTran Web RSS Feeds for events for lock serial number.

CenTran Configuration Manager

- **Changes / New Features**

    - Added new tab for displaying persistent connections from CenTran Agent services to CenTran.

CenTran API

- **Fixed Issues**

    - Fixed data missing from REST web service calls for remote lock activate and remote lock delete users.

CenTran Agent

- **New Product**

    - The CenTran Agent service software is used at ATM console computers to monitor the status of the connected Cencon lock, and to handle requests to CenTran to update the status of the connected Cencon lock.
    - Changed operations to not lock reboot after lock status when a lock event is detected.
    - Added control of lock reboot after asking CenTran for lock status or lock event evaluation.
    - Fixed possible clean up issue when shutting down.
    - Introduction of CenTran Agent Programming Guide documentation for ATMs.
    - Fixed startup issue for CenTran Agent from system restart (warm boot), versus starting up from being shut down (cold boot).

CenTran Agent for .NET 3.5

- **New Product**

    - The CenTran Agent service software is used at ATM console computers to monitor the status of the connected Cencon lock, and to handle requests to CenTran to update the status of the connected Cencon lock. The CenTran Agent for .NET 3.5 is compatible with very old ATMs that are still running Windows XP SP2.

    - Introduction of CenTran Agent Programming Guide documentation for ATMs.

Cencon Keybox Agent

- **New Product**

    - The Cencon Keybox Agent service software is used at client computers with a Cencon KeyBox attached, to allow web based interfaces to use CenTran to initialize user keys from a web browser.

Cencon Database Setup Utility

- **Fixed Issues**

    - Fixed Oracle database possible deadlock issue that could occur under heavy load. Removed CENPWD_LOGDISPATCH database view from usage under Oracle, as it caused deadlocks. Previous Beta versions of Cencon and CenTran used the CENPWD_LOGDISPATCH database view, and will not be compatible with the updated database architecture.

Documentation

- **Changes / New Features**

    - Updated various product document numbers and version for version 5.
    - Updated CenTran Getting Started Guide with information on new tab for CenTran Configuration Manager for persistent connections from CenTran Agents.
    - Removed (Beta) label from Web Services chapters of CenTran Programming Guide.
    - Incorporated Cencon recommended practices documents into Cencon Getting Started Guide as appendices.
    - Incorporated CenTran troubleshooting guide document into CenTran Gettting Started Guide as appendices.

Cencon Version 5 System Reference Manual

Cencon / CenTran Release Notes

Version 5.1.0.3303 (BETA)

Notes

- Translation of different versions of Cencon has to be completely redone. There are potential changes to the resource files and to the XML string translation files that will not be correct or compatible between different versions of Cencon.

General Operations

- **Changes / New Features**

    - Added splash screen to indicate progress for the Cencon application startup. Previously, it could take several seconds for the main Cencon screen to display which was potentially confusing.

    - Updated installations of Cencon, CenTran, CenTran Agent, and Cencon Keybox Agents for better handling of services and support for Windows 8 and higher. Removed install driver button from installation splash screen. Driver is automatically installed as part of application install.

- **Fixed Issues**

    - Ignore drag operations in the Cencon main frame that involve a collapsed group. Ignore Shift-F10 context menu requests in the Cencon main frame that involve a collapsed group. This was causing an exception to occur in Cencon.

    - Corrected report display issue of key can type for lock audit keys.

    - Corrected issue with paper size always being reset to letter when printing from Cencon.

    - Updated various exception handling to also report inner exception message. This is for better technical support of issues with Cencon or CenTran.

    - Changed Cencon reports to not use an asynchronous load of report record count for Microsoft SQL databases. This was causing an exception on some systems.

    - Updated Cencon drop down selection list boxes for selection of existing data to properly account for case sensitive vs not case sensitive database configuration.

    - Corrected database query error with Oracle for Lock Collections and Route report. The error involved comparing against fields of the locks within a collection or route.

User Operations

- **Changes / New Features**

    - Added feature to remove a bank user from all locks that user is assigned to, and create the appropriate remove bank user key. Previously the locks had to be determined manually.

- Added User Operations menu to key report toolstrip menu when key is a user key.

Lock Related Functions

- **Changes / New Features**

  - Added support for checking lock audit event dates to determine the correct user name to display. User keys are renamed or deleted and reused. Different user names were assigned to a user key at different points in time. The key serial number from the audit is compared against the active user table as well as the user history table to determine the correct name to display.
  - Added a lock serial communications operation to cancel a dispatch and advance a mode of network connected lock to the next combination. This operation required a firmware change to the lock and is available for Cencon lock firmware version 2.2 or higher.
  - After lock event evaluation from CenTran to a lock across a network, reconcile lock clock with server, if necessary.
  - Add Select Bank Branch form and make available from dialogs where all bank branches are valid through new search icon.

- **Fixed Issues**

  - Region mismatch reported when trying to dispatch imported lock with mixed-case region. Dispatch function now correctly handles Regions of mixed case.
  - Corrected consistency of leading zeros on lock S/N in Cencon. With this change lock serial numbers will be consistently padded in the Cencon user interface to the left with zeros. Serial numbers of less than 6 digits are padded out to 6 digits. Serial numbers less than 9 digits and greater than 6 are padded out to 9 digits.

Bank Branch Operations

- **Changes / New Features**

  - Added new Select Bank Branch dialog. This dialog is available by clicking on a new search icon beside of the bank branch field in various dialogs. The new Select Bank Branch dialog allows an easier selection of a bank branch when dealing with a very large number of possible bank branches. It allows filtering the bank branch selection by assigned customer id. It also allows an improved type ahead operation for suggesting matching bank branches, using the bank branch name, customer name, or bank branch numeric ID.

- **Fixed Issues**

  - Create Bank Branch ID - Incorrectly limited to 4 digits if used for Cencon Gen 2 lock. Confirmed support for bank branch IDs up to 2147483647 in Cencon Interactive Interface and CenTran XML interface. Changes made in both source and user documentation.

Activity Log Operations

- **Changes / New Features**

  - Activity log and archive activity log search did not save network address. With this change, the Network Address and

Lock Mode fields on the search dialog for the Activity Report and Archived Activity Report will be correctly remembered across report sessions.

CenTran

- **Changes / New Features**

    - Legacy binary file transactions:

        > **Warning**
        >
        > Legacy binary file transactions, which were deprecated in CenTran Version 4.1.5, are no longer officially supported as of CenTran Version 5.1.0 and will be removed in a future release. Kaba Mas recommends that any use of the legacy binary file format be migrated to the XML file format as described in the CenTran Version 5 Programming Reference Manual.

    - Added a transaction to cancel a dispatch and advance a mode of a network connected lock to the next combination. This operation required a firmware change to the lock and is available for Cencon lock firmware version 2.2 or higher.

- **Fixed Issues**

    - Corrected unneeded audit record being created by read customer, read region, and read bank branch when the search item is not found.

    - Corrected region comparison for region authorization checks for CenTran to do case insensitive or case sensitive comparison matching the database collation. This affects the region comparison for the following transactions:
        - Add User Key
        - Audit Archive Query
        - Audit Query
        - Change User Name
        - Close Locks
        - Dispatch Locks
        - Lock Delete
        - Lock Query
        - Lock Remote Activate
        - Lock Remote Add Users
        - Lock Remote Delete Users
        - Lock Remote Resynchronize Dispatching
        - Lock Remote Resynchronize Users
        - Lock Remote Set Access
        - Lock Remote Set Open Delay Window
        - Lock Remote Set Time
        - Lock Remote Shelve
        - Log Archive Query
        - Log History Query
        - Log Query
        - Read Locks
        - Read User Key
        - Read Users

- Reassign Locks
- Region Add
- Region Delete
- Region Query
- Region Read
- Region Update
- Rename Locks
- Route Add
- Route Add Locks
- Route Delete
- Route Delete Locks
- Route Dispatch All Locks
- Route Dispatch Locks
- Route Lock Query
- Route Query
- Route Read
- Route Read Locks
- Route Reassign All Locks
- Route Update
- Unassign Locks
- Update Locks
- Update User
- Update User Key
- User Archive Query
- User History Query
- User Query

- Corrected Cencon lock evaluate event to properly handle route sequences. Corrected Cencon lock cancel dispatch / advance combo back end code to properly handle route sequences. Updated messages displayed by Cencon for cancel dispatch to better explain the operation that occurred.

- Corrected remote Cencon keybox access to eliminate the extraneous closing and re-opening of network connections. This should greatly improve performance during remote keybox operations.

CenTran Configuration Manager

- **Fixed Issues**

  - Change Centran / CentranConfigurationManager to reserve URLs using the WorldSid SecurityIdentifier enumeration to address the Everyone group to avoid language problems.

CenTran API

- **Changes / New Features**

  - Added support for new cancel lock dispatch remote management operation with Cencon lock.

CenTran Agent

- **Changes / New Features**

  - Added support for configuration of multiple companies controlling different modes of Cencon lock.

    The Centran Agent can now be configured to connect to more than one Centran server. Since lock events in locks at the latest firmware level now identify which lock modes were affected by an event, it is now possible for the agent to handle events for different lock modes with different servers. A lock mode can be assigned its own server or it may share a server with another mode. This allows the different lock modes to be handled by different companies, if that is desired; the persistent connection feature of the agent is particularly useful for this.

  - Give user option to have Centran Agent request evaluation at start-up, with 20 minute retry.
  - Allow user to specify serverless Centran Agent in the configuration file.
  - Allow user to use the host from the Centran Service URI for the IP address for the persistent connection.

- **Fixed Issues**

  - Set up Centran Agent lock variables before waiting for networking to come up, so the command thread can safely ask for status. Added service failure recovery settings to Centran Agent set-up projects.
  - Added delay of one minute from startup before ATM service thread starts processing, to allow correct startup of other required services.
  - Fix various issues with pass through port configuration.
  - Made handling of incoming network connections to agent multi-threaded to allow simultaneous operations.
  - Made handling of outgoing persistent network connections to CenTran server multi-threaded to allow simultaneous operations.

Cencon Keybox Agent

- **Fixed Issues**

  - Added delay of one minute from startup before service thread starts processing, to allow correct startup of other required services.
  - Made handling of incoming network connections to agent multi-threaded to allow simultaneous operations.
  - Made handling of outgoing persistent network connections to CenTran server multi-threaded to allow simultaneous operations.

Cencon Database Setup Utility

- **Changes / New Features**

- The Cencon Database Setup Utility now has the following options:
    - Create a new Cencon database.
    - Update the existing Cencon database.
    - Import legacy data into the Cencon database.
    - Report on an existing Cencon database without making changes.
- Changed CenconDBSetupUtility process to only make database changes if Create or Update is selected. Import does not allow the selection of options for update or validation of database.
- Added support for better analysis of data when importing legacy Cenbank data from multiple installations. The import now checks for conflicts in data being imported from all Cenbank installations prior to any import of data.
- Added support for generating detailed HTML report for import of legacy Cenbank data.
- Added support for lock and user key white list when importing legacy Cenbank data from multiple installations. This allows selection of what data is valid to be imported, and what is to be ignored.
- Added support for doing import of legacy data to Cencon database with database still in use doing operations.
- Added stored procedure for doing bulk lookup of user key ids, lock names, and lock serial numbers for SQL server.

- **Fixed Issues**

    - Changed CenconDBSetupUtility to create CENPWD_LOGDISPATCH as a table, rather than as a view, which will remove the extra locks on CENPWD and CENLOG during dispatches, etc. This maintains backwards compatibility of the database with prior versions of software.
    - Corrected error with legacy import of Cencon data attempting to insert log records that do not have a valid existing user id.

USB Lock Adaptor for Cencon Gen 2 Deadbolt Lock

- **New Product**

    - The USB Lock Adaptor for the Cencon Gen 2 Deadbolt lock enables connecting existing Cencon Gen 2 Deadbolt locks to ATM console computers for remote access and networking using the CenTran Agent software.

Documentation

- **Changes / New Features**

    - Added product overview section to Cencon / CenTran Getting Started Guides. This explains how the various components of the Cencon system work together when deployed using network communications.
    - Added recommended practices appendices to Cencon Getting Started Guide for Cencon and CenTran deployment and amount of load. Added references to these recommended practices for when running over 25000 locks.

- **Fixed Issues**

    - Corrected Cencon component architecture chart text to correctly display in the Chrome browser.

Cencon Version 5 System Reference Manual

Cencon / CenTran Release Notes

Version 5.1.0.3363 (BETA)

Notes

- Translation of different versions of Cencon has to be completely redone. There are potential changes to the resource files and to the XML string translation files that will not be correct or compatible between different versions of Cencon.

General Operations

- **Changes / New Features**

  - Added splash screen to indicate progress for the Cencon application startup. Previously, it could take several seconds for the main Cencon screen to display which was potentially confusing.
  - Updated installations of Cencon, CenTran, CenTran Agent, and Cencon Keybox Agents for better handling of services and support for Windows 8 and higher. Removed install driver button from installation splash screen. Driver is automatically installed as part of application install.

- **Fixed Issues**

  - Ignore drag operations in the Cencon main frame that involve a collapsed group. Ignore Shift-F10 context menu requests in the Cencon main frame that involve a collapsed group. This was causing an exception to occur in Cencon.
  - Corrected report display issue of key can type for lock audit keys.
  - Corrected issue with paper size always being reset to letter when printing from Cencon.
  - Updated various exception handling to also report inner exception message. This is for better technical support of issues with Cencon or CenTran.
  - Changed Cencon reports to not use an asynchronous load of report record count for Microsoft SQL databases. This was causing an exception on some systems.
  - Updated Cencon drop down selection list boxes for selection of existing data to properly account for case sensitive vs not case sensitive database configuration.
  - Corrected database query error with Oracle for Lock Collections and Route report. The error involved comparing against fields of the locks within a collection or route.
  - Corrected application information versioning to only use major and minor version number for identifying directory for application local data.
  - Added check to Cencon / Centran for out of date ODBC driver. Added display of ODBC driver version to Cencon form for setting database connection.
  - Corrected possible exception in start up of Cencon due to invalid settings.

User Operations

- **Changes / New Features**

  - Added feature to remove a bank user from all locks that user is assigned to, and create the appropriate remove bank user key. Previously the locks had to be determined manually.
  - Added User Operations menu to key report toolstrip menu when key is a user key.

Lock Related Functions

- **Changes / New Features**

  - Added support for checking lock audit event dates to determine the correct user name to display. User keys are renamed or deleted and reused. Different user names were assigned to a user key at different points in time. The key serial number from the audit is compared against the active user table as well as the user history table to determine the correct name to display.
  - Added a lock serial communications operation to cancel a dispatch and advance a mode of network connected lock to the next combination. This operation required a firmware change to the lock and is available for Cencon lock firmware version 2.2 or higher.
  - After lock event evaluation from CenTran to a lock across a network, reconcile lock clock with server, if necessary.
  - Add Select Bank Branch form and make available from dialogs where all bank branches are valid through new search icon.

- **Fixed Issues**

  - Region mismatch reported when trying to dispatch imported lock with mixed-case region. Dispatch function now correctly handles Regions of mixed case.
  - Corrected consistency of leading zeros on lock S/N in Cencon. With this change lock serial numbers will be consistently padded in the Cencon user interface to the left with zeros. Serial numbers of less than 6 digits are padded out to 6 digits. Serial numbers less than 9 digits and greater than 6 are padded out to 9 digits.
  - Rewrote conversion routines for handling lock close seals to improve reliability.
  - Added individual checks of lock audit CRCs being evaluated from remote operations to the lock. Previously only the overall message validity check was made.

Bank Branch Operations

- **Changes / New Features**

  - Added new Select Bank Branch dialog. This dialog is available by clicking on a new search icon beside of the bank branch field in various dialogs. The new Select Bank Branch dialog allows an easier selection of a bank branch when dealing with a very large number of possible bank branches. It allows filtering the bank branch selection by assigned customer id. It also allows an improved type ahead operation for suggesting matching bank branches, using the bank branch name, customer name, or bank branch numeric ID.

- **Fixed Issues**

  - Create Bank Branch ID - Incorrectly limited to 4 digits if used for Cencon Gen 2 lock. Confirmed support for bank branch IDs up to 2147483647 in Cencon Interactive Interface and CenTran XML interface. Changes made in both source and user documentation.

<center>**Activity Log Operations**</center>

- **Changes / New Features**

  - Activity log and archive activity log search did not save network address. With this change, the Network Address and Lock Mode fields on the search dialog for the Activity Report and Archived Activity Report will be correctly remembered across report sessions.
  - Added remote lock activation and remote lock shelve events to types of events evaluated by Cencon statistical reporting.
  - Corrected sorting of the results of the Reporting Cencon function when the options "Combine Lock Mode Results To Single Column" and "Sort On Totaled Values" are both selected.

<center>**CenTran**</center>

- **Changes / New Features**

  - Legacy binary file transactions:

    > **Warning**
    >
    > Legacy binary file transactions, which were deprecated in CenTran Version 4.1.5, are no longer officially supported as of CenTran Version 5.1.0 and will be removed in a future release. Kaba Mas recommends that any use of the legacy binary file format be migrated to the XML file format as described in the CenTran Version 5 Programming Reference Manual.

  - Added a transaction to cancel a dispatch and advance a mode of a network connected lock to the next combination. This operation required a firmware change to the lock and is available for Cencon lock firmware version 2.2 or higher.
  - Made database lock specification optional for remote setting of the lock clock. This is to allow remotely setting the time on shelved locks.
  - Changed transaction to set lock specified remote clock to stop and inform user if the requested mode is shelved.

- **Fixed Issues**

  - Corrected unneeded audit record being created by read customer, read region, and read bank branch when the search item is not found.
  - Corrected region comparison for region authorization checks for CenTran to do case insensitive or case sensitive comparison matching the database collation. This affects the region comparison for the following transactions:
    - Add User Key
    - Audit Archive Query
    - Audit Query
    - Change User Name
    - Close Locks
    - Dispatch Locks
    - Lock Delete
    - Lock Query
    - Lock Remote Activate
    - Lock Remote Add Users
    - Lock Remote Delete Users

- Lock Remote Resynchronize Dispatching
- Lock Remote Resynchronize Users
- Lock Remote Set Access
- Lock Remote Set Open Delay Window
- Lock Remote Set Time
- Lock Remote Shelve
- Log Archive Query
- Log History Query
- Log Query
- Read Locks
- Read User Key
- Read Users
- Reassign Locks
- Region Add
- Region Delete
- Region Query
- Region Read
- Region Update
- Rename Locks
- Route Add
- Route Add Locks
- Route Delete
- Route Delete Locks
- Route Dispatch All Locks
- Route Dispatch Locks
- Route Lock Query
- Route Query
- Route Read
- Route Read Locks
- Route Reassign All Locks
- Route Update
- Unassign Locks
- Update Locks
- Update User
- Update User Key
- User Archive Query
- User History Query
- User Query

- Corrected Cencon lock evaluate event to properly handle route sequences. Corrected Cencon lock cancel dispatch / advance combo back end code to properly handle route sequences. Updated messages displayed by Cencon for cancel dispatch to better explain the operation that occurred.

- Corrected remote Cencon keybox access to eliminate the extraneous closing and re-opening of network connections. This should greatly improve performance during remote keybox operations.

- Added three second timeout to obtain a persistent network connection to a lock. This improved being able to get a valid network connection to the lock while having a large number of remote operations queued up for the lock.

- Optimized threading for Centran accepting persistent connections to reduce response time for accepting network connections.
- Corrected timeout issues with pool of persistent network connections. Improved responsiveness of persistent network connection checks for validity.
- Corrected duplicate audits being created by some Centran transactions.
- Added additional error handling for invalid XML file input.

CenTran Configuration Manager

- **Fixed Issues**

  - Change Centran / CentranConfigurationManager to reserve URLs using the WorldSid SecurityIdentifier enumeration to address the Everyone group to avoid language problems.

CenTran API

- **Changes / New Features**

  - Added support for new cancel lock dispatch remote management operation with Cencon lock.
- **Fixed Issues**

  - Extended Centran API default timeout from 5 seconds to 15 seconds. The 5 second timeout is potentially too short for lock serial evaluate event operations.

CenTran Agent

- **Changes / New Features**

  - Added support for configuration of multiple companies controlling different modes of Cencon lock.

    The Centran Agent can now be configured to connect to more than one Centran server. Since lock events in locks at the latest firmware level now identify which lock modes were affected by an event, it is now possible for the agent to handle events for different lock modes with different servers. A lock mode can be assigned its own server or it may share a server with another mode. This allows the different lock modes to be handled by different companies, if that is desired; the persistent connection feature of the agent is particularly useful for this.

  - Give user option to have Centran Agent request evaluation at start-up, with 20 minute retry.
  - Allow user to specify serverless Centran Agent in the configuration file.
  - Allow user to use the host from the Centran Service URI for the IP address for the persistent connection.
  - Added event logging to Centran Agent to be able to see a history of connection and operation activity.
  - Added support for creating an event log report to the command line Centran Agent Utility. The Centran Agent Utility can create the report as an XML file or as a HTML report to open in a web browser.
  - Added high level descriptions of Centran Agent configuration to Centran Agent Getting Started Guide.

Fixed Issues

- Set up Centran Agent lock variables before waiting for networking to come up, so the command thread can safely ask for status. Added service failure recovery settings to Centran Agent set-up projects.
- Added delay of one minute from startup before ATM service thread starts processing, to allow correct startup of other required services.
- Fix various issues with pass through port configuration.
- Made handling of incoming network connections to agent multi-threaded to allow simultaneous operations.
- Made handling of outgoing persistent network connections to CenTran server multi-threaded to allow simultaneous operations.
- Fixed an issue with the network communications timeout for unresponsive connection.
- Improved determining unresponsive network connections by evaluating manner of failure when reading data.
- Made sure that only the three current lock modes (FLM / Route / Bank) are considered by the agent when evaluating lock events.
- Increased delay before retrying a Centran lock event evaluation to 30 seconds from end of failure to start of retry. Previously, this delay between attempts did not take into account how long the attempt itself took.
- Updated application versioning information.
- Corrected issue with not always checking if a retry is valid for failed transaction responses from Centran.

Cencon Keybox Agent

- **Fixed Issues**

  - Added delay of one minute from startup before service thread starts processing, to allow correct startup of other required services.
  - Made handling of incoming network connections to agent multi-threaded to allow simultaneous operations.
  - Made handling of outgoing persistent network connections to CenTran server multi-threaded to allow simultaneous operations.

Cencon Database Setup Utility

- **Changes / New Features**

  - The Cencon Database Setup Utility now has the following options:
    - Create a new Cencon database.
    - Update the existing Cencon database.
    - Import legacy data into the Cencon database.
    - Report on an existing Cencon database without making changes.
  - Changed CenconDBSetupUtility process to only make database changes if Create or Update is selected. Import does not allow the selection of options for update or validation of database.
  - Added support for better analysis of data when importing legacy Cenbank data from multiple installations. The import now checks for conflicts in data being imported from all Cenbank installations prior to any import of data.
  - Added support for generating detailed HTML report for import of legacy Cenbank data.
  - Added support for lock and user key white list when importing legacy Cenbank data from multiple installations. This

allows selection of what data is valid to be imported, and what is to be ignored.

- o Added support for doing import of legacy data to Cencon database with database still in use doing operations.
- o Added stored procedure for doing bulk lookup of user key ids, lock names, and lock serial numbers for SQL server.

- **Fixed Issues**

- o Changed CenconDBSetupUtility to create CENPWD_LOGDISPATCH as a table, rather than as a view, which will remove the extra locks on CENPWD and CENLOG during dispatches, etc. This maintains backwards compatibility of the database with prior versions of software.
- o Corrected error with legacy import of Cencon data attempting to insert log records that do not have a valid existing user id.

USB Lock Adaptor for Cencon Gen 2 Deadbolt Lock

- **New Product**

- o The USB Lock Adaptor for the Cencon Gen 2 Deadbolt lock enables connecting existing Cencon Gen 2 Deadbolt locks to ATM console computers for remote access and networking using the CenTran Agent software.

Documentation

- **Changes / New Features**

- o Added product overview section to Cencon / CenTran Getting Started Guides. This explains how the various components of the Cencon system work together when deployed using network communications.
- o Added recommended practices appendices to Cencon Getting Started Guide for Cencon and CenTran deployment and amount of load. Added references to these recommended practices for when running over 25000 locks.
- o Added lock firmware level 2.2 to firmware release notes.
- o Published default values for Centran Agent configuration file elements to Centran Agent Getting Started Guide.
- o Improved appearance of PDF file formatting from HTML documentation.
- o Updated Centran getting started guide documentation for setting up certificates.
- o Updated error code documentation in Centran Programming Guide.
- o Updated and corrected errors with Cencon Gen 2 Bank Mode activation documentation.

- **Fixed Issues**

- o Corrected Cencon component architecture chart text to correctly display in the Chrome browser.

Cencon Version 5 System Reference Manual

Cencon / CenTran Release Notes

Version 5.1.0.3494

Translation

- Translation of different versions of Cencon has to be completely redone. There are potential changes to the resource files and to the XML string translation files that will not be correct or compatible between different versions of Cencon.
- Updated translation supporting files and documentation for Cencon 5.1.0.

Installation

- **Fixed Issues**

  - Implemented check of Cencon / CenTran 32/64 bit installs against existing Keybox Agent 32 / 64 bit install already on the host system. The Keybox Agent seizes exclusive use of the Cencon USB Keybox, which interfers with Cencon and CenTran software on the same system.
  - Implemented check of Keybox Agent 32 / 64 bit installs against existing Cencon / CenTran 32/64 bit install already on the host system. The Keybox Agent seizes exclusive use of the Cencon USB Keybox, which interfers with Cencon and CenTran software on the same system.
  - Corrected license agreements to correct version for Centran Agent and Cencon Keybox Agent installs.

General Operations

- **Changes / New Features**

  - Added splash screen to indicate progress for the Cencon application startup. Previously, it could take several seconds for the main Cencon screen to display which was potentially confusing.
  - Updated installations of Cencon, CenTran, CenTran Agent, and Cencon Keybox Agents for better handling of services and support for Windows 8 and higher. Removed install driver button from installation splash screen. Driver is automatically installed as part of application install.
  - Updated drivers used for USB connectivity to the Cencon USB Keybox and to the Cencon USB ATM Lock Adaptor from Jungo WinDriver level 11.10 to 11.50.
  - Updated Kaba Mas code signing certificate.

- **Fixed Issues**

  - Ignore drag operations in the Cencon main frame that involve a collapsed group. Ignore Shift-F10 context menu requests in the Cencon main frame that involve a collapsed group. This was causing an exception to occur in Cencon.
  - Corrected report display issue of key can type for lock audit keys.

- Corrected issue with paper size always being reset to letter when printing from Cencon.
- Updated various exception handling to also report inner exception message. This is for better technical support of issues with Cencon or CenTran.
- Changed Cencon reports to not use an asynchronous load of report record count for Microsoft SQL databases. This was causing an exception on some systems.
- Updated Cencon drop down selection list boxes for selection of existing data to properly account for case sensitive vs not case sensitive database configuration.
- Corrected Cencon drop down selection list support so that item selection via a mouse click returns correct value.
- Corrected database query error with Oracle for Lock Collections and Route report. The error involved comparing against fields of the locks within a collection or route.
- Corrected application information versioning to only use major and minor version number for identifying directory for application local data.
- Added check to Cencon / CenTran for out of date ODBC driver. Added display of ODBC driver version to Cencon form for setting database connection.
- Corrected possible exception in start up of Cencon due to invalid settings.
- Corrected the default folder for the Reference manual displayed during setup of the first time Cencon logon. This will be correctly shown as the Cencon installation folder.
- Corrected range searches for locks, log records, user combo issued to better handle min, max values being reversed or zero.
- Corrected host name not being populated in security hardware report from Cencon USB Key Box.

Oracle Database Support

- **Changes / New Features**

  - Updated Cencon / CenTran validation for Oracle 12c pluggable database.
  - Cencon / CenTran / CenconDBSetupUtility: Modified version check for Oracle database to require 12C or higher.
  - CenconDBSetupUtility: Added support for Oracle user optional user permission for SET CONTAINER.
  - Cencon / CenTran: Updated Getting Started Guide documentation for Oracle configuration and client setup.

- **Fixed Issues**

  - Cencon / CenTran: Removed Oracle 11 instant client from installs, as they were not compatible with using an Oracle service name rather than a SID.

User Operations

- **Changes / New Features**

  - Added feature to remove a bank user from all locks that user is assigned to, and create the appropriate remove bank user key. Previously the locks had to be determined manually.
  - Added User Operations menu to key report toolstrip menu when key is a user key.
  - Added ability to change default combination for bank mode user in Edit User dialog.

- **Fixed Issues**

  - Corrected error with Microsoft SQL stored procedure to change a user id. It did not properly handle entries for the

user configuration data. This error did not affect the Oracle version of the stored procedure.

- In Cencon, corrected the text displayed for verifying the rename of a user not having translation support.

- Find User: Corrected if Access Times are defined for a user such that Sunday is the only day when access is allowed, the Find Users dialog will not find that user when the option "Search for Users Who Have a Time Window Set" is checked.

- For the **Add a New User** form, Access Control tab, corrected the new user dispatch limit start and end date comparison for the start date being before the end date. Previously this comparison could incorrectly report that the date range is invalid.

- For the **Add a New Windows Logon User To Cencon** form, Access Control tab, corrected the new user dispatch limit start and end date comparison for the start date being before the end date. Previously this comparison could incorrectly report that the date range is invalid.

- For the **Add a New Windows Logon User To Cencon** form, Access Control tab, corrected the function of the Clear All button. Previously clicking this button did not clear the Access Times information.

- Corrected default reference manual directory set up by First Time Logon dialog.

Lock Related Functions

- **Changes / New Features**

  - Added support for checking lock audit event dates to determine the correct user name to display. User keys are renamed or deleted and reused. Different user names were assigned to a user key at different points in time. The key serial number from the audit is compared against the active user table as well as the user history table to determine the correct name to display.

  - Added a lock serial communications operation to cancel a dispatch and advance a mode of network connected lock to the next combination. This operation required a firmware change to the lock and is available for Cencon lock firmware version 2.2 or higher.

  - After lock event evaluation from CenTran to a lock across a network, reconcile lock clock with server, if necessary.

  - Add Select Bank Branch form and make available from dialogs where all bank branches are valid through new search icon.

  - Modified the Shelve Lock Selection dialog to allow lock specification by specific lock mode.

- **Fixed Issues**

  - Region mismatch reported when trying to dispatch imported lock with mixed-case region. Dispatch function now correctly handles Regions of mixed case.

  - Corrected consistency of leading zeros on lock S/N in Cencon. With this change lock serial numbers will be consistently padded in the Cencon user interface to the left with zeros. Serial numbers of less than 6 digits are padded out to 6 digits. Serial numbers less than 9 digits and greater than 6 are padded out to 9 digits.

  - Rewrote conversion routines for handling lock close seals to improve reliability.

  - Added individual checks of lock audit CRCs being evaluated from remote operations to the lock. Previously only the overall message validity check was made.

  - Corrected Find Users dialog text field values are not remembered from session to session when they should be.

  - Reassign : Erroneous error "The specified user is already assigned to the lock." Reassign dialog now correctly handles reassignment of a route lock with sequence number greater than 1.

  - Lock Open Alarm: Locks not correctly filtered out per option to ignore locks open longer than a given time period.

  - Correct Elapsed Time is now displayed in the Lock Open Alarm dialog for locks opened in DST Daylight Savings Time.

  - Lock Activate Dialog: Branch combobox dropdown freezes. This change corrects the issue where the Bank Branch Name combobox look ahead dropdown intermittently freezes when using the cursor keys to scroll up and down.

Changed individual lock report to display default bank mode user combinations and flag to require change of combo to open lock. Changed lookup of bank users to return appropriate bank mode default combination for current lock, not current default for user.

- Corrected errors with initialization of DS1922 timeset key for a time zone without multiple daylight savings time transitions. The time zone bias was incorrect, and the same starting page was being written for the following pages. This resulted in 8 identical time zone entries.
- Corrected display of key report for DS1922 timeset key. The full time zone name was not being displayed.
- Corrected an incorrect "Too many bank users" message from being issued when adding Bank User to a Gen 1 lock under Cencon.
- Re-architected Lock import / export with XML files. Corrected various issues, including not properly exporting / importing bank branch information to support Bank mode locks and Bank mode users. Corrected that users not needed for the selected bank mode locks were also being imported.
- Added support for auditing reissued lock activate key creation.
- Bumped displayed route sequence numbers in the Close Locks With Key dialog, so they display in the range 1-3.
- Fixed selecting only the first saved lock mode when loading from the lock search record profile.
- Fixed proper use of partial search for dispatched user if user specifies it in lock search record.
- Corrected the "Clear Form" action button on the Cencon Activate dialog to properly clear the expected fields. With this change, on the Activate dialog, the Load Lock Data action button will be enabled after the Clear Form action button is clicked.
- Forced the Cencon serial comms lock activation page to be double buffered, and keep it from being extraneously resized.

Bank Branch Operations

- **Changes / New Features**

  - Added new Select Bank Branch dialog. This dialog is available by clicking on a new search icon beside of the bank branch field in various dialogs. The new Select Bank Branch dialog allows an easier selection of a bank branch when dealing with a very large number of possible bank branches. It allows filtering the bank branch selection by assigned customer id. It also allows an improved type ahead operation for suggesting matching bank branches, using the bank branch name, customer name, or bank branch numeric ID.

- **Fixed Issues**

  - Create Bank Branch ID - Incorrectly limited to 4 digits if used for Cencon Gen 2 lock. Confirmed support for bank branch IDs up to 2147483647 in Cencon Interactive Interface and CenTran XML interface. Changes made in both source and user documentation.

Customers Operations

- **Fixed Issues**

  - Corrected Find Customers dialog text field values are not remembered from session to session when they should be.

Lock Collections

- **Fixed Issues**

    - Corrected Find Lock Collections dialog text field values are not remembered from session to session when they should be.

    - In the Cencon Lock Collections search dialog, the Lock Flags tab will now be highlighted when the Available or Unassigned Open radio buttons are selected in the Unassigned Open Call Status box.

Activity Log Operations

- **Changes / New Features**

    - Activity log and archive activity log search did not save network address. With this change, the Network Address and Lock Mode fields on the search dialog for the Activity Report and Archived Activity Report will be correctly remembered across report sessions.

    - Added remote lock activation and remote lock shelve events to types of events evaluated by Cencon statistical reporting.

    - Corrected sorting of the results of the Reporting Cencon function when the options "Combine Lock Mode Results To Single Column" and "Sort On Totaled Values" are both selected.

Authorization Role Operations

- **Fixed Issues**

    - Updated Cencon Authorization Role report and Authorization Definition report. Ensured that default roles can not be edited.

CenTran

- **Changes / New Features**

    - Legacy binary file transactions:

      > **Warning**
      >
      > Legacy binary file transactions, which were deprecated in CenTran Version 4.1.5, are no longer officially supported as of CenTran Version 5.1.0 and will be removed in a future release. Kaba Mas recommends that any use of the legacy binary file format be migrated to the XML file format as described in the CenTran Version 5 Programming Reference Manual.

    - Added a transaction to cancel a dispatch and advance a mode of a network connected lock to the next combination. This operation required a firmware change to the lock and is available for Cencon lock firmware version 2.2 or higher.

    - Made database lock specification optional for remote setting of the lock clock. This is to allow remotely setting the

time on shelved locks.

- Changed transaction to set lock specified remote clock to stop and inform user if the requested mode is shelved.
- Improved lock lookup when evaluating lock events. Changed individual lookup against the lock database table of each lock mode to a single query.
- Added new transaction support for User Change Bank Mode Combination.

- **Fixed Issues**

  - Corrected unneeded audit record being created by read customer, read region, and read bank branch when the search item is not found.
  - Corrected region comparison for region authorization checks for CenTran to do case insensitive or case sensitive comparison matching the database collation. This affects the region comparison for the following transactions:
    - Add User Key
    - Audit Archive Query
    - Audit Query
    - Change User Name
    - Close Locks
    - Dispatch Locks
    - Lock Delete
    - Lock Query
    - Lock Remote Activate
    - Lock Remote Add Users
    - Lock Remote Delete Users
    - Lock Remote Resynchronize Dispatching
    - Lock Remote Resynchronize Users
    - Lock Remote Set Access
    - Lock Remote Set Open Delay Window
    - Lock Remote Set Time
    - Lock Remote Shelve
    - Log Archive Query
    - Log History Query
    - Log Query
    - Read Locks
    - Read User Key
    - Read Users
    - Reassign Locks
    - Region Add
    - Region Delete
    - Region Query
    - Region Read
    - Region Update
    - Rename Locks
    - Route Add
    - Route Add Locks
    - Route Delete
    - Route Delete Locks
    - Route Dispatch All Locks

- - Route Dispatch Locks
    - Route Lock Query
    - Route Query
    - Route Read
    - Route Read Locks
    - Route Reassign All Locks
    - Route Update
    - Unassign Locks
    - Update Locks
    - Update User
    - Update User Key
    - User Archive Query
    - User History Query
    - User Query

- Corrected Cencon lock evaluate event to properly handle route sequences. Corrected Cencon lock cancel dispatch / advance combo back end code to properly handle route sequences. Updated messages displayed by Cencon for cancel dispatch to better explain the operation that occurred.

- Corrected remote Cencon keybox access to eliminate the extraneous closing and re-opening of network connections. This should greatly improve performance during remote keybox operations.

- Added three second timeout to obtain a persistent network connection to a lock. This improved being able to get a valid network connection to the lock while having a large number of remote operations queued up for the lock.

- Optimized threading for CenTran accepting persistent connections to reduce response time for accepting network connections.

- Corrected timeout issues with pool of persistent network connections. Improved responsiveness of persistent network connection checks for validity.

- Corrected duplicate audits being created by some CenTran transactions.

- Added additional error handling for invalid XML file input.

- Added sorting by time to post audits to the event log. Some audits were potentially out of order by a second.

- Added validation of web service certificate values used in the CenTran configuration file. This is to properly report what data is invalid in the CenTran configuration file. Previously, corrupt or invalid data in the CenTran configuration file would cause CenTran to crash at startup.

- Added check for a good startup of CenTran to all CenTran transaction processing.

- Changed CenTran startup to check against tick count for system run time. Some systems with a slow boot of system services resulted in CenTran not initializing itself correctly. Moved initialization of various items to after the delayed startup of the CenTran service startup.

  If the system has been running at least 7 minutes or if the CenTran service has delayed at least 5 minutes, then CenTran will attempt to start processing transactions.

- Added service dependencies for CenTran service startup at the service install. This is to ensure that the host server has successfully started prior to the CenTran service attempt to initialize and begin processing.

  The CenTran service is now dependent on the following services:

    - Event Log (eventlog)
    - Remote Procedure Calls (RpcSs)
    - Server (LanmanServer)

- Corrected TRANSACTION_ADD_USER_KEY incorrectly returning RC_ERR_READ_SHA_KEY_FAILED_VALIDATE_KEY_SIGNATURE for blank keys. This change enables the use of CenTran file XML interface to a new user with a key that is unitialized without received the error of RC_ERR_READ_SHA_KEY_FAILED_VALIDATE_KEY_SIGNATURE.

- Corrected incorrect URL in RSS feed for lock events from Centran.
- Add a check to see whether the application is running interactively before letting the back-end throw up a message box to inform user of DB or PCIO error. This corrected a possible exception from CenTran running as a service.
- Made the customer record fields except Customer ID optional in the CenTran XML schema. This affects the following operations:

    - Add Customer
    - Update Customer
    - Read Customer

- Corrected multiple simultaneous dispatch transactions being received by CenTran potentially resulting in one or more communications errors with the Cencon USB Keybox. Fixed multi-threading synchronization error involving access to the Cencon USB Keybox driver common resource.
- Changed default and example configuration files to use recommended production settings for Windows Communications Foundation diagnostic tracing. Verbose diagnostic trace settings are still in the configuration files, but commented out.

CenTran Configuration Manager

- **Fixed Issues**

    - Change CenTran / CenTranConfigurationManager to reserve URLs using the WorldSid SecurityIdentifier enumeration to address the Everyone group to avoid language problems.
    - Added service dependencies for CenTran service startup at the service install. This is to ensure that the host server has successfully started prior to the CenTran service attempt to initialize and begin processing.

        The CenTran service is now dependent on the following services:

        - Event Log (eventlog)
        - Remote Procedure Calls (RpcSs)
        - Server (LanmanServer)

    - Added reminder to Centran Configuration Manager of startup delay for Centran from system start.

CenTran API

- **Changes / New Features**

    - Added support for new cancel lock dispatch remote management operation with Cencon lock.
    - Added new transaction support for User Change Bank Mode Combination. Updated CenTran API documentation for new Change User Bank Mode Combination transaction.

- **Fixed Issues**

    - Extended CenTran API default timeout from 5 seconds to 15 seconds. The 5 second timeout is potentially too short for lock serial evaluate event operations.
    - Corrected performance issue with REST web service transactions. The memory allocation of the message content was not being handled in an efficient manner.

CenTran XML Input Output Example

- **Changes / New Features**

    - Added new transaction support for User Change Bank Mode Combination.

- **Fixed Issues**

    - Corrected not reading back named pipe communications type setting correctly from preferences.

    - Corrected example configuration file not having proper buffer sizes set for SOAP client communications. Added reminder to test settings dialog that SOAP client communications have to be configured in the application configuration file.

Cencon Web Client

- **Changes / New Features**

    - Added a rudimentary Lock Operations page to the sample Cencon Web Client.

CenTran Agent

- **Changes / New Features**

    - Added support for configuration of multiple companies controlling different modes of Cencon lock.

      The CenTran Agent can now be configured to connect to more than one CenTran server. Since lock events in locks at the latest firmware level now identify which lock modes were affected by an event, it is now possible for the agent to handle events for different lock modes with different servers. A lock mode can be assigned its own server or it may share a server with another mode. This allows the different lock modes to be handled by different companies, if that is desired; the persistent connection feature of the agent is particularly useful for this.

    - Give user option to have CenTran Agent request evaluation at start-up, with 20 minute retry.

    - Allow user to specify serverless CenTran Agent in the configuration file.

    - Allow user to use the host from the CenTran Service URI for the IP address for the persistent connection.

    - Added event logging to CenTran Agent to be able to see a history of connection and operation activity.

    - Added support for creating an event log report to the command line CenTran Agent Utility. The CenTran Agent Utility can create the report as an XML file or as a HTML report to open in a web browser.

    - Added high level descriptions of CenTran Agent configuration to CenTran Agent Getting Started Guide.

- **Fixed Issues**

    - Set up CenTran Agent lock variables before waiting for networking to come up, so the command thread can safely ask for status. Added service failure recovery settings to CenTran Agent set-up projects.

    - Added delay of one minute from startup before ATM service thread starts processing, to allow correct startup of other required services.

    - Fix various issues with pass through port configuration.

- Made handling of incoming network connections to agent multi-threaded to allow simultaneous operations.
- Made handling of outgoing persistent network connections to CenTran server multi-threaded to allow simultaneous operations.
- Fixed an issue with the network communications timeout for unresponsive connection.
- Improved determining unresponsive network connections by evaluating manner of failure when reading data.
- Made sure that only the three current lock modes (FLM / Route / Bank) are considered by the agent when evaluating lock events.
- Increased delay before retrying a CenTran lock event evaluation to 30 seconds from end of failure to start of retry. Previously, this delay between attempts did not take into account how long the attempt itself took.
- Updated application versioning information.
- Corrected issue with not always checking if a retry is valid for failed transaction responses from CenTran.
- Added service dependencies for CenTran Agent service startup at the service install. This is to ensure that the host computer has successfully started prior to the CenTran Agent service attempt to initialize and begin event processing.

  The CenTran Agent service is now dependent on the following services:

  - Event Log (eventlog)
  - Remote Procedure Calls (RpcSs)
  - Server (LanmanServer)

Cencon Keybox Agent

- **Fixed Issues**

  - Added delay of one minute from startup before service thread starts processing, to allow correct startup of other required services.
  - Made handling of incoming network connections to agent multi-threaded to allow simultaneous operations.
  - Made handling of outgoing persistent network connections to CenTran server multi-threaded to allow simultaneous operations.
  - Documentation: Added a product overview to Cencon Key Box Agent Getting Started Guide, along with warning that the Cencon Keybox Agent should not be installed alongside Cencon/CenTran.
  - Added service dependencies for Cencon Keybox Agent service startup at the service install. This is to ensure that the host computer has successfully started prior to the Cencon Keybox Agent service attempt to initialize and begin processing.

    The Cencon Keybox Agent service is now dependent on the following services:

    - Event Log (eventlog)
    - Remote Procedure Calls (RpcSs)
    - Server (LanmanServer)

Cencon Database Setup Utility

- **Changes / New Features**

  - The Cencon Database Setup Utility now has the following options:

- Create a new Cencon database.
- Update the existing Cencon database.
- Import legacy data into the Cencon database.
- Report on an existing Cencon database without making changes.

- Changed CenconDBSetupUtility process to only make database changes if Create or Update is selected. Import does not allow the selection of options for update or validation of database.

- Added support for better analysis of data when importing legacy Cenbank data from multiple installations. The import now checks for conflicts in data being imported from all Cenbank installations prior to any import of data.

- Added support for generating detailed HTML report for import of legacy Cenbank data.

- Added support for lock and user key white list when importing legacy Cenbank data from multiple installations. This allows selection of what data is valid to be imported, and what is to be ignored.

- Added support for doing import of legacy data to Cencon database with database still in use doing operations.

- Added stored procedure for doing bulk lookup of user key ids, lock names, and lock serial numbers for SQL server.

- **Fixed Issues**

  - Changed CenconDBSetupUtility to create CENPWD_LOGDISPATCH as a table, rather than as a view, which will remove the extra locks on CENPWD and CENLOG during dispatches, etc. This maintains backwards compatibility of the database with prior versions of software.

  - Corrected error with legacy import of Cencon data attempting to insert log records that do not have a valid existing user id.

  - Changed CenconDBSetupUtility to add missing authorizations automatically to default roles, not just when resetting authorizations.

  - Corrected checks for Cencon / CenTran connected to the database being applied only for create or update of Cencon database. This was being incorrectly applied to legacy file import operations and reporting operations.

  - Corrected previous database user data types not being deleted prior to being updated during database update.

USB Lock Adaptor for Cencon Gen 2 Deadbolt Lock

- **New Product**

  - The USB Lock Adaptor for the Cencon Gen 2 Deadbolt lock enables connecting existing Cencon Gen 2 Deadbolt locks to ATM console computers for remote access and networking using the CenTran Agent software.

Documentation

- **Changes / New Features**

  - Added product overview section to Cencon / CenTran Getting Started Guides. This explains how the various components of the Cencon system work together when deployed using network communications.

  - Added recommended practices appendices to Cencon Getting Started Guide for Cencon and CenTran deployment and amount of load. Added references to these recommended practices for when running over 25000 locks.

  - Added lock firmware level 2.2 to firmware release notes.

  - Published default values for CenTran Agent configuration file elements to CenTran Agent Getting Started Guide.

  - Improved appearance of PDF file formatting from HTML documentation.

- Updated CenTran getting started guide documentation for setting up certificates.
- Updated error code documentation in CenTran Programming Guide.
- Updated and corrected errors with Cencon Gen 2 Bank Mode activation documentation.
- Updated CenTran Getting Started Guide documentation with additional detail on URL addresses for Certificates.
- Updated Cencon Reference Manual : 3.1.7 Lock Operations with Serial Connect.

- **Fixed Issues**

  - Corrected Cencon component architecture chart text to correctly display in the Chrome browser.
  - Corrected references to Cencon4Footer.htm to footer.htm in Cencon reference manual.
  - Added notes concerning the **OPd** door sensor message inserted into pages describing procedures at the lock while the container door is open.
  - Updated documentation on Bank lock activation for better clarity.
  - CenTran: Added missing background image to CenTran Getting Started Guide.
  - Corrected Cencon Reference Manual : Referenced section numbers out of sync. Corrected section references in Cencon Reference Manual : 3.5.6 Create a Retrieve Bank Users Key (Gen2). Corrected section references in Cencon Reference Manual : 3.5.5 Initialize Lock Time Set Key refs wrong section #.
  - Corrected out of date URLs for Kaba Mas web site references.
  - Corrected some missing images in Cencon Getting Started Guide. Also corrected some images being out of date.
  - Corrected order of Cencon Getting Started Guide chapters for better flow during setting up Cencon. Corrected process steps for Cencon Getting Started Guide.
  - Ensured that database versions referenced in the Cencon Getting Started Guide are consistent.
  - Corrected the Centran Management URL in the Centran Getting Started Guide.
  - The Cencon Version 5 System Reference Manual, chapter Using Cencon Reports, now correctly describes the behavior of the "Return only exact data matches" option on the Cencon search dialogs.
  - Documented that Activate Lock's "Load Lock Data" button has a mode order for getting the data, fix button's documented name from "Search From Lock", and incidentally remove references to MapPoint.
  - Updated screen shots of installers for Getting Started Guides.
  - Updated Centran Getting Started Guide with notes for database access and file access from a service account. This included comments on Windows authentication and SQL authentication for databases.
  - Removed unneeded Minimize, Maximize and Help buttons from various modal dialogs.

CenTran Known Issues

- CenTran and the CenTran API are not correctly handling XML escape characters in data fields. These are specific characters that are used as part of the XML standard.

  If these characters are being passed as part of XML data, they must be replaced with alternate strings of characters to represent them.

  The XML escape characters are the following values:

Character	Replacement	Description
"	"	double quotation mark
&	&	ampersand
'	'	apostrophe (apostrophe-quote)
<	<	less-than sign
>	>	greater-than sign

  The current work around is to avoid using these characters with data entered into Cencon / CenTran.

  Use of these characters will not affect Cencon. They will cause an XML validation error with CenTran and the CenTran API when using XML transaction files or REST web service.

Cencon Version 5 System Reference Manual

Cencon Gen 2 Lock Firmware Release Notes

Cencon Gen 2 Deadbolt Lock
Firmware Level: 2.0.814

11/16/2009

- **Initial product release of Cencon Gen 2 Deadbolt Lock to replace Cencon Gen 1 Deadbolt lock.**

- **Changes / New Features**

    - Cencon Gen 1 compatibility mode for operation with legacy software.

    - Added support for secure DS1963S iButton electronic keys. Still has support for earlier electronic key models going into end of life.

    - Added support for lock serial numbers up to approximately 4 billion.

    - Improved security of combinations and increased close seal to 4 digits.

    - Added serial port for external devices or interfaces to be attached. Added support for secure encrypted serial communications commands to the lock depending on customer activation of modes.

    - Added high accuracy real time clock to avoid dependency on varying iButton time values. Added support for daylight savings time transition tables to cover 20 years of operations. Also added support for DS1922 iButton electronic key for setting the lock time and updating daylight savings time transition tables.

    - Increased bank mode to allow up to 100 users to be stored. Increased the allowed ranges of bank mode user IDs and bank branch IDs to approximately 4 billion.

Cencon Gen 2 Deadbolt Lock
Firmware Level: 2.0.822

03/24/2010

- **Fixed Issues**

    - Corrected error with bank mode user ID value being truncated during activate, add user, and delete user operations with serial communications. This caused the bank mode user ID to be incorrect if it was in excess of 65535. This error only affected these operations with serial communications, not with supervisor audit keys.

Cencon Gen 2 Deadbolt Lock
Firmware Level: 2.0.824

04/16/2010

- **Fixed Issues**

Corrected time zone bias conversions from minutes to seconds. This affected the display of local time values, time window operations, lock out operations, and time delay operations.

Cencon Gen 2 Deadbolt Lock
Firmware Level: 2.0.866

11/11/2010

- **Fixed Issues**

  - Removed comparison of Security ID in DS1427 Bank user key to the value used in the SA key used to activate Bank mode. The value varies with Cenbank software log on key and this was causing some Bank user keys to not be able to be used at locks activated with Cenbank 4.

Cencon Gen 2 Deadbolt Lock
Firmware Level: 2.0.929

05/13/2011

- **Fixed Issues**

  - Updated timing for duress and shunt relays to match Cencon Gen 1 lock. Might affect timing of output from duress and shunt relays.

Cencon Gen 2 Swingbolt Lock
Firmware Level: 2.1.994

12/02/2011

- **Initial product release of Cencon Gen 2 Swingbolt Lock.**

- **Changes / New Features**

  - Adds option for swingbolt to the Cencon Gen 2 lock.
  - Adds support for Cencon Gen 2 Swingbolt lock breakout box USB adaptor, for interface to an ATM console computer.

- **Fixed Issues**

  - Various bug fixes and timing adjustments for serial communications.

Cencon Gen 2 Deadbolt Lock
Firmware Level: 2.0.1003

- **Changes / New Features**

  - Added improved hardware diagnostic serial communications commands.

- **Fixed Issues**

  - Corrected relay timings for new models of relay hardware.

Cencon Gen 2 Swingbolt Lock
Firmware Level: 2.1.1049

02/13/2013

- **Changes / New Features**

  - Increased swing bolt open window to 10 seconds from 5 seconds because customers were having a hard time getting the container door open in time.

- **Fixed Issues**

  - Various improvements for better product manufacturing testing.

Cencon Gen 2 Deadbolt Lock
Cencon Gen 2 Swingbolt Lock
Firmware Level: 2.1.1061

04/03/2013

- **Fixed Issues**

  - Fix issue for deadbolt lock where both -dL then G2 were being displayed when lock is opened, then relocked.
  - Corrected possible communications error resulting from lock going into low power state.
  - Fixed reply from swingbolt lock for remote administration enable, disable, which is displayed in the lock report.
  - Corrected SA key Add/Delete user key operation so that if the user errors out while attempting these, they'll be able to retry the key and successfully finish the Add/Delete operation.
  - Fixed clock dead battery (-cEC) indicator for swingbolt lock.

Cencon Gen 2 Deadbolt Lock
Cencon Gen 2 Swingbolt Lock
Firmware Level: 2.1.1068

05/07/2013

- **Fixed Issues**

  - For swingbolt lock, adjusted check to turn the clock back on if it has stopped, or for a dead battery indication.

- For swingbolt lock, allow up to 2 secs. time when detecting break out box before attempting to reset it.
- Fixed issue displaying old/wrong data to LCD when attempting key retries.
- Fixed issue with serial communications confirm close to avoid duress indicator for Bank mode getting shown for FLM or Route mode close.

Cencon Gen 2 Swingbolt Lock
Firmware Level: 2.1.1072

06/03/2013

- **Fixed Issues**

  - For swingbolt lock, fixed possible issue with breakout box communications getting out of synchronization with lock.
  - For swingbolt lock, improved breakout box handling of rapid events occuring with door usage.

Cencon Version 5 System Reference Manual

Chapter 1 - Introducing Cencon 5

1.1 Cencon System Product Overview

The Challenge

While the front of ATMs are accessed by customers with individual cards and PINs, the back of the ATM is often accessed by service personnel from multiple companies all using the same lock combination. Bank employees, cash replenishers, technical service reps, repair personnel all using the same combination to open an ATM safe poses a significant security risk.

The Solution

The Cencon ATM Cash Vault Security System from Kaba Mas is designed to combat insider theft from ATMs through the combined use of lock hardware, systems software and Smart Keys. The Cencon system offers total access control and accountability with its One Time Combination feature. The One Time Combination is dispatched from a central location and cannot be reused at a later date, thus eliminating temptation.

The Cencon ATM Cash Vault Security System allows locks located anywhere in the world to be controlled and monitored from one central location.

The central location consists of

- A database describing locks, lock administration personnel, lock service personnel, lock access details and history.
- Kaba Mas software that
    - Manages the creation and distribution of One Time Combinations(OTC).
    - Tracks the status of each lock and user.
    - Provides audit capability.
    - Can be used interactively by a human Dispatcher or programmatically by customer applications such as IVR or Web base interfaces.

The software provided by Kaba Mas consists of

- Cencon Interactive Application: Interactive Central Point of Control
    - Used to create, distribute, manage One Time Combinations (OTC).
- CenTran Service: Background Central Point of Control
    - Used by customer, 3rd party applications to create, distribute and manage OTCs.
- CenTran Web Services: Used by customer web applications to communicate with CenTran Service.
- CenTran Agent
    - Remote lock management: Allows CenTran Service to communicate with ATM lock, streamlining lock administration.
- Key Box Agent
    - Remote key management: Allows CenTran Service to communicate with remote key boxes, supporting decentralized lock personnel.

The Cencon ATM Cash Vault Security System supports three Modes of Operation:

FLM Mode

Designed for First Line Maintenance (FLM) personnel such as cash replenishers, technical service reps, repair personnel, the FLM mode of the Cencon lock permits the dispatch center to give a One Time Combination (OTC) for ATM lock access to a technician "on the fly." FLM personnel are each issued a Smart Key and call their dispatch center to request a One Time Combination. Once used, this combination will not function again, thus ensuring absolute access control. Once the Cencon unit is locked, a Close Seal code is displayed on the lock's LCD. Entering this Close Seal into the dispatch center's computer documents that the Cencon lock is locked and secure.

Route Mode

While permitting the same access control as FLM Mode, Route Mode additionally permits pre-defined routes for armored cash replenishers. Route personnel are each issued a Smart Key. A route of locks, along with an OTC for each lock on the route, may be assigned by a dispatch center permitting route personnel to access a series of locks without contacting their dispatch center at each individual lock. Route personnel can either call their dispatch center at the end of the shift to report the Close Seals, or the Close Seals can be read from the Smart Key by the Cencon software.

Bank Mode

Bank Mode is designed for bank personnel who may need access to the Cencon system lock but do not wish to operate through a dispatch center. Smart Keys and combinations are issued to bank personnel who may unlock the Cencon lock at any time. An internal audit trail tracks all activity of bank personnel just as it does for FLM and Route personnel. Kaba Mas Cencon software permits bank administrators to manage Bank Mode on site. Bank users may be added or deleted and audit trails may be downloaded from the lock.

Cencon Version 5 System Reference Manual

Chapter 1 - Introducing Cencon 5

1.2 High Level Overview of Cencon System Component Architecture

Cencon 5 is a security program designed to control access to containers. It is capable of allowing one central location to monitor and control exactly who may access a particular lock and at what time (i.e., <u>cen</u>tral <u>con</u>trol = Cencon.). Any number of locks may be controlled using Cencon, which is particularly well suited for companies that service Automated Teller Machines (ATMs). Through a combination of intelligent design and advanced technology, the Cencon system can achieve this control with no physical connection between the locks and the monitoring system.

Cencon 5 consists of three basic components:

1. [PC-Based Computer Program and Services](#)
2. [High-Security Locks](#)
3. [Smart Keys](#)

The Cencon software controls access to Cencon locks in either or both of the following methods:

One Time Combination or "OTC" Method (FLM and Route Modes)
    Locks utilizing this access method will change their combination each time they are opened. The monitoring computer is able to anticipate what the next combination will be through a secure software algorithm that is built into both the locks and the central monitoring unit. It is impossible for either field service or monitoring personnel to know what combination will open a given safe next without first dispatching that combination to a particular key. A record of all security activity, including dates, times, and persons involved, is automatically maintained in the software, in the locks, and to a lesser degree in the keys themselves.

Repeating Access Code or "RAC" Method (Bank Mode)
    Locks utilizing this access method will open on a chosen combination for each key. The code chosen for a particular key can be reused to open the lock on a repeated basis, according to the access parameters established for this key, without requiring interaction with the software each time. Audit records of all lock activity, including dates, times and the persons involved, are automatically maintained in the locks and keys. This information may be reviewed through the Cencon computer program.

Access is further controlled by the advanced-design electronic keys known as Smart Keys. Once the lock is active in any of the modes, an opening can only occur with an OTC or RAC + the corresponding Smart Key. This dual token requirement of a physical device plus that user's known 6-digit number for opening the lock ensures security. If one of the two access tokens are compromised or lost, either the key or the combination, the lock remains secure. Audit information on locks, keys, and software may only be accessed by administrative personnel using the highest level of security safeguards. These audit records cannot be altered by anyone, not even those people who are granted the highest level of security in the system.

It is important that you understand how the entire system operates, even though many of the operations will be carried out by other personnel. Before you start using the program, be sure to read the next few pages. They tell you what this package includes, the equipment you need to use the software, and they identify the components of the system and describe the people who will be working with them.

The Cencon ATM Cash Vault Security System consists of several components whose method of use will vary depending on the business model of the supported enterprise. Presented here is a brief high level overview of the Cencon ATM Cash Vault Security System components.

Cencon ATM Cash Vault Security System Component Architecture

Cencon Application
- Cencon Graphic User Interface
- USB Driver
- USB Key Box

Cencon Database
Data describes
- locks
- lock personnel
- lock access controls
- lock access history

Customer Web Server
- 3rd Party Applications

Customer Application
- Interactive Voice Response
- 3rd Party Applications

CenTran Server
- CenTran Web Services
- CenTran Service
- USB Driver
- USB Key Box

Customer Web Client
- Web Browser
- Key Box Agent
- USB Driver
- USB Key Box

ATM
- ATM Controller
- Door Sensor, Bolt Switch and Alarm Status plus Close Seal
- CenTran Agent
- USB Driver
- Gen 2 Cencon Lock

Customer Application
- Interactive Voice Response
- 3rd Party Applications

Legend:
- Kaba Mas Software
- Non Kaba Mas Software
- System Software
- Hardware
- HTTP / Web Service
- ODBC
- Files

Cencon Database:

- Defines locks to be controlled, monitored and audited.
- Defines personnel allowed to access locks.
- Defines Personnel allowed to control access to locks.
- Contains access history for each lock.

Cencon Application:

- Interactive, graphical Windows application used to manage the Cencon Database contents.
- Requires a Cencon Key Box be attached to a USB port of the same computer.

CenTran Service:

- Available for use by customer applications to manage the Cencon Database contents.
- Applications communicate with the service via files or HTTP / Web Services.
- Runs in background as a Windows Service.

CenTran Web Services:

- Available for use by web applications to manage Cencon Database contents.

Customer Application Using CenTran Service Command File:

- The CenTran Service performs actions against the Cencon Database per commands imbedded in files.
- Results of those actions are reported in output files created by the CenTran Service.

Customer Application Using CenTran Web Services:

- The CenTran Service performs actions against the Cencon database per commands received via the CenTran Web Services.
- Results of those actions are reported to the customer application via the CenTran Web Services.

CenTran Agent:

- Allows CenTran Service to monitor lock in a real time manner.
- Runs on the ATM in the background as a Windows Service.

Key Box Agent:

- Allows CenTran Service access to Cencon Key Boxes on remote systems.
- Runs on remote Web Client systems in background as a Windows Service.

Customer Web Client:

- Customer developed web browser based user interface used to manage Cencon Database contents as well as Cencon Smart Keys via the CenTran Web Services.
- Can be located remotely.

Cencon ATM Cash Vault Security System Components and Business Processes

Examples of Business Processes Supported by Cencon ATM Cash Vault Security System Components:

1. FLM (First Line Maintenance) Operations with human Dispatcher:

1. FLM personnel reaches ATM and contacts Dispatcher requesting OTC.
   2. Dispatcher generates OTC via Cencon interactive application, gives OTC to FLM personnel.
   3. FLM personnel opens and closes lock, recording the Close Seal.
   4. FLM personnel gives Close Seal to Dispatcher who enters it into Cencon database via Cencon interactive application.
2. Route Operations with human Dispatcher:
   1. Before starting route, Route personnel contacts Dispatcher and requests OTCs for each lock on route.
   2. Dispatcher generates OTCs via Cencon interactive application, gives OTCs to Route personnel.
   3. Route personnel opens and closes each lock on route, recording Close Seals.
   4. When the Route has been completed, the Close Seals are given to the Dispatcher who enters them into the Cencon database via Cencon interactive application.
3. FLM Operations with IVR (Interactive Voice Response) system:
   1. FLM personnel reaches ATM, calls IVR system and requests OTC.
   2. IVR system generates OTC via CenTran Command File interface and reports OTC to FLM person.
   3. FLM personnel opens and closes lock, recording the Close Seal.
   4. FLM personnel calls IVR system and enters Close Seal.
   5. IVR system records Close Seal in Cencon database via CenTran Command File interface.

Though business processes will vary between companies there are core lock management tasks that will be used in every enterprise such as:

- Create User and Initialize Smart Key
- Delete User
- Dispatch Lock
- Open / Close physical lock
- Close Lock in Cencon database
- Reassign Lock
- Audit Lock
- Audit Key
- Audit Cencon Database

The following lists describe for a few of the core lock management tasks one possible flow of control through the Cencon ATM Cash Vault Security System components.

Create User and Initialize Smart Key:

- Dispatcher ->
- Customer Web Client ->
- CenTran Web Services ->
- CenTran Service ->
- CenTran Web Services ->
- Key Box Agent (writes KEY) ->
- CenTran Service ->
- CenTran Web Services ->

Customer Web Client

Note:

- Customer Web Client & Key Box Agent will probably be on same location but do not have to be
- Customer Web Client does NOT require a Keybox on the same system

Dispatch Lock(s):

- Dispatcher ->
- Customer Web Client ->
- CenTran Web Services ->
- CenTran Service ->
- Cencon Database ->
- CenTran Service ->
- CenTran Web Services ->
- Customer Web Client ->
- Dispatcher receives OTC
- Dispatcher transmits OTC to FLM/Route personnel

Lock is physically opened and closed:

- Service personnel calls Close Seal in to the Dispatcher who "Closes Lock" in the Cencon Database. The component flow is the same as that described for Dispatch Lock(s).

    - OR

- CenTran Agent Service on ATM uses CenTran Web Services to report Closure to CenTran Service and "Closes Lock" in the Cencon Database programmatically:
    - Lock is closed ->
    - CenTran Agent ->
    - CenTran Web Services ->
    - CenTran Service ->
    - Cencon Database ->
    - CenTran Service ->
    - CenTran Web Services ->
    - CenTran Agent

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1.3 The Cencon 5 Software Package

The following items are required to implement the Cencon 5 Software:

- **Cencon 5 Server License Kit: (Single Server Option - p/n 201190)**
    - **Install CD (Includes Cencon 5 Software, Cencon Database Setup Utility, Software Reference Manual, and Adobe Reader)**
    - **Cencon 5 Single Server License Certificate**
    - **Software Getting Started Guide**
    - **Quick Reference Cards (1 set)**
    - **Cencon Software Maintenance & Support (CSM&S) Agreement Form**
    - **1 Change Key**
    - **7 Cencon Smart Keys:**
        - **2 red SA Keys**
        - **3 black Logon Keys**
        - **1 white Clock Set Key (for Gen2 locks)**
        - **1 grey ReSync Key (for Gen2 locks)**
- **Mode Authorization License(s)** (One or more)
    - Bank Mode (p/n 201191). Includes 2 green B keys.
    - FLM Mode (p/n 201192). Includes 2 blue F keys.
    - Route Mode (p/n 201193). Includes 2 yellow R keys.
- **Cencon 5 orange Installation Key** (p/n 202202) - Required to install Cencon 5 in conjunction with a USB Key Box on a new PC. Uniquely coded and tagged per company according to the mode licenses ordered. Packaged and shipped separately for security reasons.
- **Cencon 5 Dispatch Kit:** (p/n 201181)
    - Cencon USB Key Box - Uniquely coded per company.
    - USB cable

An **Enterprise / Multi-Server License Kit** also is available - p/n 201194. This kit option includes all items in the Single Server Option and all 3 Mode Authorization Licenses shown above. A Cencon 5 Enterprise / Multi-Server License Certificate is provided instead of the Single Server License Certificate. The Installation Key and Dispatch Kits are still required for implementation and are still ordered separately.

If you are missing any of the above items, contact Kaba Mas Technical Support at 1 (800) 950-4744.

Optional Order Items:

- Cencon 5 Software Maintenance & Support (CSM&S) Agreement
- Cencon On-Site Training for hands-on lock installation and complete lock and software operation. (2-day class required for new users.)
- CenTran 5 (XML) Software (p/n 201182)

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Chapter 1 - Introducing Cencon 5

1.4 Personnel Classifications

There are two primary categories of people who can interact with the Cencon System: Lock Users, who open and close the lock in a particular mode, and Software Logon Users, who perform operations at the PC. For those who work with the PC system, authorization to system functions is defined through the Cencon PC software itself. The Personnel Classifications as designated in the system are as follows:

1.4.1 Lock Users

When a Lock User has a Smart Key programmed under their name, they typically keep that key with them at all times, and do not share the key with any other person. A particular Lock User's key can be initialized for any 1 of the 3 modes. The Lock User key cannot be used to logon to the Cencon software.

1.4.1.1 First Line Maintenance (FLM)

These are the field technicians whose duties include ATM repair work and lock installation. Due to the nature of their work, FLM techs are typically unaware of exactly where they may be dispatched on any given day. Each FLM tech carries a specially encoded Personal Identifier (Blue FLM Key) that, along with a dispatched combination, is required to access the lock.

1.4.1.2 Route Service Personnel (RSP)

Route personnel are field service people whose duties primarily consist of removing deposits from ATMs and replenishing currency for customer withdrawal. In some regions of the world, these users who drive Armored Cars / Armored Trucks are said to work for CIT (Cash In Transit) companies. Typically they service established routes with little variation, following a predetermined schedule. Route personnel carry specially encoded Personal Identifiers (Yellow Route Keys) that, along with a dispatched combination, are required to access the lock.

1.4.1.3 Bank Users

Bank Users are people whose duties include removing deposits from ATMs and replenishing currency for customer withdrawal. Typically, they service the ATMs or safes only at the branch where they work. Bank Users carry specially encoded Smart Keys (green Bank keys), that identify them to the lock and are used along with a unique combination to access the safe. The access combination for a bank user is fixed until changed by that user.

1.4.2 Software Logon Users

The Cencon 5 software allows an unlimited number of unique Software Logon User types, called Roles, depending on what group of menu options the user should be given access to. Prior to Cencon 5 software, there have been only 3 different levels of access (Dispatcher, Supervisor, and Special Supervisor), which are described below as examples. The software has several other default Roles, such as Reporting and Bank Mode Only, for example. The use of some of these default roles allows functions that were previously unique to auxiliary programs used with the Cencon locks (CenBank, CenDemo, Key Maintenance Utility, Activation Only) to be incorporated into the Cencon software, yet controlled to certain personnel. Although the default Roles are not changeable, any type of Logon User can be uniquely customized by copying the default role and renaming it as a new role. Each Logon Users can either use an initialized black Smart Key + his or her chosen password to access the software, or access can be allowed when the user is logged into the Windows Operating System using Windows Authorization. At least one Special Supervisor logon key is required to be created in the system, though all other software logon users can choose to use Windows Authorization or a black Logon key. The software logon keys cannot be used at the Cencon lock to open it. Below, the 3 Logon User types that were used in previous Cencon versions are described, as an example of what each role may have with the software. For more information on creating and using Roles see sect. 3.6.1 on Authorization Definitions.

1.4.2.1 Dispatcher

The Dispatcher works directly with the Cencon software to issue lock combinations and direct the operations of the FLM and Route personnel (Bank users are not dispatched). Locks are opened and secured through a coordinated effort between the Dispatcher and an FLM or Route person. Each Dispatcher is permitted access to only certain sections of the Cencon program, depending on how the authorization levels are defined for certain activities.

1.4.2.2 Supervisor

The Supervisor directs the operations of the Dispatchers. The Supervisor normally has access to levels in the Cencon software that are not available to Dispatchers, including the viewing of activity records and the creation of service routes. Each Supervisor is permitted access to only certain sections of the Cencon software, depending on how the authorization levels are defined for certain activities.

1.4.2.3 Special Supervisor

The Special Supervisor always has unrestricted access to all levels of the Cencon program, so tight control should be taken over which personnel has been given this role or has access to this key. Since the system is required to have at least one Special Supervisor user, many customers will choose to lock this key in a secure location and not use it for daily operation, but instead only bring it out to log in during special situations.

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1.5 System Components

The basic components of the system are as follows:

1.5.1 PC-Based Computer System

The PC-Based Computer System is actually comprised of hardware and software components. Cencon 5 requires a Cencon Key Box. The Cencon Key Box is installed by attaching its cable to any USB port on your computer. The Cencon Key Box contains information which serves as unique identification for a specific company's system.

> **Note**
>
> If a single company needs multiple stand-alone PC systems set up or multiple Cencon dispatching clients on the same network, multiple Cencon Key Boxes can be issued to the same company with the same unique security code for that company burned into the device.

The **Cencon Key Box** has two Smart Key ports, each having a green and a red status light. The blue LED in the middle is a power indicator when the unit is plugged in via the USB cable. A flashing green light indicates the port where the key needs to be inserted. Typically, the left-side port is used for reading an install key or a software logon key. The right-side port is used for creating or reading the audits from user keys or red SA keys. If there is an error reading the key, the red light is illuminated.

Shown above: P/N 202201. Cencon Key Box

> **FCC Notice**
>
>
>
> CENCON KEY BOX
>
> MODEL 202201
>
> The Cencon Key Box is manufactured by:
>
> Kaba Mas LLC
> 749 W. Short Street
> Lexington, KY, 40508
> U.S.A.
> 859-253-4744
> HTTP://www.kaba-mas.com

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference.
(2) This device must accept any interference received, including interference that may cause undesired operation.

Caution

Electrostatic Discharge (ESD): The Cencon Key Box

Operators may become statically charged in a normal working environment. Inserting keys or just touching the Key Readers on the Cencon Key Box may cause the computer's Operating System (OS) to disconnect from the Cencon Key Box. In this instance, un-plug and re-plug the USB cable between the computer and the Cencon Key Box. In addition, an ESD strike may cause the Cencon 5 software to malfunction. In this case, re-start the Cencon 5 software and continue your operation.

The software component is the PC-based Cencon 5 software. The software is designed to align itself with the internal software of the locks in generating unique One Time Combinations. Software functions also include the following:

- User Management
- Lock Management
- Lock Activation/Shelving
- Reports and Auditing

In order to logon to the system, an authorized Logon User's Smart Key would be inserted into the Key Reader, and the authorized user's password must be entered. Instead of using a software logon key, a Windows user can be set up in the Cencon 5 software and be validated by Windows Authentication. Any user who is given Cencon software logon authority can logon and use the Cencon program.

1.5.2 High Security Locks

The Cencon locks are highly-secured, advanced-design locks. The original design was first developed for use on United States Government safes containing classified material. There are currently 2 different models of the Cencon lock series that will operate in conjunction with the Cencon 5 Software. They are as follows:

- Cencon Gen2
- Cencon Gen1 (previously known simply as Cencon S2000)

Even though the locks are electromechanical, they require no wiring or batteries for opening the lock because they are self-powered. Power is generated by turning the dial knob on the lock to the left (counter-clockwise). After several turns of the knob, enough power is generated to allow the microprocessor in the lock to function. Combinations are then entered by pressing the numeric keys on the lock keypad, and a Smart Key is then presented to the lock's key reader. The software in the lock aligns itself with the PC software in generating unique One-Time-Combinations from the moment the lock is activated in FLM or Route mode.

Those users who are familiar with the operation of the Gen1 lock will notice few differences if operating the Gen2 lock as they did the Gen1 lock. However, many product enhancements exist with the Gen2 lock that are dependent on the type of PC equipment used to activate the lock.

See for detailed information on the Cencon lock hardware.

Caution

Electrostatic Discharge (ESD): The Cencon Lock

Kaba Mas locks are well protected from ESD damage once they are installed, but can be damaged during the installation process if proper precautions are not observed. When handling the locks, follow these precautions:

- Everything on and around work stations which might come into contact with ESD sensitive devices should be conductive and connected to earth ground through a resistor. The purpose of the resistor is to prevent electrical shock in case something should come in contact with a voltage source.
- The technicians installing the locks and PCI cards should also be "grounded." Technicians can wear conductive wrist bands with "alligator" clips connected to a convenient source for earth ground. The stainless steel plate on the wrist band should directly contact the technician's skin.
- When handling the back covers of Cencon locks and the PCI cards, do not directly touch the electronic components.

- Handle the covers by the edges, being careful not to touch the connectors. Eliminate the use of all unnecessary plastics, paper, and synthetics during installation.
- In addition, all locks and PCI cards are shipped with static shielding material (that do not generate static charges) and an antistatic sleeve covering the cable end.
- Do not install the back cover assembly until the flex cable connectors have been seated into their proper positions. Touching these cables transmits ESD from the technician's body through the cables to the electronic components of the back cover.

1.5.2.1 Lock Operating Modes

Cencon locks may be set to operate in any of several different modes.

> **Note**
>
> It is important to note that any lock may be activated in two or more modes simultaneously (of the 3 modes not including shelved mode). These different modes in a lock can either all be controlled by the same company or by 2 or 3 different companies. Also note, once a certain company has activated one of the modes from their software, no other company can be in control of that particular mode until that mode's current controller deactivates (shelves) their control of that mode.

Shelved Mode

The Cencon lock opens on the fixed combination of 50-25-50 and does not require a key of any kind. This is the default factory mode that all new locks are in when they are shipped from Kaba Mas. It is also the mode that locks are placed in when they are completely shelved (i.e., all active modes) from service, i.e., they are not being used operationally as a security device.

> **Note**
>
> The Shelved Mode Combination can be changed to something other than 50-25-50. See "Change Shelved Mode Combination" in the System Start-Up section of this manual.

Route Mode

The Cencon lock requires the correct Route key and the correct OTC to open. After access is gained, the door closed, and the lock bolt extended, the Route key is presented to the lock to receive a Close Seal number. The Route mode user records and later relays the Close Seal to a Software Logon User. Multiple combinations may be issued to a Route Key as needed. In addition, the combinations to a predetermined list of locks (a route) may be issued to the Route person at the start of the work period. In this case the Close Seal numbers are automatically recorded in the Route person's Personal Identifier key when each lock is closed. At the end of the route the Close Seal numbers can be downloaded from the key into the Cencon computer or can be entered manually one by one, from a menu. If Two Person Integrity (TPI) is required, Route Mode may be set to require two different keys and combinations to open the lock (Route Mode with Dual Access).

FLM Mode

FLM Mode is similar to Route Mode, but typically each FLM user is only dispatched a single one-time-combination at a time. When the FLM user receives the Close Seal, a call is made to the Software Logon User, who enters the Close Seal into the Cencon software, freeing the FLM key to be dispatched to the next site which needs service. This mode is useful where the containers or locks may require periodic unscheduled maintenance. By default it is not possible to give more than one combination at a time to a particular FLM user, though this can be modified. This mode may also be set to require Two Person Integrity (FLM Mode with Dual Access).

Bank Mode

This is a special mode which allows the lock to be accessed by persons other than regular service personnel (typically bank employees) when the container is located at a bank. In Bank Mode, the lock will open repeatedly when using the confidential combination each unique to different authorized Bank user key, and will not issue a close seal number. Rather than receiving a close seal number, after the door is closed and the lock is secure, the Bank Mode User's key is presented to the lock to write a close audit record to the lock and the key. The bank personnel may change their combinations when desired by a simple procedure. Again, Two Person Integrity is an option (Bank Mode with Dual Access).

Bank locks may be set to operate with Time Delay when they are activated. If a lock is activated with Time Delay, the lock will only open after the Time Delay has expired and before the Window to Open (the time allowed after the Delay time to Open the lock before the lock resets) expires. When a lock is activated in Time Delay mode, the time delay applies to all Bank mode users.

1.5.2.2 Lock Storage Capacity

The maximum number of audit record lines that can be stored in a Cencon lock is around 500, depending on the access modes used, the type of lock and the type of audit records. After that limit is reached, the audit file will wrap around and begin overwriting the oldest records. Because the audit storage capacity in the Gen2 lock exceeds the storage capacity of the SA key, in order to view the oldest

audit records, it may be necessary to directly connect the lock to a Cencon software PC using a special cable. However, typically an auditor is most concerned about the most recent set of records, so the SA key audit proves to be more than sufficient.

> **Note**
>
> An open and a corresponding close operation are recorded in 1 audit record line if performed by the same key, when used with a lock in Single Mode; therefore, the maximum number of opens and closes in the Cencon lock could be twice the number of audit lines; therefore it could be more than 1000 audit records.

1.5.3 Smart Keys

Smart Keys are used by people who work with the Cencon system, whether it be at the PC using the software program or at the lock. A Smart Key is actually a Dallas Semiconductor electronic device imbedded in a plastic or metal fob. The keys are designed to be carried on a key ring like a traditional key. The keys are placed in the key reader attached to the PC and are initialized with unique data. The lock also has a key reader, where the Smart Key is presented, resulting in data verification and the writing of programming or audit records. These sophisticated electronic keys can securely hold large amounts of both temporary and permanent information.

1.5.3.1 Key Types

There are many key type designations, shown in the chart below, which can be classified into 3 different categories: Lock Users, Software Users, or Data Transfer Keys.

The Lock User and Software User keys are sometimes known as **Personal Identifier (PI) Keys**. They are called Personal Identifier Keys because they uniquely identify the owner of the key once they have been added to the system. The PI keys are meant to be programmed to 1 individual for audit purposes and are not meant to be shared, or else security will be compromised.

The Data Transfer keys are programmed at the Cencon software to be used at the lock for a particular function, and then brought back to the Cencon software. Although the Data Transfer keys are usually loaned to a particular employee who already has a Lock User key, the Data Transfer keys are not programmed with any restriction that requires any certain Lock User to only be able to use them.

Kaba Part	Abbreviation	Description	Category	Compatibility	Color	Shape	Button Type
202020	F	FLM mode personnel	Lock User	Gen1 & Gen2	Blue	teardrop (bent)	DS1994
202022	R	Route mode personnel	Lock User	Gen1 & Gen2	Yellow	teardrop (bent)	DS1994
202023	B	Bank mode personnel	Lock User	Gen1 & Gen2	Green (Teal)	teardrop (bent)	DS1427
202024	L	Logon to Cencon (Ex: D, S, SS)	Software User	all Cencon S/W versions	Black	teardrop (bent)	DS1991
212030	A	Additional logon to KMU	Software User	KMU software only	Orange	teardrop (bent)	DS1429
202021	SA	Supervisor Audit	Data Transfer	Gen1 & Gen2	Red	teardrop (bent)	DS1996
202202	IS	Install Cencon 5 Software	Data Transfer	Cencon 5 & above only	Orange	hourglass (flat)	DS1963S
202226	CS	Clock Set	Data Transfer	Gen2 + Cencon 5 only	White	hourglass (flat)	DS1922L
202224	RS	Re-Sync	Data Transfer	Gen2 + Cencon 5 only	Dark Grey	hourglass (flat)	DS1963S
202220	F*	FLM mode personnel	Lock User	Gen2 + Cencon 5 only	Blue	hourglass (flat)	DS1963S
202222	R*	Route mode personnel	Lock User	Gen2 + Cencon 5 only	Yellow	hourglass (flat)	DS1963S
202223	B*	Bank mode personnel	Lock User	Gen2 + Cencon 5 only	Green	hourglass (flat)	DS1963S

> ***Note - Old vs. New Lock User Button Types (DS1994 / DS1427 vs. DS1963S)**
>
> The button types used in the historic F, R, and B keys (DS1994 + DS1427) are being phased out due to aging irreplaceable equipment by the manufacturer. Kaba Mas will continue to sell this version of the keys for several more years. This version of the F, R, and B keys will continue to work on both Gen1 and Gen2 locks.
>
> Future Availability: The DS1963S buttons will use the same colors as the historic F, R, and B keys, but can be differentiated by the shape of the key fob. They are not supported on Gen 1 locks or in Gen 2 locks activated in Compatibility Mode. The hour-glass shaped F, R, and B keys which use DS1963S buttons will only work with Gen2 locks activated in Full Gen2 Mode (activated with a USB Key Box).

Customers should tag and label the keys with the type of key and the user name that is defined in the system.

Lock User Keys:

The Lock User keys maintain internal audit trails which record opening and closing times. The DS1994 and DS1427 keys contain internal clocks which are set at the PC when the key is initialized for a specific user and when the **Initialize Lock User Key Clock** operation is performed. The DS1963 key audits are time-stamped using the clock found in the Gen2 lock.

FLM (F) Key

> This **blue** PI key is used by FLMs by touching it to the key reader on the side of a Cencon lock. This key lets the lock know that the FLM is authorized to open that particular lock. It is also used to get audit counts from locks in FLM Mode. A report may be generated from this key at the PC system, showing the user's activity.

Route (R) Key

> The **yellow** Route PI key is used very much like an FLM PI, but by Route Personnel. It uses the same electronic device used in the F key and therefore has the same characteristics and capabilities. A report may be generated from this key just the same as with the F key.

Bank (B) Key

> The **green** (teal) Bank PI key is used very much like the FLM and Route keys except that the combination does not change between uses. A report may be generated from this key just the same as with the F key.

Software User Keys:

Logon (L) Key

> This **black** PI key is used by an employee that has been given access to the Cencon software. The type of access the logon key has been assigned will depend on the authorization role given when it was initialized (Dispatcher, Supervisor, Bank Mode Only, etc.) This key must be inserted into the key reader at the Cencon PC client when the user is logging on to Cencon and may then be removed and secured. Users should log off during breaks and at the end of a work shift.

> | Note |
> | --- |
> | In the Cencon 5 software, the logon key is *only* accessed during the logon process. To change the effective user, and/or region, one must log out of Cencon and log back in with the desired key in the reader. |

Data Transfer Keys:

Supervisor Audit (SA) Key

> The **red** Supervisor Audit key is initialized at the PC key reader with the information needed to take it into the field to activate locks, shelve locks, or audit a lock. A single SA key can be initialized to activate or shelve multiple locks. This key can also be used to retrieve audit records from locks, and to add and delete bank mode users from a lock. For Gen2 locks only, an SA key can be programmed to retrieve the list of bank users from a bank mode lock.

Install (IS) Key

> The **orange** Install key is initialized by Kaba Mas with the information needed to identify the Cencon Customer and install Cencon on a computer. This unique key must be used during installations of Cencon 5 to allow a particular company's Key Box to be used on a particular PC. The company's unique security number programmed to the install key must also match the security number for that company programmed to all of their Key Boxes and PCI cards. The key and the tag attached to the key should be kept in a secure location after the installation process.

Clock Set (CS) Key

> The **white** Clock Set key is initialized by Cencon 4 software and used to set the clock and the daylight savings time information in Gen2 locks.

Lock ReSynchronization (RS) Key

> The **dark grey** Lock ReSync key is initialized by Cencon 4 software and used to resynchronize the data in the Cencon database with the data in a Gen2 lock.

1.5.3.2 Smart Key Operation

The Smart Keys used with Cencon provide a two-tiered approach to system security by requiring not only that anyone who opens a lock, or accesses system data on the computer has a key, but also that it is the correct type and has been properly initialized. For Lock User keys, the key is also used to provide a communications link between the central computer and the locks it controls. An audit trail of the Lock User key's activity is maintained inside the key itself.

The device that makes this possible is the Dallas Semiconductor iButton™ electronic device. This is the device in the key that looks like a watch battery. Yet, it is much more. Inside the stainless steel container there is a battery, and, in some models, a quartz crystal driven timekeeping system that provides real-time clock capabilities. Each key also has a unique serial number built into it that can be read but never changed. For more detailed information about the iButton™, you can refer to the Dallas Semiconductor web site at **www.maxim-ic.com**.

The iButton™ device is mounted in a convenient plastic or metal housing that allows it to be carried on a key chain and also provides a handle for inserting the key into the key reader at the PC or on the lock. When the key is inserted into the key reader, electrical connection is established between the internal electronics and the lock. Once the data communication is established, the lock can read data from the key and save the time and other data into the key's memory. Which function the lock performs depends partially on which type of key is inserted and what mode the lock is in.

The memory in the key is used to transfer data from the computer to the lock and from the lock to the computer. The data read from the key by the lock is used to assure that the key's user is authorized to perform the requested function. Data is also stored in the key by the lock, such as the data from a lock audit download to an SA key. The key can then be read by the computer to provide a record of lock activity.

Another function of some of the keys is to provide a time stamped record of activities performed at the lock. For Gen1 locks, this is done by using the real-time clock capability of the key. Power for the key is from a lithium battery inside the key which can last up to ten years, depending on frequency of use and temperature variations. The battery is used to run the quartz crystal that provides the time base for the real-time clock but is not necessary for the memory functions. For Gen2 locks, the audit times and dates recorded to the lock and the keys come from the real-time clock in the lock, no matter what type of Lock User Key is used.

1.5.3.3 Key Storage Capacity

The Smart Keys used with Cencon also have limits on the number of records that can be stored in them. The maximum for each key is determined by the amount of memory in the key and the type of records stored. For example, the SA key can hold several hundred audit record lines, depending on how the lock was configured and the types of audits. (Note that the SA key can only hold the records for a single lock at a time). Lock User Keys will also hold between 15-30 audit record lines of information, depending on the access modes used, the type of lock and the type of audit records. After that limit is reached, the audit file will wrap around and begin overwriting the oldest records. Because each audit record line could contain both an open time and a close time if opened by the same key in single access mode, this equates to a maximum number of open and close records on a Lock User Key between 30-60 event records.

1.6 System Data Definitions

It is very important to understand the definition and usage of the data fields that are set in the Cencon PC software.

Note

Date and Time Values

All dates displayed by the Cencon software are in the international standard format defined by ISO (ISO 8601).

Dates in this standard appear as follows: **YYYY-MM-DD**, where:

- YYYY is the year [all the digits, i.e. 2012]
- MM is the month [01 (January) to 12 (December)]
- DD is the day [01 to 31].

For example, "29th of December 2009", in this international format is displayed as 2009-12-29.

The international standard notation for the time of day is **hh:mm:ss** where:

- **hh** is the number of complete hours that have passed since midnight (00-23)
- **mm** is the number of complete minutes that have passed since the start of the hour (00-59)
- **ss** is the number of complete seconds since the start of the minute (00-59).

Midnight is represented by **hh** = "00".

Region

Region Data Access Control is a security option available within the Cencon software. Region Control is active when the checkbox displayed in the 'Change Configuration Settings' screen has been selected.   If the Region Control option is turned Off, then the Region field is optional data for locks, users, and routes, and lock users are not restricted from being dispatched to certain locks based on the region, nor are Logon users restricted to what data they can see and manage based on the region. If Region Control is turned On, it gives Cencon the ability to group users, locks, and routes into specific regions and then limit each user's access to only the users, locks and routes in their region. Every Cencon logon user would be assigned to either a Global region or Local region. The classification of a Global region or Local region does not alter the restriction that a lock user assigned to a region can never be dispatched to a lock assigned to a different region. Assignment to a Global region vs. a Local region affects what a Cencon logon user (i.e. Dispatcher, Supervisor, etc.) can see and manage within the Cencon System. Special Supervisors are always assigned to a global region, by default.

Local region logon users

- Only have access to users, locks and routes in their own region.
- Do not have access to the region maintenance functions.
- May only create users, locks, and routes in their region.
- Can never dispatch a lock user to a lock in a different region.

Global region logon users

- Have access to all users, locks and routes, regardless of the region.
- Can never dispatch or reassign a lock user in 1 local region to a lock in a different region.
- Even lock user that is designated as Global can only be dispatched to locks that are designated as Global, not to locks with any local region.
- A global logon user is required to select the region to be used for activating or shelving locks before the locks to be activated or shelved are specified. FLM/RSPs to be used in the activate or shelve process must belong to the region selected by the dispatcher.
- A global logon user can change the region assigned to any user, lock, or route.

Database Preparation

- A common example of how region control can be used is that several existing regional databases within a particular company, all using the same PCI security code and Company ID, could be merged to form a single common database accessed by all users. The logon users at the various branches could be given local regional access, which would allow them to only see, manage, and add locks and users within their local region. The IT managers would only have 1 central database to manage and support rather than multiple regional databases. Customers should contact Kaba Mas for assistance or advice on this process.

See [Region Maintenance](#) for more information on Region Control.

Company ID

The value entered for this field is set during the original software installation and can be any four-digit number you wish to identify your company. You should choose a number that is, in some way, meaningful to your company, and yet complex. Once this ID is set, you cannot change it. You should also record this number, and keep it in a secure location, since the number is no longer visible during or after logging in to the Cencon 5 software. If you are a branch of a larger company, or you are upgrading, you must enter the Company ID that has already been chosen for your company. If you are planning to activate locks from Cencon running on a networked PC, the Company ID must be the same on all systems involved in the process.

Customer Names

The Customer Name is a unique identifier that allows optional grouping of locks, users, and routes (usually for specific customers). This is especially useful when a single company is servicing locks for multiple customers. Customer Names can also provide a way of grouping Locks that have similar characteristics, such as belonging to a branch bank, or being located in a certain geographical area, or any grouping that the organization controlling the locks finds useful.

1.7 System Processes

There are numerous system processes that involve integrating activity at the PC software with activity at the lock. It is important that these processes be completed in their entirety. The following is an overview of each of these processes with links to the detailed "How To..." section of this document.

1.7.1 Activate Lock from Shelved Mode

A lock's default mode is Shelved Mode. A key must first be programmed for "activation" and then used at the lock before it can become a functional security device. From the Cencon software a lock can be activated in FLM Mode, Route Mode, Bank Mode, or any combination of these modes at the same time. The lock activation key (SA key) must first be programmed at the PC. Depending on which mode(s) are to be activated, the appropriate lock user key(s) are also prepared at the PC. Then, these keys are taken to the lock, along with a standard Cencon change key, in order to perform the activation procedure.

Details:
[Activate Lock in FLM Mode](#)
[Activate Lock in Route Mode](#)
[Activate Lock in Bank Mode](#)
[Activate Lock in Route Mode from FLM Mode](#)
[Activate Lock in FLM Mode from Route Mode](#)

1.7.2 FLM/Route Service Call

A lock will need to be opened periodically by either an FLM Technician or a Route Person. First a combination must be dispatched from the Cencon PC System. The FLM or Route Person then takes the combination that was issued and their respective Personal Identifier Key to the lock. The lock is opened with the dispatched FLM or Route service combination, and the necessary service operations are performed. The lock is then closed and the Personal Identifier Key (F or R) is used to retrieve the Close Seal. The Close Seal is reported to the Cencon dispatcher to close the call.

Details:
[FLM/Route Service Call](#)

1.7.3 Route Call

When a Route is dispatched from the Cencon PC System, it may involve one or multiple locks and one or multiple visits to each lock. This involves using the Cencon software to first define a multi-lock route before the combinations for this route are ever dispatched. Once the combinations are issued, the Route Person takes those route combinations and the R Key to each of the respective locks in the route. A route may occur in a single day or can be spread over multiple days. Each lock is opened with the dispatched Route combination for that lock and the specific sequence of visitation to the lock. A single lock may be visited up to 3 times within a single route. Once the lock is open, the appropriate route activities are performed. The R key is then used to close the lock and obtain the close seal which is returned to the Cencon dispatcher to close the call. The close seal can be called in to the Dispatch center at the time a Lock is closed as with a single service call, or the Route person can wait until the route has been completed and can then turn in the R key to close the calls in the PC System with the key.

Details:
[Route Call](#)

1.7.4 Retrieve and Report on Audit Download from Lock

The audit records recorded in a lock may be written to an SA key which is then taken to the PC to be printed. The procedure is to use the Cencon software to initialize an SA key for the retrieval of the audit data. The key is then taken to the lock. The lock is powered up and the retrieve audit command is entered. The key is held to the key reader on the lock while the data is written into its memory. The key with the data now written in it is taken to the PC where the data is read and a report is either printed or displayed. No PI key is required and the lock does not have to be opened.

Details:
[Retrieve and Report on Audit Download from Lock](#)

1.7.5 Shelve Lock

A lock may be temporarily removed from active service by shelving it. This involves using the Cencon software to prepare an SA for the shelving and performing the shelve operation at the lock. The process is slightly different depending on the lock mode. Note that a lock can be shelved in multiple modes (FLM, Route, Bank) with the same key at the same time if the

modes were activated on the same Cencon database.

Details:
Shelve Lock in FLM Mode

1.7.6 Add Bank User(s) To Lock After Activation

When a bank mode lock is activated, the users that are selected when the SA was programmed are added to the lock's authorization table. Additional users can be added at any time. The new users must first be added to Cencon if they do not already exist. Then the users must be given authorization to access the lock and the SA key is prepared at the PC to transfer the user data to the lock. This activity must be performed by an authorized Bank mode lock user because it requires that the lock be opened. This user must then take the SA Key and Change Key to the lock where users are going to be added.

Details:
Add Bank Users To Lock After Activation

1.7.7 Delete Bank User(s) from Lock

Part of maintaining the security of Bank Mode means deleting users from the lock when they no longer need access. This operation involves initializing an SA key with the information necessary to delete the users from the lock. A Bank mode lock user with opening authorization must then take the SA Key and Change Key to the lock where user(s) are going to be deleted, and open the lock to perform the Delete Users operation.

Details:
Delete Bank Users from Lock

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Chapter 2 - System Startup

2.1 Start the Cencon Program

The contents of this chapter are intended to assist you with System Start-up. Before you proceed, you should already have completed the activities found in the Cencon 5 Software Getting Started Guide (P/N 2058.075).

To start the Cencon program:

1. Select the Start icon from the Windows task bar.
2. Select the Programs menu item.
3. Select the Cencon menu item.
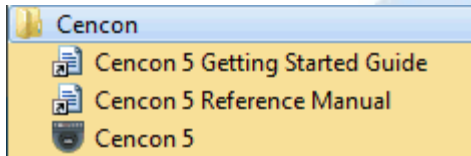
4. Select the Cencon 5 icon.
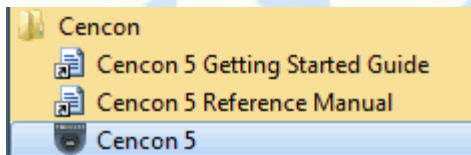
When you start the Cencon system, you may need to identify the database connection, depending on how the Cencon system configuration data is set.

5. If you see the following window, you have not selected a Cencon database:
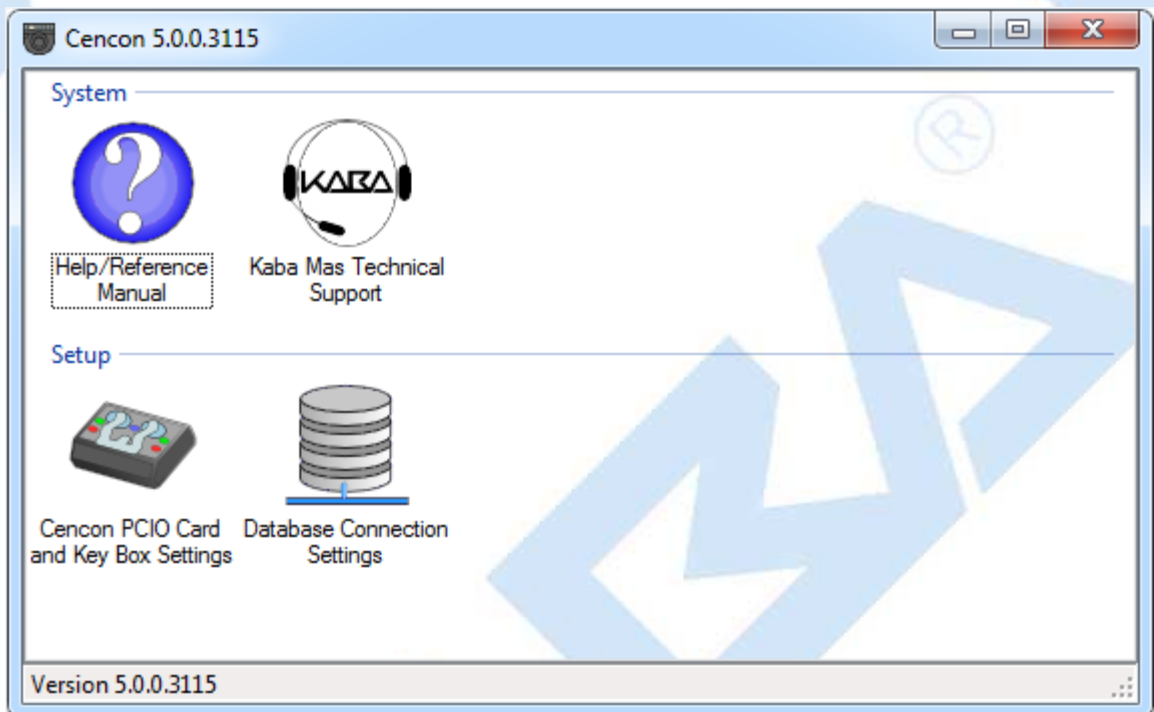
- Select "Database Connection Settings" to access the dialogs which allow you to identify the appropriate Cencon database.

Database Connection Settings

Select an Open Database Connectivity (ODBC) connection for the data source.

Select ODBC Data Source

Database ODBC Information

Data Source Name:	Cencon 4
User ID:	MHG\kholme
Database Administrator:	Yes
Database Management System Name:	Microsoft SQL Server
Database Management System Version:	10.00.4064
Server Name:	KHOLMESW7LT\SQLEXPRESS
Database Name:	CENCON4
Instance Name:	SQLEXPRESS
Schema Name:	CENCONUSER
Case Sensitive:	No
WorkstationTime and Zone:	2012/02/22 10:40:31 : Eastern Standard Time
Database Server Time and Zone:	2012/02/22 10:40:32 : (UTC-5 Hours)
Workstation IP Address:	<local machine>
Database Server IP Address:	Unable to determine the IP address.

☐ Reduce database checks at Cencon logon

This option is not recommended. This allows you to skip a major portion of the database validation checks conducted by Cencon. If you use this option, you may inadvertently log onto a malformed Cencon database which will result in Cencon having critical errors.

OK   Cancel

If the input field for "Set this ODBC Connection as fixed database logon" is checked, Cencon remembers the database connection for the next time the program is loaded.

Select the button labeled "Select ODBC Data Source" to select the ODBC connection for the database to be used with the Cencon system.

- Select the Catalog tab if you need to modify the database catalog name:

Database Connection Settings

Select an Open Database Connectivity (ODBC) connection for the data source.

Select ODBC Data Source

Database ODBC Information

Data Source Name:	Cencon 4
User ID:	MHG\kholme
Database Administrator:	Yes
Database Management System Name:	Microsoft SQL Server
Database Management System Version:	10.00.4064
Server Name:	KHOLMESW7LT\SQLEXPRESS
Database Name:	CENCON4
Instance Name:	SQLEXPRESS
Schema Name:	CENCONUSER
Case Sensitive:	No
Workstation Time and Zone:	2012/02/22 10:40:31 : Eastern Standard Time
Database Server Time and Zone:	2012/02/22 10:40:32 : (UTC-5 Hours)
Workstation IP Address:	<local machine>
Database Server IP Address:	Unable to determine the IP address.

☐ Reduce database checks at Cencon logon

This option is not recommended. This allows you to skip a major portion of the database validation checks conducted by Cencon. If you use this option, you may inadvertently log onto a malformed Cencon database which will result in Cencon having critical errors.

OK   Cancel

- Select the Schema tab if you need to modify the database schema:

Database Connection Settings

Select an Open Database Connectivity (ODBC) connection for the data source.

Select ODBC Data Source

Database ODBC Information

Data Source Name:	Cencon 4
User ID:	MHG\kholme
Database Administrator:	Yes
Database Management System Name:	Microsoft SQL Server
Database Management System Version:	10.00.4064
Server Name:	KHOLMESW7LT\SQLEXPRESS
Database Name:	CENCON4
Instance Name:	SQLEXPRESS
Schema Name:	CENCONUSER
Case Sensitive:	No
WorkstationTime and Zone:	2012/02/22 10:40:31 : Eastern Standard Time
Database Server Time and Zone:	2012/02/22 10:40:32 : (UTC-5 Hours)
Workstation IP Address:	<local machine>
Database Server IP Address:	Unable to determine the IP address.

☐ Reduce database checks at Cencon logon

This option is not recommended. This allows you to skip a major portion of the database validation checks conducted by Cencon. If you use this option, you may inadvertently log onto a malformed Cencon database which will result in Cencon having critical errors.

OK   Cancel

If using the default schema of "dbo" with one of the versions of Microsoft SQL Server, (i.e. Microsoft SQL Server 2000, 2005, 2005 Express, etc) you do not have to update the schema name.

6. The following window is displayed when a database is successfully identified:

Continue with "Logon to the Cencon System". You can also refer to the "Cencon 5 Getting Started Guide" for additional details.

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2.2 Logon to the Cencon System

The Cencon startup window controls access to configuration settings and logon:
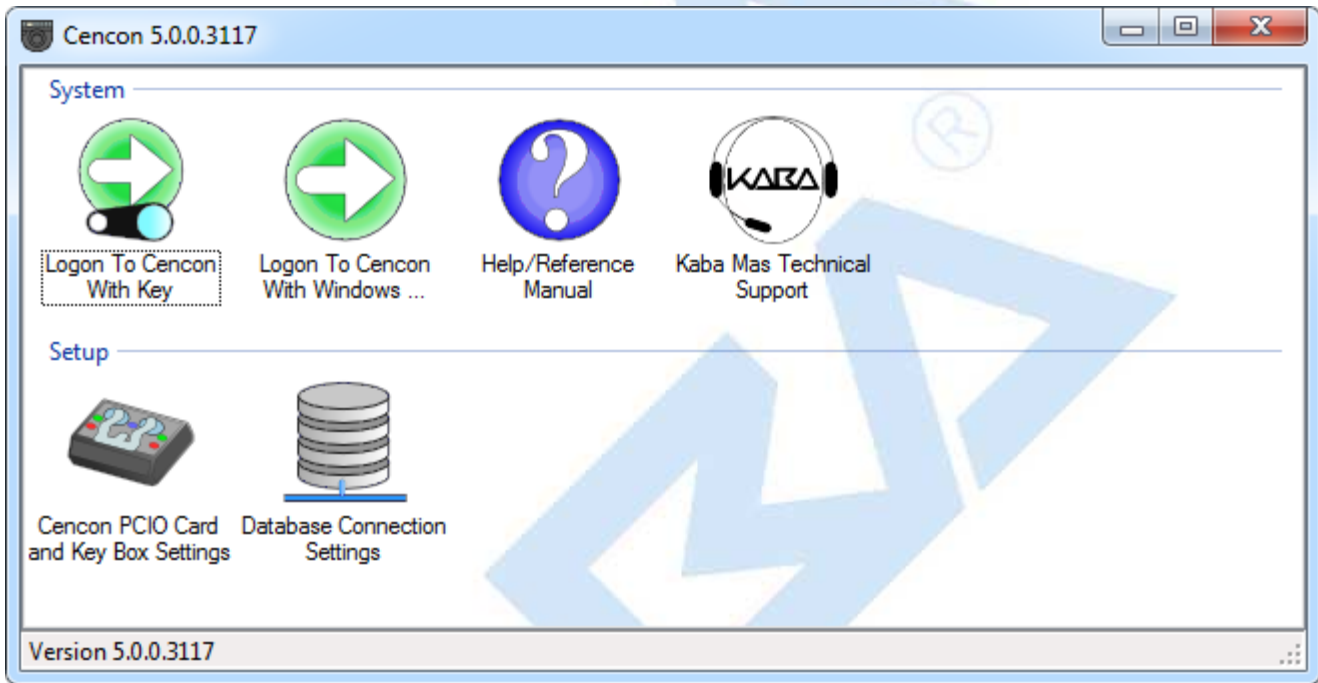
See the Cencon Getting Started Guide for details on the "Cencon Key Box Settings" and the "Database Connection Settings" functions.

Cencon allows a user to logon using either an authorized black Software Logon User key (such as Dispatcher, Special Supervisor, etc.). Additionally, a user may logon using their authorized Windows logon password.

1. To logon using a key, select **Logon to Cencon with Key**. Insert the black key in the proper port. If the key is recognized as valid, enter the password as requested:
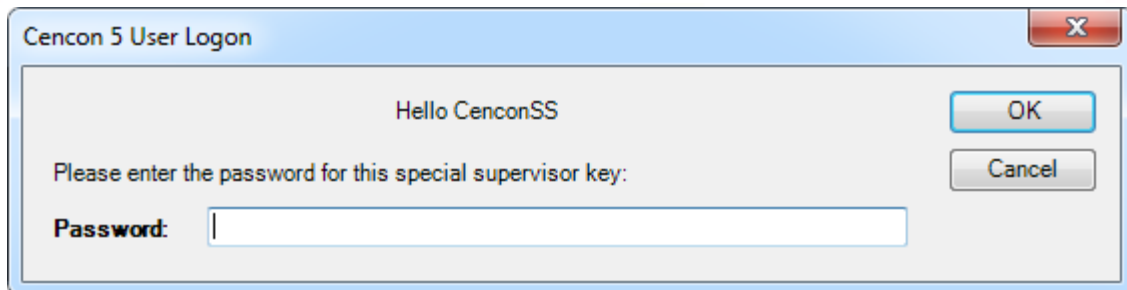
   Remember that this field is case sensitive and recognizes spaces as well as characters.

Note
You cannot logon to the system using a nickname, or a user ID. You must use the password specified for the key in the key reader. The key in the key reader identifies the user trying to log onto the Cencon System.

Hint
If a window is displayed indicating that the User ID doesn't pass authority check, first check to make sure that the appropriate key is in the reader and that the reader is properly connected.

2. To logon using a Windows Logon password, select **Logon to Cencon with Windows Logon**. Note that the Windows user name must already be set up as a user within Cencon (in the same manner as a user key).

The Cencon logon key is only accessed during the logon process. Once you are logged on, you should remove your key from the key reader and secure the key. You should also be sure to close Cencon when you leave the PC, as recommended by the following message:
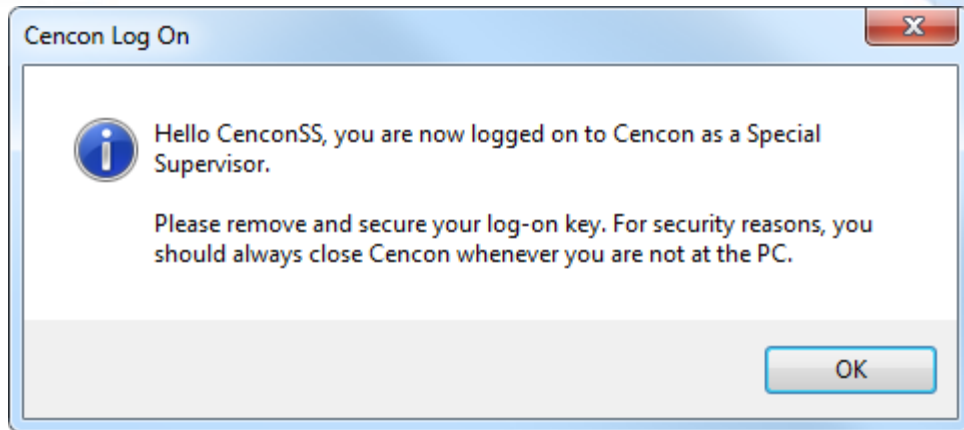
After a successful logon, the Cencon Main Menu window is displayed. Some of the items may not be displayed on your system depending on your user authority settings.

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2.3 Main Window

The Main Window displays only those functions authorized for the current user. Related functions are grouped as follows.

Accelerator Keys

The following accelerator keys are programmed to access functions on the main window:

F1 = Help
Ctrl + A = Activate Locks
Ctrl + D = Dispatch Locks
Ctrl + K = Close Locks with Key
Ctrl + L = Lock Operations
Ctrl + R = Route Report
Ctrl + S = Close Lock
Ctrl + U = Add User Keys
Ctrl + W = Add Windows Logon User

- Favorites:

Cencon gives you quick access to functions you use often by letting you add them to a Favorites group at the top of the main window. Cencon saves this Favorites information separately for each Cencon user.

The Favorites group is initially empty. You add a function to your Favorites group by dragging its icon from its home group and dropping it in Favorites, or by right-clicking on the icon and selecting "Add Operation To Favorites Group" from the popup menu. A new copy of the icon will appear in the Favorites group.

You delete a function from Favorites by dragging its icon out of the Favorites group and dropping it, or by right-clicking on the icon and selecting "Remove Operation From Favorites" from the popup menu.

Note

The drag-and-drop method of adding functions to and removing functions from the Favorites group is not available under Windows XP. Instead, you must use the popup menu method.

- Lock operations:

Locks

Lock Operations

Lock Report

Open Lock Log

Route Report

Lock Collections

Bank Branch Report

Customer Report

Dispatch Lock

Reassign Lock

Close Lock

Lock Open Alarm

Lock Operations With Serial Connect

Activate Locks

Shelve Locks
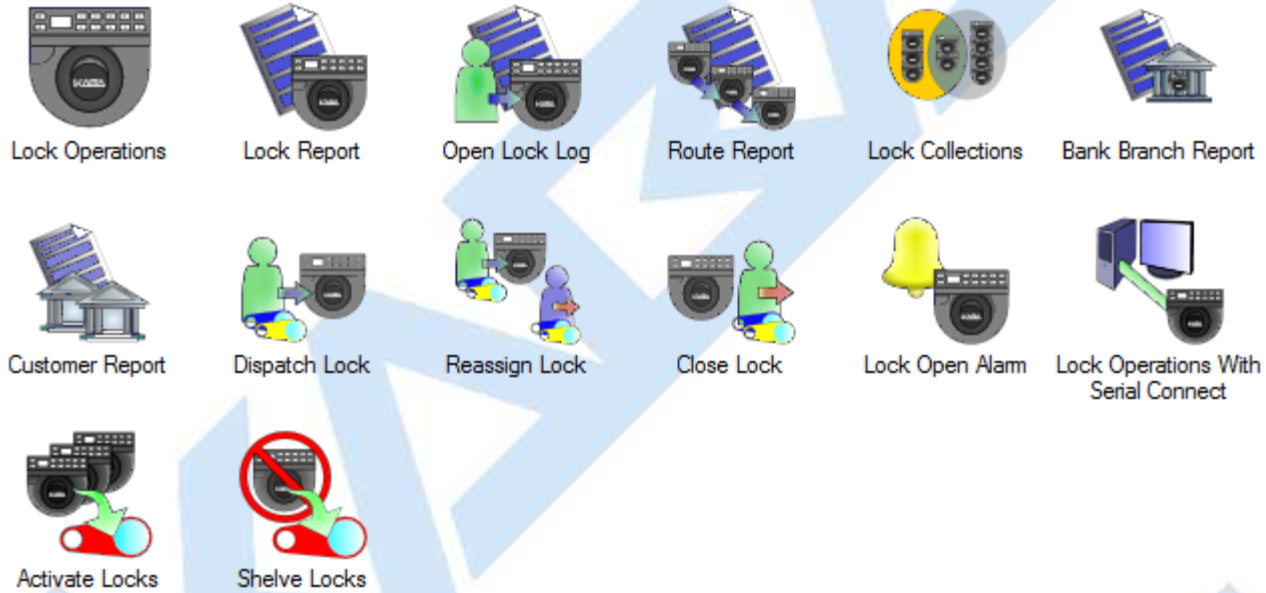
Note
The most commonly used functions (Dispatch, Reassign, and Close) are available via 2 methods. These are (A) by direct access from clicking the icons on the main menu, which requires typing in the lock name or lock serial number, and (B) from within the Lock reports, which allows you to search for the specific lock, right-click the line of that lock, and choose from basic operations to perform on that lock. Within this document, most of these basic functions are shown accessed via the icon on the main menu; however, depending on your operational use of the software, you may discover that leaving the Lock Operations report open, searching for the locks from there, and performing all dispatching and closing by right-clicking improves your personal daily efficiency.

- User operations:

Users

User Operations

Edit User Key In Reader

Close Lock With Key

Add User Keys

Add Windows Logon Users
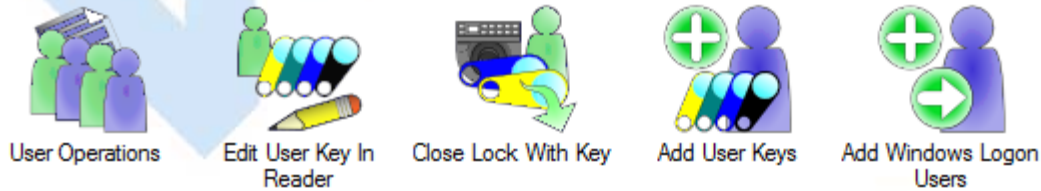
- History operations:

History

Activity Report

Archived Activity Report

Lock Log History Report

Archived Lock Log History Report

Deleted Lock History Report

User History Report

Archived User History Report

Archived Route Report

Reporting
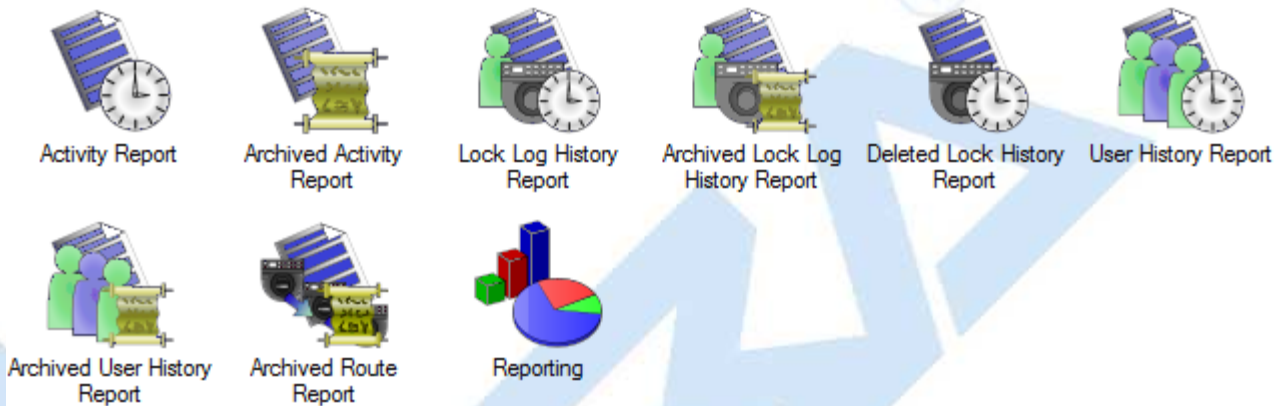
- Key operations:

Keys — Initialize Audit Download Key · Create a Retrieve Bank Users Ke... · Initialize Lock User Key Clock · Initialize Key To Set Lock Time (Gen2) · Re-Initialize User Key · Key Report

- System operations:

System — Authorization Role Report · Region Report · Change Configuration Settings · Preference Settings · Security Hardware Report · Logoff From Cencon · Help/Reference Manual · Kaba Mas Technical Support

These functions are access options pertaining to functions for customizing and maintaining your Cencon system.

- Status Bar:

The Status Bar is located at the bottom of the Cencon Main Menu screen. Prior to logon, this area displays the Cencon software version information. After logon, this bar displays the name of current logged on user, their assigned role, and region information (if region control is active).

> **Note**
>
> If any operational item is not displayed or is displayed in gray (disabled), that item is not available to the current user (usually because they are not authorized to access the function). Security of the Cencon system is based on the key in the key reader, the function being requested, and the authorization role assigned to the function by the manager who installed or customized your software. Refer to the Authorization Functions chapter for more detailed information.

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2.4 Lock Operation in Shelved Mode

2.4.1 Open Lock in Shelved Mode

Note
If you are operating a Cencon lock and **-dL** appears on the display during an operation, it indicates that you should **d**ial **L**eft (Counter Clockwise). The purpose is both to give the lock additional power and to ensure the lock bolt is fully extended. **CW= Clockwise; CCW = Counter Clockwise** **Special Note: Please refer to section 4.3 for Cencon Swing Bolt Operations.**

Each Cencon Lock is shipped from the factory in Shelved Mode. The One Time Combination feature which requires a Smart Key is not available when the lock is shelved. Instead, the Shelved Mode combination is used to open the lock without any Smart Key. The default Factory Combination is set to **50-25-50**. Practice opening the lock in shelved mode with the default factory combination until you are comfortable with its operation. The default combination may be changed, in which case the new combination would be used to open the lock while in Shelved Mode. The correct opening procedure for a shelved lock is:

1. **Power Lock → EC**
   Turn the dial to the left (CCW) until the letters **EC** (**E**nter **C**ombination) appear in the display window.

2. **EC → Enter Shelved Mode Combination → OPr**
   Enter the current Shelved Mode combination, whether it be the Factory Combination of 50-25-50 or a newly set Shelved Mode combination, by sequentially pressing those digits on the lock keypad. The LCD will display the numbers as the combination is entered. When the combination has been correctly entered, **OPr** will be displayed, meaning "**OP**en **r**ight".

3. **Opr → Retract Bolt**
   Turn the dial to the right (CW) to retract the bolt.

4. **Open Door**

5. **Close Door**

6. **Extend Bolt**
   Turn the dial a minimum of one complete rotation to the left (CCW) to extend the bolt.

Note
After opening and closing any lock, you should always check to ensure that the lock is physically relocked (i.e., bolt fully extended and locked in place) by turning the dial to the right. If the bolt does not retract, you can be assured the lock is secured.

Helpful Hint
At any point while entering the combination during an opening sequence, if you notice that an incorrect number was pressed on the keypad, you may clear the entire operation and start again by pressing the star (*) key. This allows you to return to the EC prompt without getting a wrong try error (lightning bolt).

Caution - Lock Out (LCO)
When the combination is incorrectly entered, a lightning bolt error will flash on the display (with no other numbers following it). To clear this error and start again, press and hold the star (*) key. Even in Shelved Mode, it is important to avoid getting 5 wrong combination attempts in a row without a successful opening in between because the lock will be put into Lock-Out condition, displaying, "LCO." Clearing the LCO condition in Shelved Mode requires waiting 5 minutes and then entering the correct combination. **Gen2 Locks** If there is a problem with the battery in the Gen2 lock when a lockout occurs, the lock must have power for the full timeout period. The display will alternately flash **-dL** and **LCO** to indicate this.

2.4 Lock Operation in Shelved Mode

2.4.2 Change Shelved Mode Combination

> **Note**
>
> If you are operating a Cencon lock and **-dL** appears on the display during an operation, it indicates that you should **d**ial **L**eft (Counter Clockwise). The purpose is both to give the lock additional power and to ensure the lock bolt is fully extended.
> **CW= Clockwise; CCW = Counter Clockwise**
> **Special Note: Please refer to section 4.3 for Cencon Swing Bolt Operations.**

Required Items: Change Key

For Cencon Locks with a code level of 71, or greater, you may change the Shelved Mode combination. You may change the default Factory Combination of 50-25-50 to a new combination to be used while the lock is still in Shelved Mode.

You can find how to determine the lock code level of a Cencon lock in Appendix E - Determine Lock Level.

This is an option that is only available while the lock is in Shelved Mode and is intended only for temporary use after the ATM is deployed but before the lock is activated. It is not recommended to keep the Cencon lock in this Shelved Mode condition, due to lack of security and control.

> **Warning**
>
> If this combination is lost or forgotten, there is no alternate way to open the lock. Also, while in Shelved Mode, the Gen1 lock records no audits of lock openings. A Gen2 lock records data and time of openings; however, of course, there is no user recorded in the audit for these openings.

Once you have changed the combination for the first time, you have the ability to change the combination again to a different Shelved Mode combination or back to the Factory combination of 50-25-50.

> **Note**
>
> Once a lock is "activated" in any mode, the Shelved Mode combination returns to the Factory Default of 50-25-50.

1. **Power Lock → EC**
   Turn the dial to the left (CCW) until **EC** (**E**nter **C**ombination) is displayed.

2. **EC → Enter Shelved Mode Combination → OPr**
   Enter the current shelved mode combination (either 50-25-50 or a changed Shelved Mode combination) by pressing those digits on the lock's keypad. The numbers will be displayed on the LCD as they are entered.

3. **OPr → Retract Bolt**
   Turn the dial to the right (CW) to retract the bolt.

4. **Open Door**

5. **Insert Change Key**

   Insert the change key into the change key socket on the back of the lock.

> **Warning**
>
> **Do not close the door.** Leave the door open during this process until you are comfortable opening the lock with the new combination.

6. **Extend Bolt**
   Turn the Dial to the left (CCW) to extend the bolt.

7. **Power Lock →** ⌷tEC⌷

   Turn the dial to the left (CCW) until ⌷tEC⌷ (Change Key symbol along with **E**nter **C**ombination) is displayed.

8. ⌷tEC⌷ **→ Press #8 → EcF**

   Press the # button followed by 8. **EcF** (**E**nter **c**ombination, **F**actory) will be displayed.

9. **EcF → Enter Current Shelved Mode Combination → EnF**
   Enter the current shelved mode combination, **EnF** (**E**nter **n**ew **F**actory combination) will be displayed.

10. **EnF → Enter New Combination → CnF**
    Select and enter the new combination. **CnF** (**C**onfirm **n**ew **F**actory combination) will be displayed.

11. **CnF → Enter New Combination → POC**
    Enter new combination again to confirm. **POC** (**P**ull **O**ut **C**hange key) will be displayed.

Warning
Record the new combination and store it in a secure place. If this combination is lost or forgotten, there is no alternate way to open the lock.

12. **POC → Remove Change Key → EOP**
    Remove the change key. EOP (End OPeration) is displayed.

13. **Power Lock → EC**
    Turn the dial to the left (CCW) until **EC** (**E**nter **C**ombination) is displayed.

14. **EC → Enter New Shelved Mode Combination → OPr**
    Enter the shelved mode combination by pressing those digits on the lock's keypad.
    The numbers will be displayed as they are entered.

15. **OPr → Retract Bolt**
    Turn the dial to the right (CW) to retract the bolt.

16. **Close Door**

17. **Extend Bolt**
    Turn the dial to the left (CCW) to extend the bolt.

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2.5 Cencon Versus CenTran Considerations

The following table identifies the differences in supported field lengths for the Cencon database and the CenTran transaction file (.ti / .to) structure.

Field Name	Allowed Length in CenTran 3.x & 4 with .TI / .TO Files	Supported Length in Cencon 5 & CenTran 4 with XML Files
Lock Name	10 characters	64 characters
Logon User ID	20 characters	64 characters
FLM User ID	20 characters	64 characters
RSP User ID	20 characters	64 characters
Nickname	10 characters	64 characters
Route Name	8 characters	64 characters
Lock Serial Number	6 digits	9 digits

If you are using the CenTran 4 XML transaction files, the allowed field lengths are the same as the length supported in Cencon. Please refer to the CenTran 4 Programming Guide found on the Kaba Mas website for more information.
http://www.kabamas.com

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2.7 Prepare System for Operation

The following activities are required to prepare Cencon for operation.

<table>
<tr><td style="background:yellow">**Before Creating Users and Activating Locks...**</td></tr>
<tr><td>

Depending on how you are using Cencon, certain information must be predefined so that it is available for selection during the process of creating users and activating locks. This data includes:

- **Bank Branches**: If you are going to create any Bank users or locks, you must first define the Bank Branches to which they will be assigned using the Bank Branch Report.

- **User Types**: If you want to assign a customized authorization role to any new users, you need to create the new user roles before creating the users. See User Authorization for more information.

- **Region Definitions**: If you are going to use Region control, you should first define your regions using the Region Report.

- **Customer ID**: If you are going to assign a Customer ID to your users or locks, you should first define the Customers using the Customer Report.

</td></tr>
</table>

2.7.1 Add Additional Users

If you are following this documentation in order, and you have followed all the steps covered in the Getting Started Guide, and if you have just created an empty database and not imported or upgraded any previous Cencon files, at this point there is only one logon user in the system, a Special Supervisor key. To add additional software logon users follow the procedure outlined below.

FLM, Route, and Bank users are the personnel that will perform operations at the Cencon lock. It is necessary to add these personnel before Activating locks, because lock activation requires having one or more of these personnel in the system. You can add the FLM technicians, Route personnel, and Bank users at this time as well, again using the following procedure.

The following steps are only meant to provide a minimal overview of the procedure. See Add a User for detailed information.

1. Start the Cencon program and logon as a user, such as the SS key, who has the authority to add new users.

2. From the **Main Window** click on **User Operations.**

3. From the **Search For Users Dialog** select **Search**. (Press the Enter key to select **Search** to avoid using your mouse.)

4. When the **User I.D. Report** displays, select **Operations > Add a User**.

5. The "Add a New User" dialog opens. Insert the new user's key into the key reader.

6. Enter a name for the user in the User ID field.

7. Select the User Type.

8. Enter the User Password if this is a Software Logon Key. (The password is not required for FLM, Route, and Bank users).

9. If Region Control is active, select a region.

10. If this is a bank user, select a Bank Branch and enter a enter a Bank User ID.

11. Select the Access Control tab to enter the appropriate access control restrictions for the user. If you are creating a supervisor or dispatcher key, this will control the times that the user can access the PC system (Special Supervisors always have access). If this is an FLM, Route, or Bank user, the information will control the times when the user can gain access to

the locks.

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Warning

If you define time access windows for your system users, be sure to take into consideration time orientation changes if applicable (i.e., Standard Time to Daylight Savings and vice versa). Your PC system will automatically adapt for these time changes, but the time windows carried in the keys will be off by an hour when your PC system goes to a different time orientation. To alleviate this problem, you can have a +1 hour and -1 hour allowance in your time window. If security measures will not tolerate this type of allowance in the window, each user's key must be brought back to the system for updating when the time changes. The function in the PC Software that is used to update the keys is **Change User Information** function and is found in the User Operations Report. For more detail see the section on **Change User Information**.

Caution

If you are using the time window capabilities of the system and you have a centralized dispatch center, keep in mind that accommodations will have to be made when adding FLM and Route Personnel to the system whose keys will be distributed to different time zones. The Window Opening Information will have to be adjusted by the difference (+/-) between the dispatch center and the time zone where the key will be sent.

</div>

12. Click on the Process button.

13. The User Created window opens. Click on "Yes" to add another user or "No" to exit.

Repeat steps 5 through 12 for any additional users that you would like to add at this time.

Once FLM and/or Route users are added to the system, they can be assigned to activate new locks or be dispatched to existing locks.

2.7.2 Activate Locks

Once you have active FLM, Route and/or Bank users in the system, you can activate locks. To activate a lock, you should know the following information:

- The name that you will assign to the new lock
- The FLM or Route person who will have the assignment of activating the lock (not needed for Bank mode activation).
- The lock's serial number (between 6 - 9 digits)

> **Note**
>
> The lock serial number can be obtained from the lock itself by powering the lock and pressing # 2.

- The mode in which the lock will be activated
- Any of the Optional Data about the ATM that you want stored in the database: address/location, Customer Name, ATM Serial #, etc.

There are a number of different activation scenarios, examples of which are covered later in this document. How you will activate the lock will depend on the following information:

- The mode(s) in which it will be activated
- Whether or not any other mode(s) are already active
- Whether you want to require Single combination access or Dual combination access

Detailed procedures for activating locks are found under Activate Locks. In addition to these areas of reference, detailed procedural flow charts can be found in the Appendices.

The general flow of an activation can be summarized here. See also the System Process Flow Charts section of the manual.

You must first activate the lock in the PC system by programming a red SA key. The SA key is used to transfer information from

the Cencon PC System to the Cencon Lock. You also will need the User ID of the FLM or Route Person who will be activating the lock (FLM and/or Route mode activation only).

Once you activate the lock in the PC system, you will need all of the following components to activate the actual lock:

- The programmed red SA Key
- The FLM or Route user's Personal Identifier Key (if activating FLM or Route mode)
- The activation combination
- A Change Key (Included in Instruction Kit for each lock)

The above items are taken to the Cencon lock and used to activate it. After the procedure to activate the lock at the lock is completed, the activation call needs to be 'closed' in the PC system. The person who activated the lock should relay the close seal number to the dispatch center so that the call can be closed. This 'close seal' number is either a two or four digit number that, when entered into the program, tells the software that the activation call has been completed. The lock has been activated and is ready to be used for regular dispatches.

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2.8 Using the Cencon System

Cencon is designed so that almost all functions are accessed from the related report - you simply open the appropriate report, select locks, routes, or users and then an operation from the Operations or Administration menu. A few of the very common functions, such as Lock Dispatch and Lock Close, can also be accessed directly from icons on the main window.

> **Note**
>
> The **Lock Operations** icon on the main screen opens a version of the Lock Report which has been optimized for load performance. This report offers the same functions as the full Lock Report but displays only a minimal subset of the data. Plus, for your convenience, the Lock Operations report includes the dispatched user ID and the combination for each currently open call. Thus it should be your primary tool for working with locks.

The following is a sample of some reports and their operations:

3.1.2 Lock Log Report - Displays information on open locks.
- Close a FLM/RSP service call for the selected lock.
- Reassign a FLM/RSP service call to different FLM(s)/RSP(s).
- Unassign a FLM Service call so that the FLM may be assigned a call to another lock.
- Edit Lock Data for the selected lock.
- Display detailed information about the selected lock. See also 3.1.1.14 Individual Lock Report.

3.1.1 Lock Report/Lock Operations Report - Displays information on all locks.

Operational Functions:

- Dispatch a FLM/RSP to service the selected Lock.
- Close a FLM/RSP service call for the selected lock.
- Reassign a FLM/RSP service call to different FLM(s)/RSP(s).
- Unassign a FLM Service call so that the FLM may be assigned a call to another lock.
- Edit Lock Data for the selected lock.
- Display detailed information about the selected lock. See also 3.1.1.14 Individual Lock Report.

Administrative Functions:

- Activate locks and reissue activate keys
- Shelve locks
- Verify shelve
- Delete shelved locks
- Replace and undo replace locks
- Rename locks
- Force close and force delete
- Import locks from XML file and export locks to XML file

3.1.3 Route Report - Displays routes.
- Add a new route.
- Edit route data for the selected route.
- Delete the selected route(s).
- Rename the selected route.
- List a route for dispatching, reassigning, closing the locks on the route. See also 3.1.3.1 Route Listing Report.
- Import all route files (.RTE) found from the currently set route directory. This is for routes not stored in the Cencon database, created either by previous versions of Cencon or by third party software.

- Import a specifically selected route file.

[3.1.3.1 Route Listing Report](#) - Displays the locks associated with a specific route.
- Browse to add locks to the route. This allows you to select locks from the lock report that you want added to the route.
- Remove the selected lock(s) from the route.
- Select users to service the route.
- Dispatch the locks on the route.
- Reassign the locks on the route.
- Close the locks on the route by menu, by manually entering close seals.
- Close the locks on the route by key, by reading close seals off of the dispatched route user's key.
- Display detailed information about the selected lock. See also [3.1.1.14 Individual Lock Report](#).

[3.2 User ID Report](#) - Displays information on Cencon users.
- Add a new key user and add a new Windows logon user.
- Change user information for the selected user(s).
- Delete the selected user.
- Rename the selected user.
- Display open locks that the selected user is currently dispatched to.

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3.0 Using Cencon Reports

The Cencon software provides report driven functionality. Almost every function is accessed by selecting items from the appropriate report (locks, users, routes, etc.) and then selecting a function to operate on the selected items. Direct access to a few frequently used functions is provided by icons on the main window.

Hint
The Lock reports are special cases in that the Lock Operations report is a subset of the full Lock report and is optimized to display and scroll quickly. Always use the Lock Operations report for accessing lock functions unless the additional data in the full report is needed.

The display of each report is performed in a separate task from other Cencon processes. A report remains on the screen until you close it or exit. Cencon Report screens contain a Title Bar, Menu Bar, Column Headings, a grid that displays columns and rows of data, vertical and horizontal scroll bars, and a status bar. You may re-size, move or hide the panel and columns.

General Operation:
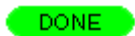
- The report generation may be cancelled at any time by closing the report window.

- Other Cencon functions may be used while the report is being generated.

- Operations on already displayed data may be performed while the report is being generated.

- Although Cencon's report generation process is optimized to communicate as efficiently as possible across networks, it is important to limit the amount of data displayed in order to achieve optimal performance. Cencon allows the user to filter the report data by displaying a Search screen before the report is generated (for the Lock Log, Locks, Users, Activity Log, and Customer reports).

  The Search screen may be used to request specific ranges and types of data and thus reduce the amount of data communicated through the network.

- Some of the search dialogs have a large number of search parameters available for use. These dialogs have the parameters split up into categories on different tabs of the dialog. If a tab of a search dialog has one or more search parameters entered on that tab, and the contents of the tab are not immediately visible, then the tab will be highlighted in light green. This is to allow easy determination of where search parameters have been entered in the various tabs of the search dialogs.

- The search dialogs can remember and reload the previously entered search parameters. This option is enabled with a check box on each of the search dialogs.

- The search dialogs include the option of searching for "exact" matches or "contains" matches. For example, if "Exact" is selected and a lock name of "lock1" is entered, the report will only display information for the lock named "lock1". If "Exact" is not selected and "lock1" is entered, the report displays data for all locks whose names contain the text "lock1" (lock12, lock12345, newlock12345, etc.).

  Fields that contain free form data, such as the "User Defined" field, will always be searched as if "Exact" is not selected.

- The following status messages are displayed in the bottom right corner of each report:

Status Icon	Description
LOADING	Retrieving and processing data for the report.
DONE	The report has finished processing. All data is displayed.
PARTIAL	The report has finished processing but not all of the data fit into the computer's memory. When you scroll outside of the loaded data, additional records will automatically be accessed and some of the existing data will be removed to make room.

ERROR	An error has occurred and only part of the data is displayed. Check your network and database status and rerun the report.
STOPPED	The user has started an operation and the report has stopped loading to avoid interference (and additional overhead) to the operation.
COUNT	The number of records for the report. Displayed only briefly during startup processing.

- An informational message is displayed at the bottom left of the report screen to indicate the number of matching records, the number of records which fit into memory, and the range of records shown in the display.

  Example:

  18 Lock log entries found. (18 records currently in memory.) (1 - 14 displayed.)

Cencon Data Table Reports also have color coding in order to differentiate types of activity and report field attributes. The following legend describes the meaning of colors in the Cencon Reports:

- **White** - Field cannot be edited.   (In the case of Lock Reports = lock currently not dispatched; in User Report = user not currently dispatched.)

- **Yellow** - Field can be edited.   (Only found in the Route Listing Report.)

- **Light Red** - Indicates an error condition.   (In the case of Lock Reports = Gen2 lock currently has a ReSync key issued to it. Cannot dispatch.)

- **Green** - Indicates success.   (In the case of Lock Reports = lock currently dispatched; in User Report = user currently dispatched.)

- **Grey** - Not applicable.   (This field is not applicable to this lock or this user, for instance the Dual Mode User column for a lock in Single Mode.)

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Important Note

Color coding is also used in the Lock Report, User Report and Bank Branch Report to differentiate between different generations of locks and keys, which determines their compatibility with each other and with other functions in the software.

In the Lock Report, the Lock Name field will either be white, grey, or blue.
       White   =   Gen1 lock
       Grey   =   Gen2 lock activated in Compatibility Mode
       Blue   =   Gen2 lock activated in Full Gen2 Mode

In the User Report, the User Name field will either be white or blue.
       White   =   Key type of the F, R, or B key is DS1994 or DS1427.
       Blue   =   Key type of the F, R, or B key is DS1963S.

In the Bank Branch Report, the Branch Name field will either be white or blue.
       White   =   Bank branch can be used with Gen 1 and Gen 2 locks as well as with all key types.
       Blue   =   Bank branch can be used only with Gen 2 locks activated in Full Gen 2 Mode and the DS1963S key
type.

The software will display an error if an operation that is only possible with one version of lock is attempted with a different version of lock. For instance, if you attempt to dispatch a user highlighted in Blue (DS1953S key) to a lock that is highlighted in White (Gen1) or Grey (Compatibility Mode). To filter a report for a certain version of lock, use the radio button for Lock Model on the search screen, since the color coding for the lock name is not able to be sorted from the report.

</div>

Menu Bar

The Menu Bar contains the commands for operations that may be performed on the report. Some Menu Bar options are specific to each type of report, but some are common to all reports. From the displayed screen you can use the "File" menu to print the report or to save it to a file. You can also use the "Edit" menu to copy the report data to paste into another file or to convert to a graphic HTML format. In most of the reports, you can also sort the report data by selectable criteria.

File - Select the File command to display a drop-down list of file options.

- **Close** - Close the report and exit.
- **Save** - Save the report in a file. If this report has already been saved, the file name and format selected at that time are used again; otherwise, this is the same as "Save As".
- **Save As** - Save the report in a file using the file name provided by the operator and a format selected by the operator. Formats that may be selected are "Text Only (*.txt)", "Text (Tab delimited)(*.txt)" and "CSV (Comma delimited)(*.csv)".
- **Print** - Print the report. The Print panel appears, allowing you to specify the print options to be used.
- **Print Preview** - Display images of the printed pages.
- **Page Setup** - Display the "Page Setup" panel that allows you to specify the paper size, orientation and margins to be used when printing the report.

Edit - Select the Edit command to display a drop-down list of edit options.

- **Copy** - Copy the selected rows to the clipboard.
- **Copy as HTML** - Copy the selected rows to the clipboard in an HTML format.
- **Find** - Display a panel to allow you to specify the selection criteria to be used for selecting data for the report. The panel is unique for each report and is described in the help text for a report.
- **Refresh** - Refresh the data in the report display to include changes to data that have occurred since display of the report or the last refresh.

> **Hint**
>
> To Refresh the data on the report, as alternative methods from using selecting the Refresh option from the Edit drop-down along the report Menu, simply press **Control + Z**.
> A 3rd method to Refresh the report is pressing the **F5 key**.

Font - Select the Font command to display a drop-down list of font options.

- **Choose Font** - Display the Font panel to allow you to select a Font and specify its characteristics.

Sort - The Sort command displays a drop-down list of the options available for sorting the report data. The options contain a 'By [column_name]' entry for each column in a report. See the 'Column Headings' section of the specific report topic for column names. See the "Column Headings" section of this topic for another way to sort report data.

Note that sorting from this menu is a toggle operation - if the data is not sorted on this column, the first click sorts it and a subsequent click undoes the sort. If the data is already sorted by clicking on the column header, clicking on the column name also undoes the sort.

Format - Because you may alter the widths of columns, change the order of columns and hide columns, Cencon stores the current form of the columns when you close a report and restores the report to the same format the next time you display it. The "Format" menu item allows you to restore the size and order of columns to their default definitions.

- **Restore Default Column Widths** - Restore all columns to their default widths.
- **Restore Default Column Order** - Restore all columns to their default order.

View - Select the View command to display a drop-down list of the View options.

- **Status Bar** - Click the Status Bar option to toggle display of the status bar. If the status bar is to be displayed the a check mark appears beside the option.

Help - Select the Help command to display a drop-down list of the Help options.

- **Help Topics** - Display Help text for the report. You may also display the Help text by pressing the "F1" key.
- **Kaba Mas Technical Support** - Open the Kaba Mas Technical Support web page in a web browser window.

Column Headings

The grey area at the top of each column contains the name of the column. Click the column heading to perform an operation on the entire column.

To resize a column, place the cursor on the right boundary of the column where it changes to a splitter cursor (↔) to allow you to operate on the right boundary. You may increase or decrease the width of a column, drag the right boundary of the column

heading by placing the cursor on the right boundary and holding the left mouse button down. You may set a column width to the size of the longest text in the column by placing the cursor on the right boundary and double-clicking the left mouse button.

To hide a column, drag the right boundary to the left boundary. If a column completely overlays another column then there will be small gap at the top of the column boundary. You may reveal the overlaid column by placing the cursor over the right side of the boundary and dragging the boundary to the right. If you place the cursor over the left side of the boundary then dragging the boundary to the right expands the column to the left rather than revealing the hidden column.

To move a column, position the cursor within the column heading, hold down the left button and drag the left edge of the move cursor to the left edge of the destination column heading. If you are moving the column left then it will be moved to the right of destination column. If you are moving the column right then it will be moved to the left of the destination column.

Cencon remembers the appearance of the columns and maintains it in subsequent displays of the report. You may use the "Format" menu item to restore the columns to their default appearance.

To order rows by the data in a column, click on the column heading. An "Up Arrow" icon appears in the column heading to indicate ascending sequence and the rows appear in ascending order by the selected column. Click the column heading again to change the sort order to descending sequence and a "Down Arrow" icon appears in the column heading. Subsequent clicks on the sort column alternates between ascending and descending sequence.

If the report data is displayed on the screen and there are more lines than can be shown in the body display box, a vertical scroll bar will appear on the panel to allow you to scroll hidden lines into view. Most of the reports are also wider than the viewable screen shows. You can use the left and right scroll bar at the bottom of the window to shift data left and right for viewing. You can also maximize the window to show more data.

Status Bar

The Status Bar appears at the bottom of a report panel if the option has been selected by the View command on the Menu Bar. The left side of the Status Bar displays a message that shows the number of rows in the report.

Keyboard

Although the mouse is the primary means of navigating through and selecting entries in the reports, the keyboard can also be used for these purposes.

- **Up Arrow, Down Arrow, Page Up, Page Down, Home and End** - These keys allow the user to navigate through the report, selecting a single record. When used with the Shift key, these keys allow the user to select multiple adjacent records. When used with the Ctrl key, these keys allow the user to navigate through the report and to then select multiple non-adjacent records one at a time using the space bar.

- **F10** - Opens the File dropdown menu. When used with the Shift key, F10 opens the popup context menu for the record or records currently selected in the report. Once a menu is opened, it can be navigated through using the arrow keys.

3.1.1 Lock/Lock Operations Reports

For information on common usage of the reports, refer to the following section: 3.0 Using Cencon Reports

These reports list information pertaining to Cencon locks. The Lock Operations report is a subset of the full Lock report and is optimized to display and scroll quickly. Always use the Lock Operations report for accessing lock functions unless the additional data in the full report is needed. The following Search screen is displayed prior to generating the report to allow filtering for specific lock records:

The tabs in the search screen will be highlighted if they contain search settings that are not immediately visible.

Find Locks

Fields | Flags | Ranges | Address/Description

Audits (Minimum): [   ]

Start Date
☐ Check Date   Start: 2013-03-16
                End: 2013-04-16

Last Used Date
☐ Check Date   Start: 2013-03-16
                End: 2013-04-16

Low Battery Date
☐ Check Date   Start: 2013-03-16
                End: 2013-04-16

Duress Date
☐ Check Date   Start: 2013-03-16
                End: 2013-04-16

☑ Return only exact data matches
☑ Remember Settings For Next Time Report Is Opened

[OK]   [Cancel]   [Help]

Upon selecting 'OK', the locks matching the given search parameters will be displayed. Depending on the number of matching locks and the speed of your database connection, it may take several seconds for the locks to be displayed. You can still do operations with the report even while locks are still being loaded into memory. If your computer does not have enough memory to keep all of the locks in memory, then the report will fetch locks as needed depending on the portion of the report you are looking at. If this occurs, then the word 'Partial' will be displayed on the report status bar.

Sample Lock report:

Lock Report

File Edit Font Operations Administration Format Help

Name	Mode	Serial	Audit	Start Date	Last Used	Status	Single Open	1 Route Seq Open	2 Route Seq Open	3 Route Seq Open	Unas Call Open
Test Lock 1	F	532145	2	2008-02-26 ...	2013-02-12 ...	Active	N	N	N	N	N
TestGen1Lock	B	100055	1	2009-11-10 ...	2013-03-12 ...	Active	N	N	N	N	N
TestLock 545604	F	545604	4	2007-09-19 ...	2007-09-19 ...	Shelved	N	N	N	N	N
TestLock 545604	R	545604	3	2007-09-21 ...	2007-09-21 ...	Shelved	N	N	N	N	N
TestLock 589424	F	589424	4	2007-09-19 ...	2007-09-19 ...	Shelved	N	N	N	N	N
VLK001	F	532001	23	2002-10-31 ...	2013-02-12 ...	Active	N	N	N	N	N
VLK001	R	532001	41	2002-11-01 ...	2013-04-10 ...	Active	N	Y	N	N	N
VLK002	F	532002	5	2002-10-31 ...	2013-03-07 ...	Active	N	N	N	N	N
VLK002	R	532002	40	2002-11-01 ...	2013-03-07 ...	Active	Y	N	N	N	N
VLK003	F	532003	2	2009-09-16 ...	2013-03-07 ...	Active	N	N	N	N	N
VLK003	R	532003	1	2009-09-16 ...	2013-03-07 ...	Active	Y	N	N	N	N
VLK004	F	534000	4	2003-02-04 ...	2013-02-12 ...	Active	N	N	N	N	N
VLK005	F	532005	5	2002-11-01 ...	2013-03-07 ...	Active	N	N	N	N	N
VLK005	RD	532005	40	2002-11-01 ...	2013-02-11 ...	Active	N	Y	N	N	N
VLK006	F	532006	4	2009-09-16 ...	2013-03-07 ...	Active	N	N	N	N	N
VLK006	R	532006	2	2009-09-16 ...	2013-03-07 ...	Active	N	Y	N	N	N
VLK007	F	532007	3	2002-11-01 ...	2013-03-07 ...	Active	N	N	N	N	N
VLK007	R	532007	35	2002-11-01 ...	2013-03-07 ...	Active	N	Y	N	N	N
VLK008	F	001378237	2	2013-03-07 ...	2013-03-08 ...	Active	N	N	N	N	N
VLK008	R	001378237	1	2013-03-07 ...	2012-06-01 ...	Install	N	N	N	N	N
VLK009	F	532009	3	2002-11-01 ...	2005-03-31 ...	Active	N	N	N	N	N
VLK009	R	532009	29	2002-11-01 ...	2011-07-14 ...	Active	N	Y	Y	N	N

267 locks found. (267 records currently in memory.) (95 - 119 displayed.)   DONE

Sample Lock Operations report:

File   Edit   Font   Operations   Administration   Format   Help

Name	Mode	Serial	Audit	Status	Single Open	1 Route Seq Open	2 Route Seq Open	3 Route Seq Open	Unass Call Open	FLM1/RSP1	Combo 1	FLM2/RSP2	Combo 2	Last Used	Customer I.D.	ATM Serial	F
Some Lock - C	F	123412	2	Active	N	N	N	N	N	TestingFLM				2007-08-13 16:22:02 (DST)			KI
Test Lock 1	F	532145	2	Active	N	N	N	N	N	nf3				2013-02-12 15:15:49			KI
TestGen1Lock	B	100055	1	Active	N	N	N	N	N					2013-03-12 17:02:32 (DST)	North Bank		KI
TestLock 545604	F	545604	4	Shelved	N	N	N	N	N	F3				2007-09-19 15:16:14 (DST)			KI
TestLock 545604	R	545604	3	Shelved	N	N	N	N	N	rjrb7				2007-09-21 12:49:02 (DST)			KI
TestLock 589424	F	589424	4	Shelved	N	N	N	N	N	F3				2007-09-19 14:56:48 (DST)			KI
VLK001	F	532001	23	Active	N	N	N	N	N	nf2				2013-02-12 19:24:16			KI
VLK001	R	532001	41	Active	N	Y	N	N	N	nr1	43 45 82			2013-04-10 15:25:38 (DST)			KI
VLK002	F	532002	5	Active	N	N	N	N	N	fdave				2013-03-07 14:00:36			KI
VLK002	R	532002	40	Active	Y	N	N	N	N	nr2	96 95 55			2013-03-07 14:00:36			KI
VLK003	F	532003	2	Active	N	N	N	N	N	nf2				2013-03-07 13:59:29	some cust...		KI
VLK003	R	532003	1	Active	Y	N	N	N	N	nr2	40 50 55			2013-03-07 13:59:29	some cust...		KI
VLK004	F	534000	4	Active	N	N	N	N	N	nf1				2013-02-12 17:50:30			KI
VLK005	F	532005	5	Active	N	N	N	N	N	fjoel renamed				2013-03-07 11:16:46			KI
VLK005	RD	532005	40	Active	N	Y	N	N	N	nr1	57 68 61	nr2	13 63 92	2013-02-11 14:48:23			KI
VLK006	F	532006	4	Active	N	N	N	N	N	nf2				2013-03-07 11:15:50			KI
VLK006	R	532006	2	Active	N	Y	N	N	N	rjohn	29 03 48			2013-03-07 11:15:50			KI
VLK007	F	532007	3	Active	N	N	N	N	N	nf2				2013-03-07 14:17:30			KI
VLK007	R	532007	35	Active	N	Y	N	N	N	nr1	23 29 94			2013-03-07 14:17:30			KI
VLK008	F	001378237	2	Active	N	N	N	N	N	nf2				2013-03-08 08:41:51	North Bank		KI
VLK008	R	001378237	1	Install	N	N	N	N	N	rjoel01				2012-06-01 09:11:24 (DST)	Test		KI
VLK009	F	532009	3	Active	N	N	N	N	N	ftom				2005-03-31 08:43:23	some cust...		KI
VLK009	R	532009	29	Active	N	Y	Y	N	N	nr1	50 17 77			2011-07-14 09:57:29 (DST)	some cust...		KI
VLK010	F	532010	2	Active	N	N	N	N	N	fdave				2003-01-08 11:48:48			KI
VLK010	RD	532010	36	Active	N	N	N	N	N	rjohn		rbob		2011-05-13 12:59:18 (DST)			KI
VLK011	F	562011	3	Active	Y	N	N	N	N	nf1	40 06 58			2013-02-11 12:13:02			KI
VLK012	R	532012	4	Active	N	Y	N	N	N	rjrb7	56 25 10			2013-02-27 11:16:20			KI
VLK013	F	532013	9	Active	N	N	N	N	N	fdave				2007-11-21 13:07:10			KI
VLK013	R	532013	12	Active	N	N	N	N	N	nr2				2013-03-11 13:46:05 (DST)			KI
VLK014	F	532214	2	Active	Y	N	N	N	N	nf2	76 71 81			2013-01-18 16:03:35	asdf	asdfasd	KI

267 locks found. (267 records currently in memory.) (94 - 125 displayed.)   DONE

Color Coding in the Report

The color coding of the names in the Lock Name column indicates the following:

White   The lock is a Gen 1 lock.
Blue   The lock is a Gen 2 lock, activated in Full Gen2 Mode.
Gray   The lock is a Gen 2 lock which has been activated in Gen 1 compatibility mode (using a previous version of Cencon software or using Cencon 5 with a Cencon PCI Card or using CenBank software.)

If all other fields besides the Lock Name are Green, the lock is Open. If all other fields besides the Lock Name are White, the lock is Closed.

Common lock functions may be performed on a selected lock using the Operations drop-down menu or by clicking the right mouse button to display a popup menu. Other lock functions are accessed from the

Administration drop-down menu. The menu items are enabled depending on the status of the selected lock and the authority of the user. Items which are not authorized for the current user are displayed in grey in the drop-down menu and are not displayed at all in the popup menu.

Lock Report with Operations Menu:

Note that operations are enabled/disabled based on whether they are appropriate for the selected locks.

Lock Report with Administration Menu:

Lock Report

Menu: File | Edit | Font | Operations | Administration | Format | Help

Administration menu (open):
- Activate Locks — Ctrl+A
- Reissue Activate Key For Locks
- Update Activation of Gen2 Locks Activated in Compatibility Mode
- Shelve Locks
- Verify Shelve Locks
- Delete Shelved Lock
- Reset Pending Shelve State (Bank Locks)
- Force Delete Of Unshelved Lock
- Replace Lock
- Rename Lock
- Manager Force Close w/o Seal
- Import Locks From an XML File
- Export the Selected Locks To an XML File
- Add Users to a Bank Mode Lock
- Remove Users from a Bank Mode Lock
- Initialize a Key to Resynchronize Lock (Gen2)
- Cancel a Resynchronize Lock Operation (Gen2)
- Resynchronize the Database with Lock Data (Gen2)
- Remote Serial Operations with Lock (Gen2)

Name					...ast ...sed	Status	Single Open	1 Route Seq Open	2 Route Seq Open	3 Route Seq Open	Unas Call Open
TestGen1Lock					)13-03-12 ...	Active	N	N	N	N	N
TestLock 545604					)07-09-19 ...	Shelved	N	N	N	N	N
TestLock 545604					)07-09-21 ...	Shelved	N	N	N	N	N
TestLock 589424					)07-09-19 ...	Shelved	N	N	N	N	N
VLK001					)13-02-12 ...	Active	N	N	N	N	N
VLK001					)13-04-10 ...	Active	N	Y	N	N	N
VLK002					)13-03-07 ...	Active	N	N	N	N	N
VLK002					)13-03-07 ...	Active	Y	N	N	N	N
VLK003					)13-03-07 ...	Active	N	N	N	N	N
VLK003					)13-03-07 ...	Active	Y	N	N	N	N
VLK004					)13-02-12 ...	Active	N	N	N	N	N
VLK005					)13-03-07 ...	Active	N	N	N	N	N
VLK005					)13-02-11 ...	Active	N	Y	N	N	N
VLK006					)13-03-07 ...	Active	N	N	N	N	N
VLK006					)13-03-07 ...	Active	N	Y	N	N	N
VLK007					)13-03-07 ...	Active	N	N	N	N	N
VLK007					)13-03-07 ...	Active	N	Y	N	N	N
VLK008					)13-03-08 ...	Active	N	N	N	N	N
VLK008	R	001378237	1	2013-03-07 ...	2012-06-01 ...	Install	N	N	N	N	N
VLK009	F	532009	3	2002-11-01 ...	2005-03-31 ...	Active	N	N	N	N	N
VLK009	R	532009	29	2002-11-01 ...	2011-07-14 ...	Active	N	Y	Y	N	N
VLK010	F	532010	2	2002-11-01 ...	2003-01-08 ...	Active	N	N	N	N	N

267 locks found. (267 records currently in memory.) (96 - 120 displayed.) — DONE

Operational Functions:

- Dispatch a user to service the selected Lock.
- Close a service call.
- Close Locks with User Key.
- Close Locks based on Verify of Open With Lock User Key.
- Close Lock with Remote Serial Operation (Gen2)
- Reassign a service call to a different user.
- Unassign a Service call so that the user may be assigned a call to another lock. This operation pertains only to FLM mode locks (the menu item is disabled for Route mode locks).
- Edit Lock Data.
- Display Lock Details.
- Display the lock location on a map
- Add to Collection
- Add to Route
- Display the users assigned to the bank lock: opens a user report which lists only the users assigned to the bank lock.
- Display the routes containing the selected lock: opens a route report which lists only the routes containing the selected lock.

Administration Functions:

- [Activate Lock](#)
- [Reissue an activate Key](#)
- [Update a Gen 2 lock activated as Gen 1](#)
- [Shelve Lock](#)
- [Verify Shelve](#)
- [Delete Shelved Lock](#)
- Reset Pending Shelve State (Bank Locks) - Allows you undo the shelving of a bank lock (and to reissue a shelve key for a bank lock if it is lost).
- [Force Delete of Unshelved Lock](#)
- [Replace](#)
- [Rename](#)
- [Manager Force Close w/o Seal](#)
- [Import Locks From an XML File](#)
- [Export the Selected Locks to an XML File](#)
- [Add Users to a Bank Mode Lock](#)
- [Remove Users From a Bank Mode Lock](#)
- [Resynchronize the Database with a Lock](#)
- [Remote Serial Operations with Lock (Gen2)](#)

Note
Some functions require the selection of a lock or multiple locks before the menu item is available. Other functions are not dependent on the highlighting of any lock before the function shows that it is available to select (for example: Activate Locks, ReSync the database with Gen2 lock data, read close seals from a key, etc.)

3.1.1.1 Activate Locks

The activation of locks is a joint effort between a Software Logon User and a Lock User. In this section we will only cover the activities of the Software Logon User.

Note

Multiple locks (and multiple modes) can be programmed for activation at the same time on the same SA key (red).

The maximum number of locks/lock modes that can be activated on one SA key depends on several factors including which modes are activated, the version of the lock, and (if Bank mode is being activated) the number of Bank mode users.

Typically, it is not recommended to attempt to exceed more than 15 lock activations on the same SA key. In some scenarios, an error will display when attempting to program the SA activation key for fewer locks, and in other cases, the error would not display until many more lock activations were attempted on the same key.

Before Activating Locks

Depending on how you are using Cencon, certain information must be predefined so that it is available for selection during the process of activating locks. This data includes:

- **Bank Branches**: If you plan to activate Bank locks, you must first define the Bank Branches to which they will be assigned using the Bank Branch Report.

- **Bank User**: If you plan to activate Bank locks, you must add at least two bank users in the lock's assigned bank branch. See Add users.

- **FLM or Route User**: If you plan to activate FLM or Route locks, you must add at least 1 lock user of that mode to dispatch when creating the lock activation key. See Add users.

- **Region Definitions**: If you plan to use Region control, you should first define your regions using the Region Report.

- **Customer ID**: If you plan to assign a Customer ID to your locks, you should first define the Customers using the Customer Report.

Note

Cencon bank mode limitations differ between Cencon Gen 1 locks and Cencon Gen 2 locks. The following table summarizes the differences between the lock versions:

Feature	Cencon Gen 1	Cencon Gen 2
Number of Users On Lock	1-32	1-100
Bank Mode User ID Limit Per Bank Branch	1-79	0-2147483647
Bank Branch ID Limit	1-9999	1-2147483647
Initial Combinations	Bank mode user keys always have an initial default combination of **50-25-50**.	Bank mode user keys have an initial combination as set by the Cencon software.
Combination Valid To Open Lock	Must change bank mode user key initial combination before opening the lock.	Requirement to change the bank mode user key initial combination before opening the lock is set per bank mode user by the Cencon software.

Feature	DS1427 Bank Key	DS1963S Bank Key
Cencon Gen 1	Supported	Not Supported
Cencon Gen 2	Supported	Supported
Security	Legacy Cencon Security	Enhanced Security and Hardware Authentication
Bank Mode User ID Limit Per Bank Branch	1-79	0-2147483647

Bank Branch ID Limit	1-9999	1-2147483647

From the Administration Menu of a Lock Report, click on Activate Locks. Note that if region control is active, the current logon user's region is automatically assigned to the new locks.

To add new locks, press **Add Lock** for each different lock serial number to be added. This function creates an entry in the lock list and automatically fills in a default value for the Lock Name. To remove an entry from the list, highlight the appropriate row and press **Remove Lock**.

Select a row in the list of locks shown on the left-hand side of the screen, and enter the data for the lock on the right-hand side of the screen (Entries are required for the items in **bold text** on the Activation menu):

1. Enter the numeric **Serial Number** of the Lock. The lock serial number can be found on the original box in which the lock was shipped or by powering the lock and then pressing # 2.

<table>
<tr><td style="background:yellow">Caution</td></tr>
<tr><td>Ensure that the Serial Number is entered in this field correctly, or else the SA activation key will give an error at the lock when attempting to activate it. Lock Serial Numbers may be from 6 to 9 digits. Any 0s in the first digits of the serial number can be ignored when typing the number into this field.</td></tr>
</table>

<table>
<tr><td style="background:green">Hint</td></tr>
<tr><td>Since Cencon users often assign the lock name to be the same as the lock serial number, the lock name field is automatically updated to match the serial number as you enter it. The lock name may be changed after the serial number is entered.</td></tr>
</table>

2. Update the **Lock Name**.

<div style="border:1px solid #000;">

Caution

Lock Names are very critical in the Cencon System. They are **case sensitive** and can be up to sixty-four (64) characters in length.

</div>

<div style="border:1px solid #000;">

Hint

The Activate function does not look at the selected lock(s) in the lock report.

However, if you are reactivating a lock which is in a shelved state or which is active in another mode, you do not have to reenter the lock's data; Cencon can look it up and fill it in for you. To use this feature, enter the serial number or name of the existing lock and press the "**Load Lock Data**" button. The data is copied from the first existing mode in the order Bank, Route, FLM.

</div>

3. For the **Lock Mode**, select the desired mode from each of the drop-down list boxes. FLM, Route, and Bank modes can be activated from this panel. A choice of Single User Access would mean that the Lock will require only a single combination and Personal Identifier Key to open the lock. If Dual User Access is chosen, the lock will require two combinations and Personal Identifier Keys to open the lock. Any combination of the three modes can be activated with the same key.

4. Optionally enter data about this lock or ATM in the remaining fields. The Lock Description/Location information and the User-Defined Lock fields allow up to 4 lines of 40 characters each. This information remains with the lock until it is shelved, although any of this data is able to be changed.

<div style="border:1px solid #000;">

Mapping Considerations

Cencon supports mapping of lock locations using the MapQuest, Google Maps, and Bing Maps internet services. These applications require accurate location information.

</div>

5. If activating in Bank mode:
   1. Select a **Bank Branch Name** (from the left-hand side of the form).

      Note: When activating a Gen 1 bank mode lock the ID of the selected Bank Branch cannot exceed 9999.

   2. Enter a Bank Mode Time Delay (optional). This is the number of minutes (from 1 to 99) that a user will have to wait, after entering a combination and inserting the Personal Identifier Key before the lock will open. If no Time Delay to Open is desired, set this field to 0.

      Note: The time delay for Gen1 locks must be at least 5 minutes.

   3. Enter a Bank Mode Time Window (optional). The second part of activating with Time Delay is the Window to Open. This specifies the amount of time, in minutes (from 1 to 99), in which a user must re-insert their key to open the lock after the Time Delay has expired. If the lock is not opened before the Window to Open elapses, the lock resets and the combination(s) and key(s) must be repeated, the time delay elapsed and then the lock opened.

      Note: The Time Delay and Time Window values must be either both zero or both non-zero.

      Gen2 Locks
      If there is a problem with the battery in the Gen2 lock while a time delay is processing, the lock must have power for the full time delay period. The display will alternately flash **-dL** and the remaining time to indicate this.

   4. Click on the "**Bank Users**" tab, on the right-hand side of the form. The Branch Users list displays all the users in the selected Bank Branch. Select and add the desired users to the Selected Users list.

      Note: You must select at least **two** users and at least two users must **not** have time window restrictions.

      Note: Cencon Gen1 locks are limited to 32 bank users and Gen2 locks are limited to 100 bank users.

      The **Apply User Selection to All Bank Locks** check box automatically sets the bank users for all the bank locks being activated to the users in the list (even if users have already been assigned to individual locks). If you do not check this box, the selected users are only assigned to the currently selected lock.

6. Select the **Test Open Mode** (on the left-hand side of the activation screen.) This specifies the type of user being dispatched to test that the lock can be opened after activation.

7. If the lock is not being dispatched to test activation in Bank mode, you must dispatch a specific FLM or Route user to open the lock the first time. Enter the **User Name** (two names if dual user was selected). The Browse button can be used to select names from the User report.

8. Enter a Region designation for the lock(s) if Region Control function is turned On, and the logon user has a Global region designation. If the logon user has a local region, the lock(s) will be activated with that particular region designation. If the Region Control is Off, the Region field is optional.

9. The **Lock TimeZone** field will default to the Time Zone setting of the PC. If the lock(s) being activated will be located in a different time zone, this field can be modified.

Once you have reviewed your data and are ready to proceed with activation, insert a red SA key into the reader and click on **Activate Locks**. The system issues the combination(s) that will open the Lock(s) the first time after the Lock Activation process is successful. The following sample window displays a lock being activated in Bank mode and another lock being activated in FLM, Route, and Bank modes, with a Bank user being selected for the activation.

Note
If you are activating more than one lock from the same SA key, multiple lock combinations will be shown.

Record the combination(s) to be issued to the FLM or RSP who will be activating the lock.

Note
If a newly activated lock is already active in an existing mode, the lock must be opened in the existing mode in order to activate the new mode. If Cencon determines that this is necessary, the following prompt is displayed:

If you select Yes, Cencon displays a prompt for you to enter a collection name:

Create a New Lock Collection

Collection Name: [   ]

Owner Name: [Owner   ]

[OK] [Cancel]

If you enter a name and press OK, Cencon creates and displays a collection of the new and existing locks from which you can perform the required dispatches.

Activate screen showing the bank user selection tab:

The SA Key is now ready to be taken to the Lock(s) for activation at the lock. If you have performed the activate from a lock report, press **F5** on the Lock Report screen to refresh the report and display the correct state for the activated lock(s).

Note
If a lock has not yet been activated in any mode, the lock is currently operating in Shelved Mode and can be opened using the Shelved Mode combination. However, if a lock is already activated in one mode and you are activating it in another mode, a person who can access the lock in the active mode will be required to open it so that it can be activated in another mode. This activity will require the dispatching of a service call for the person who will be required to open the lock.

3.1.1.2 Add Lock to a Collection

Cencon 5 provides the ability to create a named collection of locks. Each lock report provides an operational function named "Add to Collection" which is enabled when one or more locks are selected (also available from the popup menu which appears when you right-click on a lock in the report).

If a **Lock Collection Listing** report is open, Cencon asks if you want to add the selected lock or locks to the open collection lock list. If you click on Yes, the selection is automatically added to the open collection.

If a **Lock Collection Listing** report is not open (or if you select to not add the selection to the open collection lock list), the following form is displayed:

To add the selected locks to a collection, click on a collection name to select it and press **Add Locks**. The dialog also allows for the creation of a new collection and the display of the locks in an existing collection.

See Section 3.1.4 for more information on Lock Collections.

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3.1.1.3 Add Lock to a Route

Cencon 5 provides the ability to create routes, which are groups of multiple locks in route mode that can be dispatched simultaneously. Each lock report provides an operational function named "Add Lock to a Route" which is enabled when one or more locks are selected (also available from the popup menu which appears when you right-click on a lock in the report).

If a **Route Lock Listing** report is open, Cencon asks if you want to add the selected lock or locks to the open route lock list. If you click on Yes, the selected locks are automatically added to the open route.

If a **Lock Route Listing** report is not open (or if you select to not add the selection to the open route lock list), the following form is displayed:

To add the selected locks to a route , click on a route name to select it and press **Add Locks**. The dialog also allows for the creation of a new route and the display of the locks in an existing route .

See Section 3.1.3 for more information on Routes.

3.1.1.4 Add Users to a Bank Lock

After a Bank mode lock is initially activated and placed into service, there will be times when it is necessary to add more Bank mode users to the lock. Cencon provides an easy method for doing this. Before users can be added to a lock, they must first be added to the Cencon PC system (into the same bank branch as the lock) using the **Add User Keys** function on the main Cencon screen (or by selecting the **Add a User** function under Operations on the User Operation report). See Add Users Sect. 3.2.1.

Note

Cencon bank mode limitations differ between Cencon Gen 1 locks and Cencon Gen 2 locks. The following table summarizes the differences between the lock versions:

Feature	Cencon Gen 1	Cencon Gen 2
Number of Users On Lock	1-32	1-100
Bank Mode User ID Limit Per Bank Branch	1-79	0-2147483647
Bank Branch ID Limit	1-9999	1-2147483647
Initial Combinations	Bank mode user keys always have an initial default combination of **50-25-50**.	Bank mode user keys have an initial combination as set by the Cencon software.
Combination Valid To Open Lock	Must change bank mode user key initial combination before opening the lock.	Requirement to change the bank mode user key initial combination before opening the lock is set per bank mode user by the Cencon software.

Feature	DS1427 Bank Key	DS1963S Bank Key
Cencon Gen 1	Supported	Not Supported
Cencon Gen 2	Supported	Supported
Security	Legacy Cencon Security	Enhanced Security and Hardware Authentication
Bank Mode User ID Limit Per Bank Branch	1-79	0-2147483647
Bank Branch ID Limit	1-9999	1-2147483647

From a lock report, select one or more active bank locks (as long as they are in the same Bank Branch). Then from the Administration drop-down menu, choose **Add Users to a Bank Mode Lock** menu item. The following dialog is displayed:
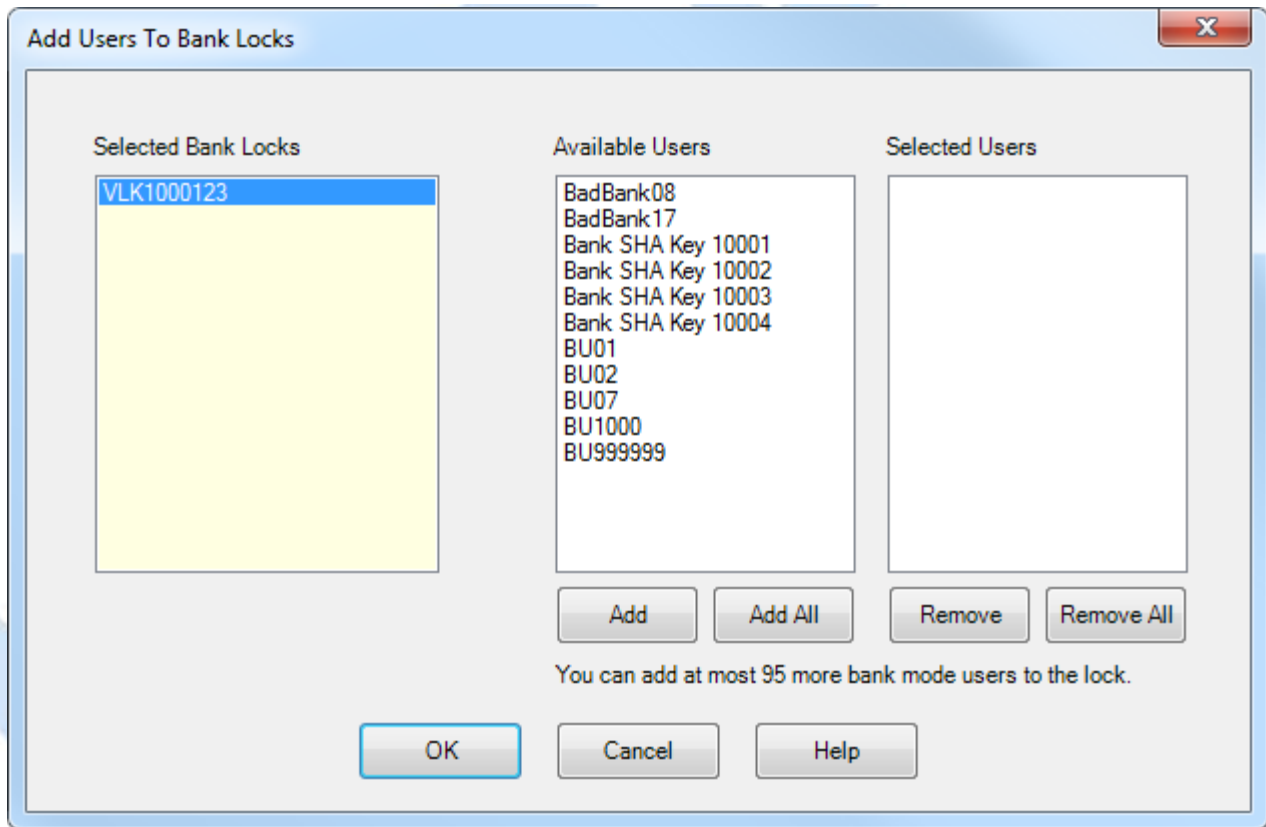
When a lock is selected in the "Selected Bank Locks" list, the available users (users in the lock's bank branch which have not yet been added to the lock) are displayed in the "Available Users" list. The users may be selected (moved to the "Selected Users" list) by pressing "Add", "Add All", or by double-clicking on a user name. The selected users list may be changed using the Remove and Remove All buttons. Press OK to write the SA key with the information for adding all the selected users to all the locks.

See 4.2.13 Add Bank Users to Lock for details on using the SA key at the lock to add the users.

See 4.3.13 Add Bank Users to Lock for details on using the SA key at a Gen 2 Swing Bolt lock to add the users.

See Section 3.1.1.25 for information on removing users from bank locks.

3.1.1.5 Close a Lock Service Call

Every time a service call is dispatched, the call must be closed when the service work is completed. The Close Seal is retrieved from the lock by the service person at the time the lock is closed when the key is presented to the reader. The service person will relay the Close Seal number of the Lock to the Dispatcher, and this information is logged into the program to close the call. To close a service call, complete the following steps:

1. Select an open lock from one of the lock reports and then choose **Close** from the operations menu (or click on the **Close Lock** icon on the main Cencon window). You may also right-click on a lock in a lock report and select **Close** from the popup menu.

   If the main window icon was used, enter the name or serial number of the lock, and select the mode. Optionally, use the appropriate **Find By** function to display the information for the lock.

2. Enter the two-digit or four-digit **Close Seal** of the Lock (relayed by the service person).

> **Note**
>
> An error message is displayed if you enter an incorrect close seal and the Lock will not be closed. The default dispatcher and supervisor authorizations allow three successive attempts to close a call. After a third unsuccessful entry the system requires a Special Supervisor to close the lock. The number of close attempts can be customized by modifying the authorization definitions for the dispatcher, supervisor, and other any roles besides the Special Supervisor.

3. Click on **Close Lock**. If the close seal was entered correctly, the program displays a message to indicate that the Lock has been closed.

> **Note**
>
> The Close Result for a normal close is "**Lock call closed**" (Gen1 and Gen2 locks).
>
> For Gen2 locks only:
>
> - The Close Result for a lock with a triggered duress alarm is "**Lock call closed. Close seal indicates duress.**"
> - The Close Result for a lock with a low/dead/removed battery or with a clock which has not been set is "**Lock call closed. Close seal indicates low clock battery or clock not set.**"

3.1.1.6 Close a Lock Service Call Using a Key

Every time a service call is dispatched, the call must be closed when the service work is completed. The Close Seal is retrieved from the lock by the service person at the time the lock is closed. This function allows the dispatcher to close a call (or multiple calls) by reading the close seals from the Lock User key rather than selecting locks from a lock report and typing in the close seal(s). To close a service call using a key, complete the following steps:

1. Insert the user's key into the appropriate port of the key reader.

2. Click the **Close Lock With Key** icon on the main Cencon screen or open one of the lock reports and select **Close Locks With User Key** from the Operations menu.

   Cencon reads the lock information from the key and displays the locks which have been closed as shown below:

Note
The close with key process uses the event time stamp from the lock (stored with the close seal on the key) to determine the valid seals. If the lock has a bad battery or the clock is not set, this time will be incorrect and you will receive a message indicating that there are no valid close seals on the key. If you see this message, you must enter the close seal manually in the right column of this form.

   If you need to process a different user's key, insert the key into the reader and press **Read Close Seals from Key**.

   If the key contains the close seal for the lock, the close seal is displayed as shown above (for route sequence 1). If the seal is not on the key, select the lock, and enter the seal in the Close Seal field.

3. If you do not want to close one of the displayed locks, select the lock and press the **Remove Lock from Being Closed** button. The lock will remain in the list but its background will be grey.

4. Press the **Close Locks** toolbar button to close those locks which have close seals.

   An error message is displayed if you enter an incorrect close seal, and the Lock will not be closed. The locks which were not closed because of an error condition are highlighted in red. Place the mouse cursor over the highlighted lock name to display the specific error message.

   If the close seal was entered correctly, the program displays a message to indicate that one or more listed locks have been closed:

Close Locks With User Key

Load Close Seals from Key   **Close Locks**   **Remove Lock From Being Closed**   **Report On Key**   **Individual Lock Report**   **Help**

Name	Mode	Serial Number	Close S...	Route S...	Route ...	Message
1037899	Route(Si...	001037899		1	VRoute	
1037899	Route(Si...	001037899		2	VRoute	
1037899	Route(Si...	001037899		3	VRoute	

Close Lock With Key

ⓘ All locks closed successfully.

OK

Name	
Serial Number	
Mode	
Close Seal	
Open Time	
Close Time	
Route Sequence	
...umber	
...ch	
User Defined 3	
User Defined 4	
Address 1	
Address 2	
City	
State/Province	

User Name: VRouteUser
Key Type: Route
Key Serial Number: 000000461A82
Key Model: Model 1994 key - FLM/Route Mode Key

3.1.1.7 Close Locks Based on Verify of Open With Key

Every time a lock is dispatched, the call must be closed when the service work is completed. Normally, a Close Seal is retrieved from the lock by the service person at the time the lock is closed. This function allows the dispatcher to close a call without a close seal by using the audit information on the key to verify that the lock was opened.

> **Note**
>
> This menu item is one of the carry-over functions from the Activation Only software, a program designed to meet the needs of companies who install, activate, and test the lock on ATMs in a factory environment. The primary purpose of this function is to allow the lock bolt to stay retracted while the empty ATM is in transit to the field, and yet be able to have this call closed in the software (once the required open-only record is found on the key). This allows the safe door of the ATM to be shut but not locked during shipping. After the ATM arrives at its intended destination and is bolted to the floor, the first Lock User who extends the lock bolt and powers the lock will be asked to present the FLM or Route key. A close seal will display on the lock; however, this close seal does not need to be entered into the software because this menu item was already used to close this lock.
>
> In the normal day-to-day operation of most companies using this function would not be recommended and should be restricted to only the Special Supervisor role.

To close a service call without a close seal, complete the following steps:

1. Insert the user's key into the key reader.
2. Open one of the lock reports, select the Operations menu, and then the **Close Locks Based on Verify of Open With Lock User Key** menu item.
3. Cencon reads the lock audit information from the key and displays the locks which have been opened as shown below:

If you need to process a different user's key, insert the key into the reader and press **Read Audits from Key**.

> **Note**
>
> This function cannot be used if the key contains valid close seals. If you see the following message, press OK and select the **Close Lock with Key** function to perform the close.

Close Locks Based On Verify Of Open With Lock User Key

⚠ This key contains valid close seals - use the Close Lock with User Key function to close the call.

[OK]
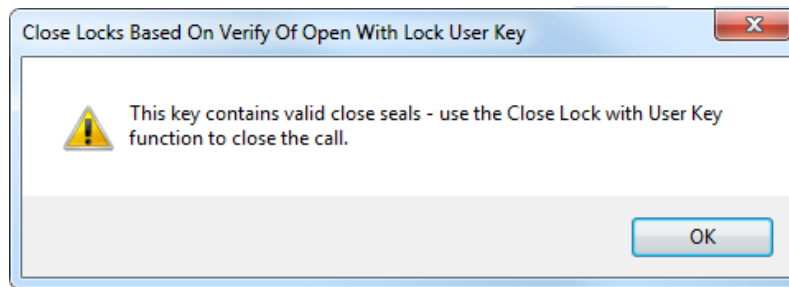
4. To view the information for a lock, select it in the list on the left side of the window.

5. Press the **Close Locks** toolbar button.

Warning
The analysis of the audit data on the key involves comparison of the dispatch time on the Cencon system and the open time from the key. To insure accurate comparisons, the time on the key must be reasonably close to the system time. Cencon displays an error message if the two times differ by more than 5 minutes.

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3.1.1.8 Delete Shelved Lock

This menu allows you to remove a Lock from the list of locks shown on the Lock Report. This option should only be used when a Lock has been shelved and responsibility for the lock has been transferred to another company. The lock must be closed first in order to be deleted using this function. Also, before deleting the lock, it should be shelved unless it has been destroyed and cannot be shelved. In that case, a Special Supervisor would need to use the Force Delete of Unshelved Lock function.

Hint
If a Lock is simply being temporarily removed from service, you should only shelve the lock, not delete it, so that any information that has been input into the database about this lock can remain with the lock file. That way, if the lock is reactivated, the data will not need to be reentered.

To delete a Lock, complete the following steps:

1. Open a lock report.
2. Select the shelved lock which is to be deleted.
3. Select the **Administration Menu**.
4. Press **Delete Shelved Lock**. The Delete dialog is displayed:
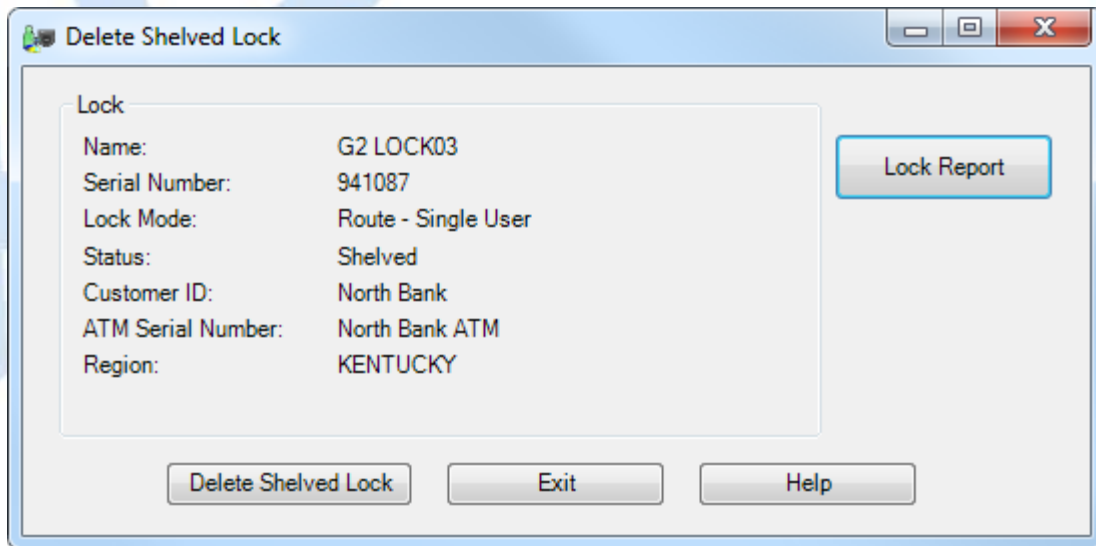
5. Click on **Individual Lock Report** if you want to view the lock details before completing the operation.
6. Click on **Delete Shelved Lock** to finish the deletion.
7. A Delete successful message should be displayed.

Warning
If an active lock is accidentally deleted, the lock record goes to the Lock History file and can be restored back to the Lock Report. (See Section 3.4.5 Lock History Report). However, if the information in the Lock History file is no longer available for whatever reason, any active lock that was deleted may have to be drilled.

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3.1.1.9 Dispatch a Lock

To dispatch a service call to open a lock, the Dispatcher issues the combination for a particular lock to a particular Lock User Key through the Cencon program and then relays that information to that Lock User. The Lock User then uses his or her key and the One Time Combination to open the lock.

1. To access the dispatch dialog, select a closed lock from a lock report and then right-click and select the dispatch menu item or press the **Dispatch Lock** icon on the main Cencon window. The Dispatch Lock form is displayed:

2. If the main window icon was used, enter the name or serial number of the lock and then use the appropriate Find function to display the information for the lock. This information is automatically filled in if the lock was selected from a lock report.

3. You can optionally click the **Individual Lock Report** button to display details on the status of the specified lock.

4. Enter the User ID of the person who will be assigned to the call. You may also click on the **Browse** button to select a user

from the User ID report.

5. If the Lock is in dual mode (requiring two users), enter the second User ID. Note that if one of the users has time windows set up, the other user must have time windows and the two sets of time windows must overlap.

6. **Second Line Maintenance Call** - Cencon provides a lock open alarm function which allows you to display a list of those locks have been open within a set time window (see Lock Open Alarm). If this dispatch is in FLM mode and is going to cause the lock to possibly be open for an extended period, check the **Dispatch as Second Line Maintenance Call** option to indicate that the lock open alarm process should ignore this open lock (when the **Ignore Locks Open for Second Line Maintenance** check box is selected on the alarm setup form). Typically, first line service calls are for basic maintenance or problems that are easily resolved. The option to designate a dispatch as a Second Line Maintenance Call is not available in Route mode.

7. Click on **Dispatch** to proceed with the dispatch. The system will display the next One Time Combination(s) that will open the lock.

   Relay this information to the service personnel for opening of the lock.

> **Note**
>
> The combination issued is only valid for the user to whom it is issued. It is not possible to issue the next one-time-only combination for this same Lock until you have closed this service call.

When the lock is successfully dispatched, the **Close Lock** button is enabled. Click on the **Close Lock** button to open the **Close Lock** form for this lock. Press **Exit** to close the Dispatch Lock form.

3.1.1.10 Edit Lock Data

This option allows you to change the data for a single lock or a group of locks.

Note
Editing data on a lock will not change the lock information in historical reports, such as past records in the Activity Log. However, data changed on the Lock Information tab for an open lock will be changed in the corresponding Open Lock Log record, as well.

Note
You may select a maximum of 200 locks to be edited.

1. Select one or more locks in one of the Lock Reports and then choose "Edit Lock Data" from the drop-down or popup menu.

The selected locks are shown in the list on the left of the dialog. Clicking on a lock name updates the information in the window with the data for that lock.

2. Modify the desired data fields by checking the corresponding check box and entering new data. **Note that the data will be changed for all the selected locks**. Select **"Update all modes of all locks"** if you also want all modes of each lock to be updated.

Mapping Considerations...
Cencon supports mapping of lock locations using the following online Internet mapping services: ○ MapQuest ○ Google Maps ○ Bing Maps These applications require accurate location information.

3. Click on **Update**. A confirmation summary message is displayed:
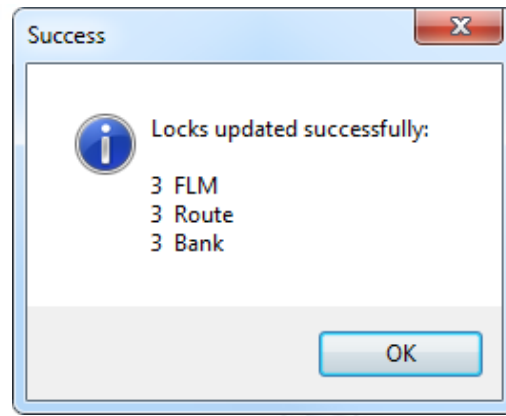
3.1.1.11 Export Lock Data

This function allows you to export an XML file containing lock data. This is useful for transferring access of locks from one branch or one database of a company to another database within that company. For example, some companies have one Cencon system they use only for lock activation and testing. Once the lock is active in System A, and saved as an XML file as described below, the file is delivered electronically and imported into the System B, the company's main dispatch center's database. At this point, System B can begin dispatching combinations to this lock, and System A should delete that lock file. (See Section 3.1.1.13 Import From File.)

To export a lock file, complete the following steps:

1. Open a lock report.

2. Select the locks you want to export.

3. Select the **Administration Menu**.

4. Click **Export the Selected Locks To an XML File**.

   The Select File dialog is displayed.

5. Select a location and file name for the XML file and click **Save**.

   The status message provides a summary of the export:
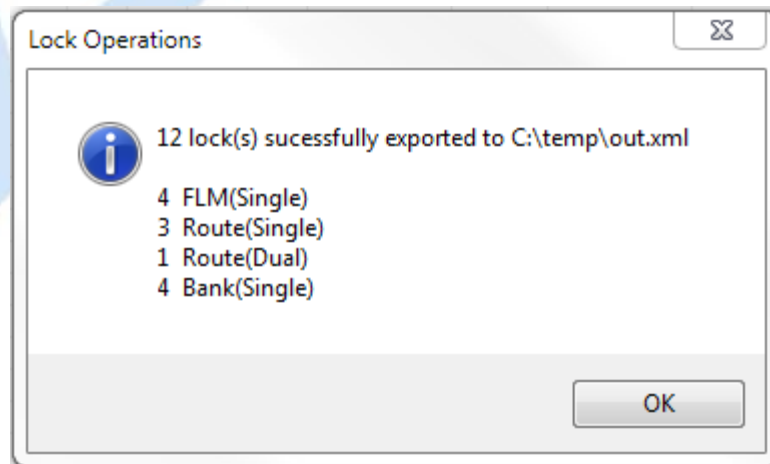
Warning
A Cencon lock XML file that is created is only intended for importing into another database within the same company (using the same security information.) The file should not be opened or used for any other purpose than importing into that company's Cencon software. Failure to heed this warning may result in data loss and drilling of containers.

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3.1.1.12 Force Delete of an Unshelved Lock

This function allows you to forcibly remove a Lock from the list of locks in the Lock Report, regardless of it's status. In most normal situations, a lock would be taken out of a system after it has been properly shelved and the verify shelve key operation has updated the status of the lock on the system. At that point, it could be deleted using the Section 3.1.1.8 Delete Shelved Lock.

This function is helpful for database cleanup of lock files by a manager in cases where there is no physical, active lock with this lock serial number in a customer's system. For example, a lock serial number may have been typed in incorrectly during the activation process, thereby creating an SA activation key and a lock file on the system both of which are useless. Another example is a lock that was destroyed and is no longer able to be used or shelved. It is recommended to control the access to this function to the highest level of managers.

Danger
This feature should be used with great care since you will be bypassing all the functions of Cencon which synchronize lock operations.

To force the deletion of a Lock, complete the following steps:

1. Open a lock report.
2. Select the locks which are to be deleted.
3. Select the **Administration Menu**.
4. Click **Force Delete of Unshelved Lock**. The following verify dialog is displayed:
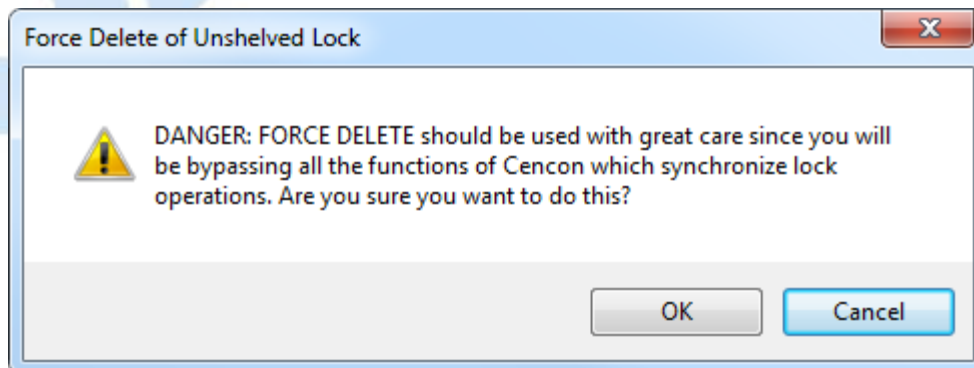
5. Click on **OK** to finish the deletion.
6. A Delete successful message should be displayed.

3.1.1.13 Import Lock Data

This function allows you to import an XML file containing lock data from another Cencon database within your company. This is useful for transferring locks and remote activation of locks.

To import a lock file, complete the following steps:

1. Open a lock report.
2. Select the **Administration Menu**.
3. Press **Import Locks from XML File**.
4. The Import dialog is displayed. Press **Import Locks From File** and select the XML file containing the locks you want to import to your system. Below is a sample of this dialog after a file containing one lock has been imported:

5. Click on a lock row to display the lock details on the right section of the window.
6. Select a lock and click on **Remove Lock from List** to prevent an import of that lock.
7. click on **Add Locks to Cencon Database** to perform the import.
8. "Imported successfully" or an error message is displayed in the Result column for each lock.

> **Warning**
>
> A Cencon lock XML file that is created is only intended for importing into another database within the same company (using the same security information.) The file should not be opened or used for any other purpose than importing into that company's Cencon software. Failure to heed this warning may result in data loss and drilling of containers.

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3.1.1.14 Individual Lock Report

The Individual Lock Report is used to display the details of a single lock, including if the lock is open and the previous combination dispatched to the lock.

From any of the lock reports, select the lock you want to display additional information on. Right-click on the lock, and select **Individual Lock Report**.

A window is displayed that looks similar to the following. The information displayed will vary depending on what information has been entered for the lock and if the lock is open or not.

Individual Lock Report

Lock Database Information

Lock Name	Gen2Swingbolt 1000116
Lock Serial Number	001000116
Lock Mode	Bank - Single User
Bank Branch Name	North Bank Branch
Bank Lock Open Delay	00
Bank Lock Open Time Window	00
Audit Count from System	1
Customer I.D.	North Bank
Region	KENTUCKY
Service Branch	North Branch
Lock Status	Active
Forced Closed	No
Activation Date	2013-03-28 16:12:34 (DST)
Last Used Date	
Address 1	749 W. Short St.
City	Lexington
State	KY
ZIP Code	40508
Country	USA
Network Address	10.108.6.108:35005
Time Zone ID	Eastern Standard Time
Is Import From Legacy Cencon/CenBank	No

Lock Customer Information

Customer I.D.	North Bank
Customer Name	North Bank
Customer Service Branch	North Bank Service
Customer Line Branch	North Bank Line
Customer Address 1	751 West Short St.
Customer Address 2	(North Side)

The File menu provides access to Save and Print functions.

3.1.1.15 Manager Force Close w/o Seal

This function allows you to forcibly close a Lock without knowing the close seal. Personnel who have been trained in the Cencon software will understand the rare situations where the use of this function may be beneficial. The main example is if a database had crashed and several combinations had been used at a lock since the previous back-up. When the back-up database is restored, to get the software audit count back in synchronization with the lock, once the manager knows the audit count of the lock, a series of dispatches and force closes could be done in the software. For Gen2 locks, an alternate method of recovery is explained in Section 3.1.1.22 Resynchronize the Cencon Database with Lock.

Danger
This feature should be used with great care since you will be bypassing the functions of Cencon which synchronize lock operations. The ability to access this function should be limited to only managers with the highest authority who have been fully trained to know when using this function is appropriate.   If managers habitually allow locks to be forced closed and the dispatched combination not used, the risk is very great that containers will need to be drilled because the Cencon system is not being used as instructed. Out-of-synch situations often result in drilling when combined with lost combinations, lost keys, and abuse of the force close function.

To close a lock without a close seal, complete the following steps:

1. Open a lock report.
2. Select the lock which is to be closed.
3. Select the **Administration Menu**.
4. Press **Manager Force Close w/o Seal**. The following close dialog is displayed:

Manager Force Close Without Seal

Lock

Name:	VLK012
Serial Number:	532012
Mode:	Route Mode (Single user)
Status:	Active
Customer ID:	
ATM Serial Number:	
Region:	KENTUCKY
User 1 Name:	rjrb7
User 1 Combo:	56 25 10
User 2 Name:	
User 2 Combo:	

☐ Dispatch As Second Line Maintenance Call

Lock Report

Route Sequence To Close

◉ Route Sequence 1   Test4
○ Route Sequence 2
○ Route Sequence 3

Close Result

Close Result:

Do NOT Force Close a lock call unless you are sure the OTC for that call was used (click here for more details).

[Close Lock]   [Exit]   [Help]

Clicking the mouse on the "click here for more details" text provides the following additional information:

Manager Force Close Without Seal

⚠️ If you are using the Manager Force Close w/o Seal feature for a call which did not have its OTC used by someone in that mode for that lock and audit count, the next dispatched OTC for this lock in this mode may not work. (It will not work in F mode. It would work in R mode, but only if no more than 2 OTCs were skipped.) To verify if the current OTC has been used at the lock you must find out the audit count at the lock: press # # and hold up the key in that mode. Compare it with the audit count for that lock and mode in the PC by viewing the Lock Report.

- If the count on the lock is 1 higher than the count for the open call in the PC, you are ready to close the call in the PC.

- If the count on the lock is the same as the count for the open call in the PC, you must use the current OTC at the lock first before you force close. Find the current OTC in the Individual Lock Report.

- If the count on the lock is 1 lower than the count for the open call in the PC, then you must obtain and use the next-to-the-last (penultimate) OTC via the Individual Lock Report. This must be used with the original key it was assigned to. Once you use the Previous OTC, you will get a close seal at the lock that has already been entered in the PC. You can immediately go ahead and use the current OTC (from Get Last Combo menu). Then you can close call in the PC with the close seal you obtain from that opening.

OK

5. Click on **Individual Lock Report** if you want to view the lock details before completing the operation.

6. Click on **Close Lock** to finish the Force Close operation. A Close successful message should be displayed once you verify that this is what you truly want to do.

3.1.1.16 Map Lock Locations

Cencon 5 provides the ability to send lock address information to external mapping software. Cencon 5 supports several free internet mapping services, for which an active internet connection is required:

- MapQuest
- Google Maps
- Bing Maps

Each of the above products requires that accurate address information be entered in the proper data fields for each selected lock. Use the Preferences dialog (on the main Cencon window) to select the desired mapping software.

To set your preferred mapping solution, see 3.6.5 Preference Settings.

To display lock locations on a map, select a lock from one of the lock reports, and then choose **Display the Lock Location on a Map**.

Note
MapQuest, Google Maps, and Bing Maps only support display of one location at a time on the map.

If the address information appears to be sufficient to locate the lock, Cencon passes the data to the mapping program for display. Refer to the mapping software's documentation for information on using the specific mapping product.

Mapping Considerations
The mapping applications require accurate location information.

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3.1.1.17 Reassign a Service Call

The Dispatcher may find it necessary to reassign a call to a different user than the one originally scheduled to perform the work.

The Dispatcher can also temporarily "unassign" an FLM user from an FLM service call; however, the unassign function must be accessed via the lock report. (See 3.1.1.24 Unassign an FLM Call). Typing in an asterisk on the Reassign user field no longer unassigns the call as in previous versions. The unassign option is designed for use when a user has accidentally been dispatched to the wrong lock and must be freed up to service the correct lock.

To reassign a service call, complete the following steps:

- Select an open lock from one of the lock reports and then choose the Reassign menu item or click on the **Reassign** icon on the main window.

  If the main window icon was used, enter the name or serial number of the lock and then use the appropriate Find function to display the information for the lock.

- The Name of the user to whom the service call is currently assigned is displayed, along with the lock combination. If the Lock was assigned in Dual mode, both names and both combinations are displayed.
- Enter the new User Names(s) in the appropriate Name fields to reassign the call (or use the Browse function to select a user name).
- Click on **Reassign**.

  If the reassign is successful, the system displays the combination(s) for the new user(s).

> **Note**
>
> Note that both combinations (the user originally dispatched and the user who was reassigned) have the ability to open the lock. However, only the combination that is entered first will actually open the lock. Once a combination is entered, the other combination will be invalid and will not open the lock. Only one Close Seal is able to be retrieved from the lock for a given call, no matter how many different users to which the call was reassigned.

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3.1.1.18 Reissue an Activate Key

This function provides for the reissue of an activation key in the event of SA key loss or data error.

From a lock report, select any **one** of the locks which should be on the activation key (the software does not allow you to select multiple lock for this function - just select any *one* of the locks and the software will automatically search for any others that were activated on that same SA key based on the original time the SA key was programmed and the lock status). Click on the Administration Menu, followed by **Reissue Activate Key for Locks**. The following dialog is displayed. Note that all the locks which were on the original key are displayed.
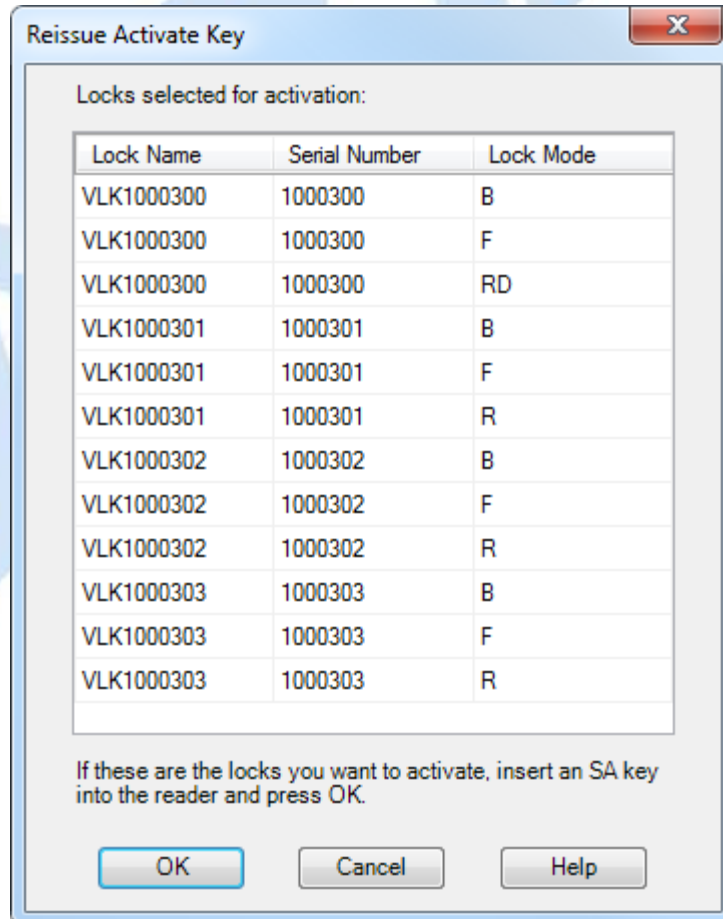
If the list is correct, insert an SA key into the reader and press OK. The message "SA Key Reissued" is displayed when the key is ready.

Any locks that have been successfully activated, which is evident in the software because the audit count is 2 or higher, will not allow a Reissue of an Activation Key. Furthermore, any locks that were imported from a previous version of Cencon or CenBank software will not allow a Reissue of an Activation Key, even if the audit count is still at 1.

> **Note**
>
> The original combination(s) dispatched in to the FLM or Route Lock User Key during the activation process will still work after the Reissued Activation SA key is used. If the activation combination(s) were not written down, they can be obtained via the Individual Lock Report or Lock Operations Report.

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3.1.1.19 Remove Users from a Bank Lock

There will be times when it is necessary to delete a Bank Mode Lock User's authorization to access a bank lock. This procedure will delete the user's authorization to access a bank lock but will not remove the user from the Cencon System.

From a lock report, select one or more bank locks within the same Bank Branch ID, and then select the "Administration/Remove Users from a Bank Lock" menu item. The following dialog is displayed:
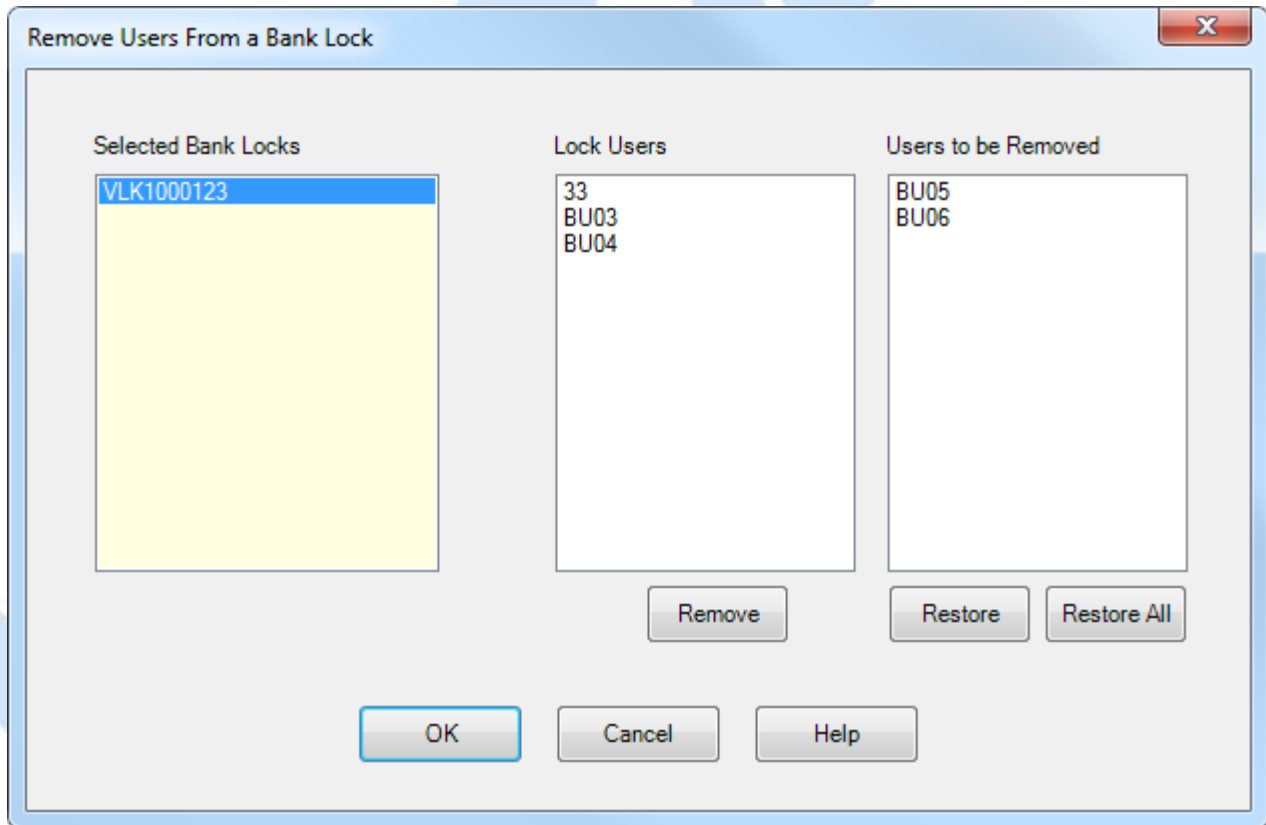
When a lock is selected in the "Selected Bank Locks" list, the users currently assigned to the lock are displayed in the "Lock Users" list. The users may be selected (moved to the "Users to be Removed" list) by pressing "Remove" or by double-clicking on a user name. The "Users to be Removed" list may be changed using the Restore and Restore All buttons. Press OK to write the SA key with the information for removing all the selected users from all the locks.

> **Note**
>
> This function displays an error if you try to delete all the users (or all but 1 user for a lock in dual mode). You must have at least the minimum number of users required to open the lock.

See 4.2.14 Bank Mode - Remove Users for details on using the SA key at the lock to remove the users.

See 4.3.14 Bank Mode - Remove Users for details on using the SA key at a Gen 2 Swing Bolt lock to remove the users.

> **Caution**
>
> If an SA key is programmed in the software to Delete Bank Users the manager should ensure that the key is properly used successfully at all of the intended locks. If any errors display during the process of reading the Delete Users SA key a second SA key initialized for Bank Mode User Table Download (see section 3.5.6 Initialize a Key to Retrieve the Bank Users from a Lock) should be used at the lock and read in the software. If the Delete Bank Users key was not used successfully at the intended locks, it is possible that the particular Bank User Key(s) can still open the lock, even though the software shows that an SA key was created to delete the key(s)

from the lock.

See Section 3.1.1.24 for information on adding additional Bank Mode Lock Users to bank mode locks.
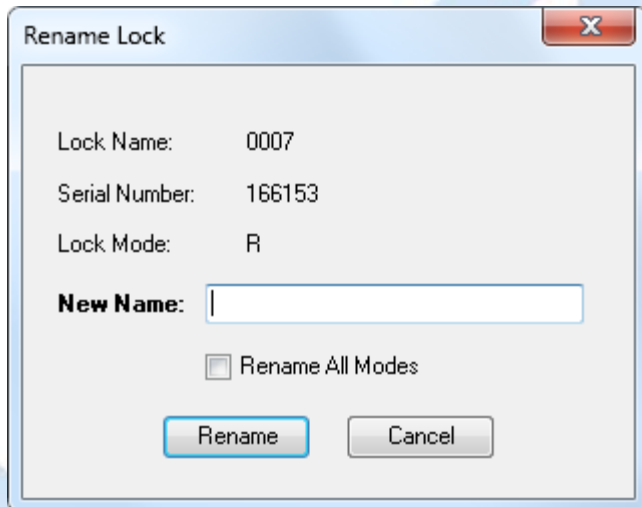
3.1.1.20 Rename Lock

This menu option allows you to rename a lock.

To rename a lock:

1. Open a lock report.
2. Select the lock to be renamed.
3. Select the **Administration Menu**.
4. Press **Rename Lock**. The Rename Lock dialog is displayed:

5. Enter a new name for the lock.
6. Click on **Rename**.

3.1.1.21 Replace Lock

This menu option allows you to replace a lock when it must be removed due to the lock back cover having been destroyed, due to factory reset of the back cover, or for any other reason. This process creates, in essence, a new activation SA key to be used to activate a lock that is not currently active in a particular mode. By using the Replace Lock function, the lock data stored in the Cencon software (name, description, etc.) will not have to be retyped and the Delete a Lock function will occur automatically for the lock serial number being replaced.

Warning
A Cencon Lock that is to be replaced must NOT be deleted from the Cencon system. The Lock must be seen as active in the PC system and closed (i.e., no combination dispatched) to be properly replaced.

To replace a lock:

1. Open a lock report.
2. Select the lock to be replaced.
3. Select the **Administration Menu**.
4. Press **Replace Lock**. The Replace Lock dialog is displayed:

5. Enter the Serial Number of the new lock.

Note
The lock serial number will automatically be changed for all active modes of the lock.

6. If the Lock Mode is not Bank, enter the RSP/FLM User ID that you want to do the replacement of the lock.
7. Insert an SA key into the key reader.
8. Click on **Replace Lock**.

9. The combination for opening the lock is displayed as shown below (the combination will be blank for Bank Mode):

10. Record the combination and select **Exit** to close the window.

Note
You can undo the replacement of a lock, where the lock being replaced was in error.

The data for the lock being replaced is kept in the lock history table with the original serial number, and placed in a lock status of 'Replaced'.

To undo the lock replacement, delete the new lock and use the Undo Replace function in the Lock History Report.

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3.1.1.22 Resynchronize the Cencon Database with a Lock

> **Note**
>
> This feature is only available for Cencon Gen2 locks.

This function allows you to resynchronize the misaligned audit count in the software for a Gen2 lock with the actual audit count of the lock. The resynchronization occurs by retrieving data from the lock with the grey ReSync key and then reading this key in the software which updates the corresponding information in the Cencon database. This procedure consists of the following:

1. Insert a dark grey resynchronization key into the Key Reader.

2. From a lock report, select a Gen2 lock and **Initialize a Key to Resynchronize Lock (Gen2)** from the Administration menu.

3. A message is displayed when the initialization is complete. At this point, the lock's report entry is marked with a red background to indicate that it is in the process of being resynchronized. Use the **Cancel a Resynchronize Lock Operation (Gen2)** menu item to cancel this process.

4. Take the key to the selected lock and retrieve the lock data.

   (See 4.2.18 Resynchronize the Database with a Lock for details on using the key at a Gen 2 lock.)

   (See 4.3.18 Resynchronize the Database with a Lock for details on using the key at a Gen 2 Swing Bolt lock.)

5. Insert the returned key into the key reader and select **Resynchronize the Database with Lock Data (Gen2)** from the Administration menu. (It does not matter if any lock or locks are selected when reading the ReSync key since the software knows which lock to update based on the information on the key.) A status message is displayed when the database update is complete and the red background color in the lock report is removed.

> **Note**
>
> Once a ReSync key has been issued for a particular lock and mode that is not already dispatched, that lock in the lock report signifies this condition by being highlighted in light red. The lock will not allow a new dispatch to occur for a particular mode while that lock and mode are in the resynchronize state (when a ReSync key has been programmed for that lock, but has not yet been returned and read in the software.)
>
> If the ReSync key was issued on a lock that was already dispatched, the lock remains highlighted green. In this condition, be aware that the a combination dispatched may or may not open the lock, and if the combination was used, the data on the returned ReSync key may be invalidated depending on the order of events.

3.1.1.23 Shelve Lock

This option allows you to deactivate (shelve) one or more modes for a lock that is currently active.

At the time the SA key is prepared, a combination is dispatched (if FLM or Route mode is being shelved) to be used to open the lock to perform the shelving.

The shelving combination, the prepared SA Key, a valid Lock User Key (FLM, Route, or Bank mode), and a Change Key are then used to perform the shelving procedure on the Lock.

To program the shelve key, first specify the lock modes to shelve using the **Shelve Locks** dialog, which can be entered in one of the following ways:

- Directly from the **Cencon Main Window** 2.3 Main Window by clicking the **Shelve Locks** icon located in the **Locks** section. The Shelve Locks dialog is displayed with no locks listed:

- From a lock report:

    1. Open a lock report.
    2. **Optionally** select the locks to be shelved.
    3. Select the **Administration** menu item.
    4. Select **Shelve Locks** to open the **Shelve Locks** dialog. The dialog will contain any locks that were selected on the lock report:
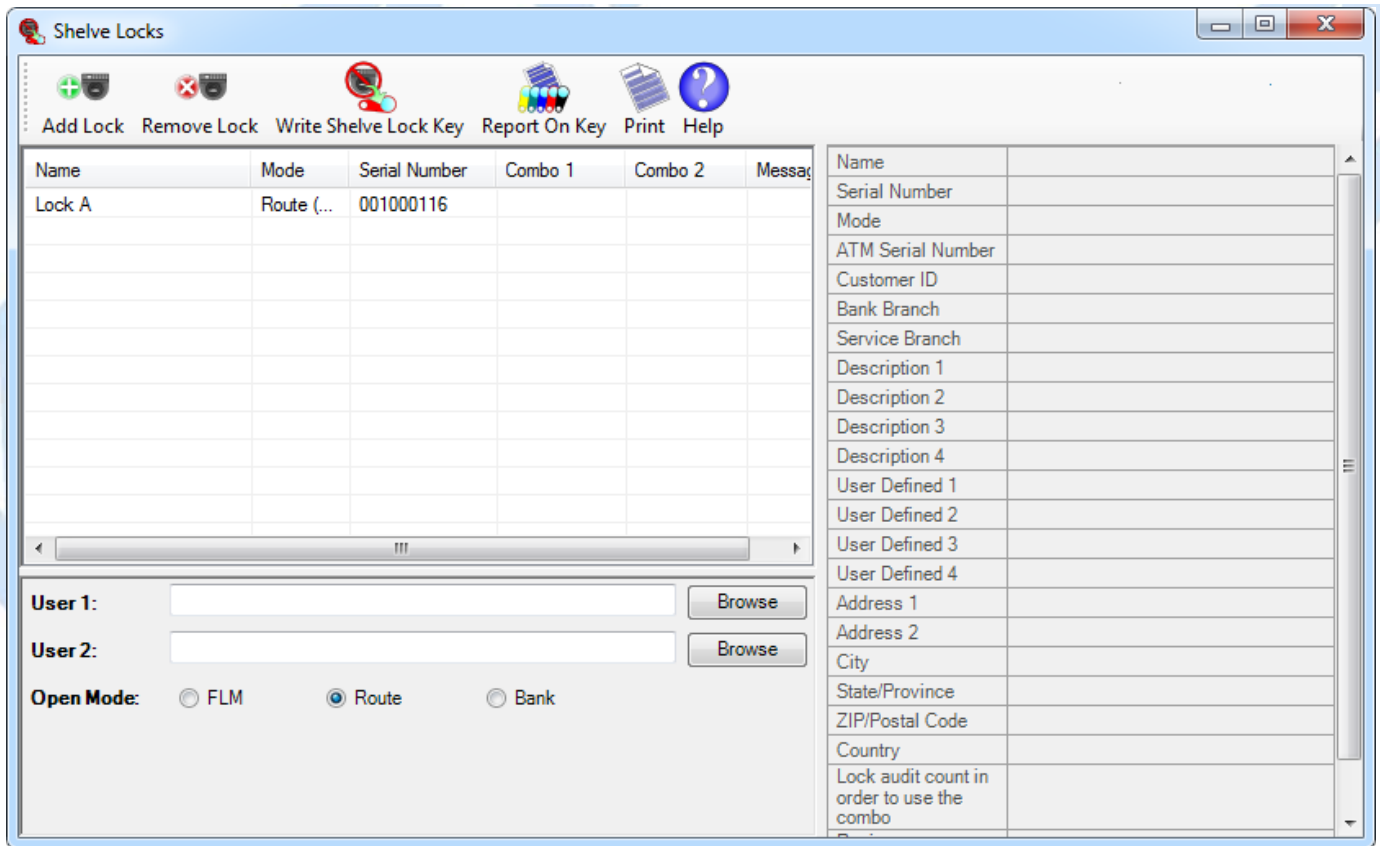
5. If no locks were selected on the lock report, the **Shelve Locks** dialog will be empty.
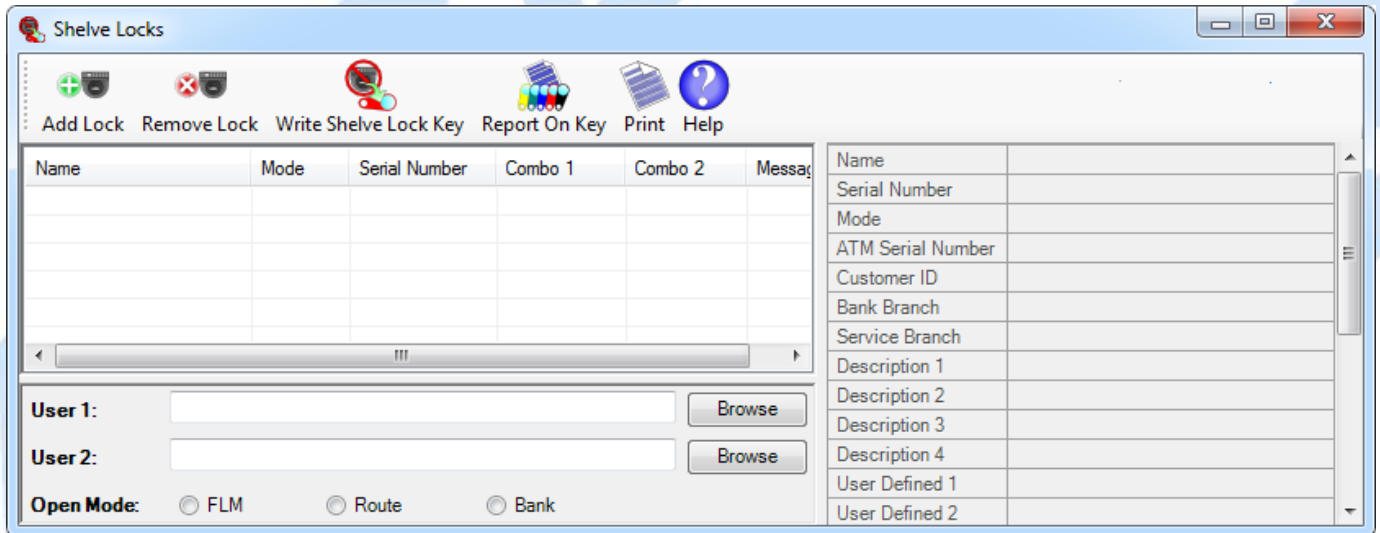
Locks to be shelved can be added to the **Shelve Locks** dialog by repeatedly using one of the following techniques:

- Highlighting locks on a lock report and selecting the **Shelve Locks** function under the **Administration** menu item.
- Clicking **Add Lock** on the **Shelve Locks** dialog to invoke the **Shelve Lock Selection** dialog where locks to shelve can be selected by serial number or by lock name:
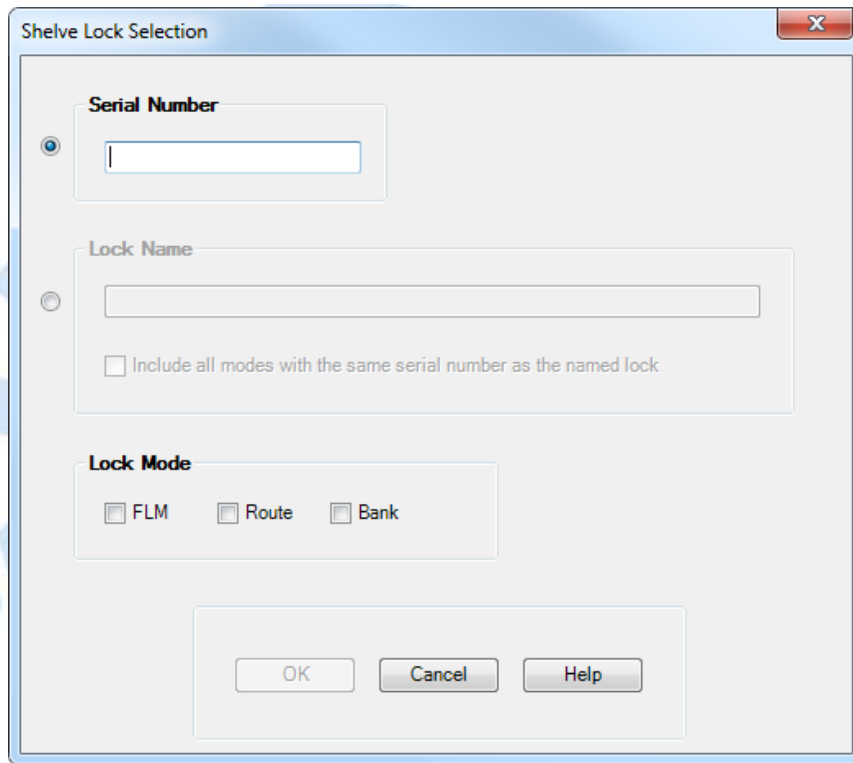
- To select locks by serial number, which returns the locks that have the specified serial number and lock modes and are eligible for shelving:
    1. Click the Serial Number radio button.
    2. Enter a serial number in the Serial Number text box.
    3. Select one or more lock modes.
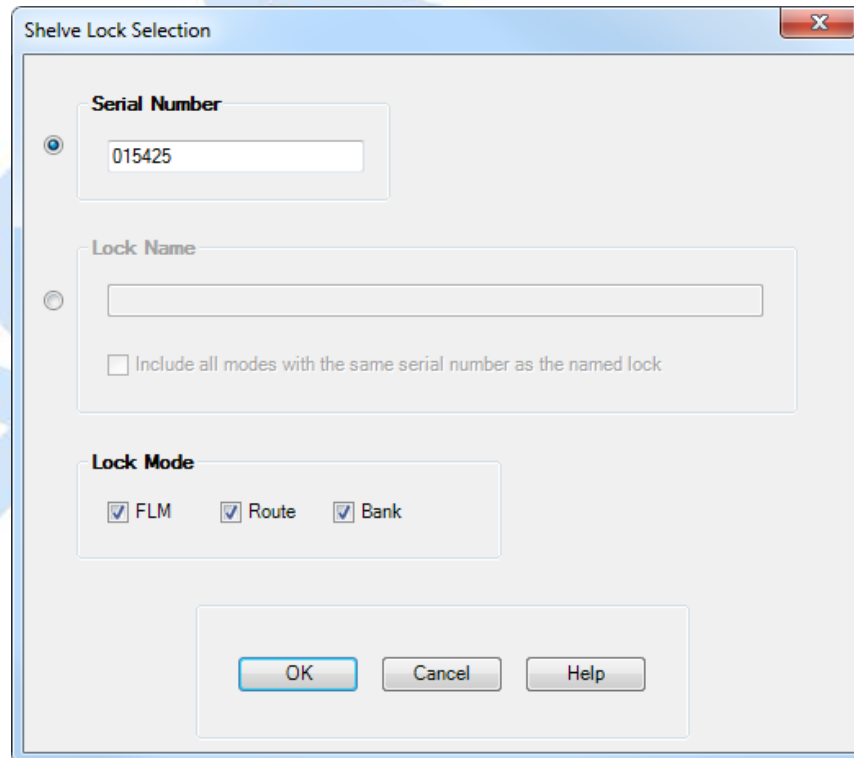
    4. Click OK.
    5. All locks with the specified serial number and lock modes and that are eligible for shelving will be added to the Shelve Locks dialog.
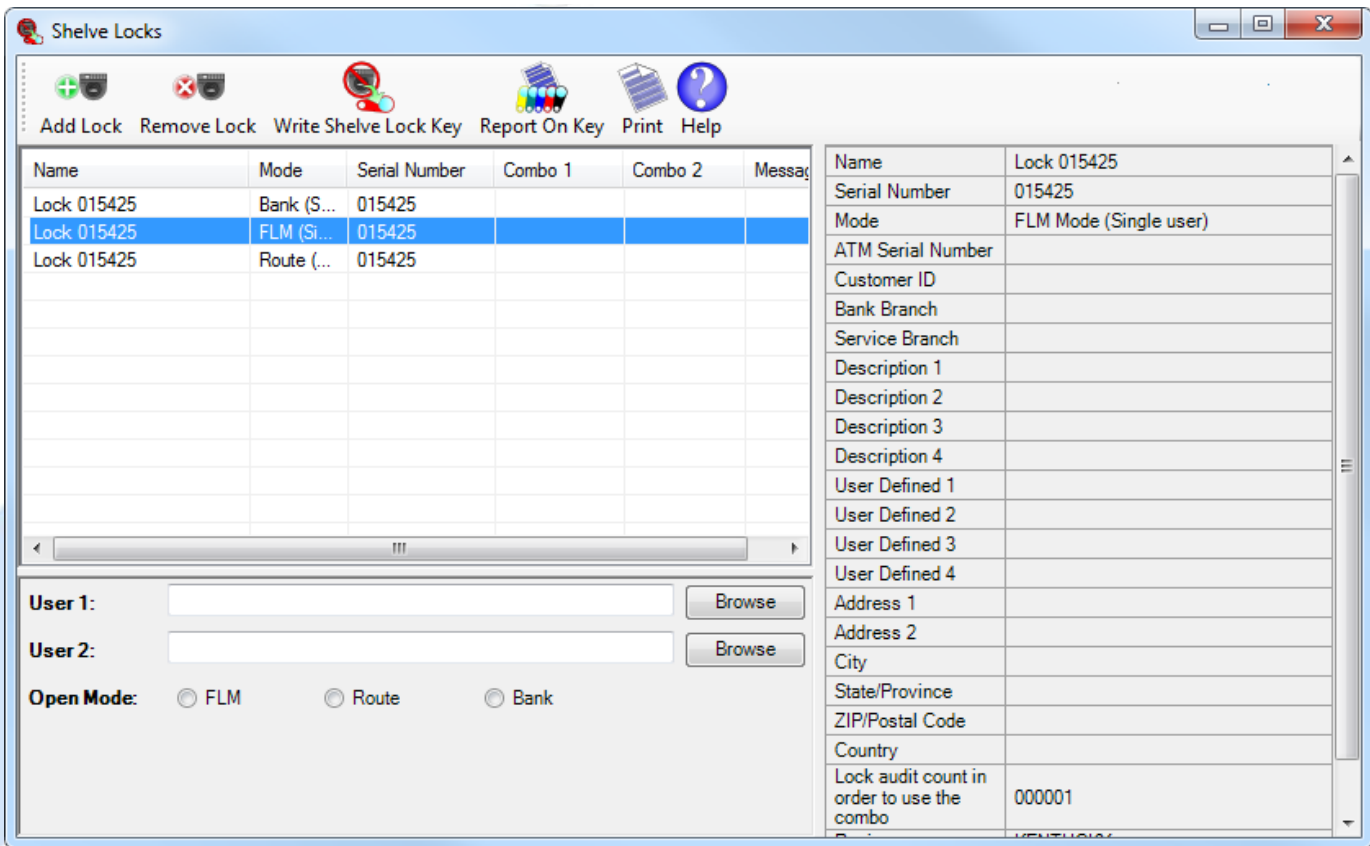
- To select locks by lock name, which returns all locks that have the specified lock name and lock modes and that are eligible for shelving:
    1. Click the Lock Name radio button.
    2. Enter a lock name in the Lock Name text box.
    3. Select one or more lock modes.
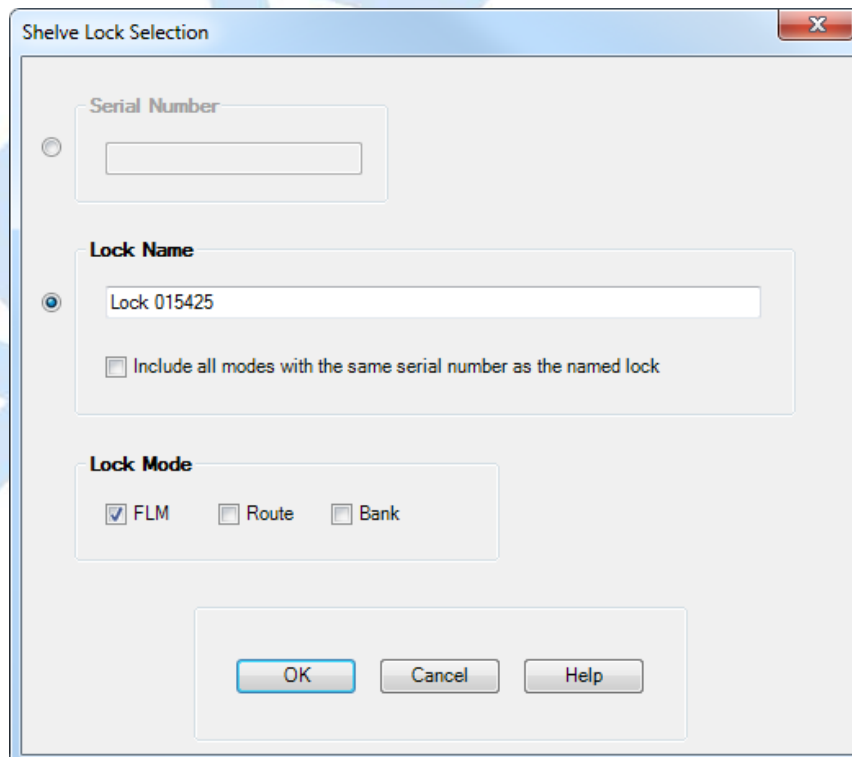
    4. Click OK.
    5. All locks that have the specified lock name and lock modes and are eligible for shelving will be added to the Shelve Locks dialog.
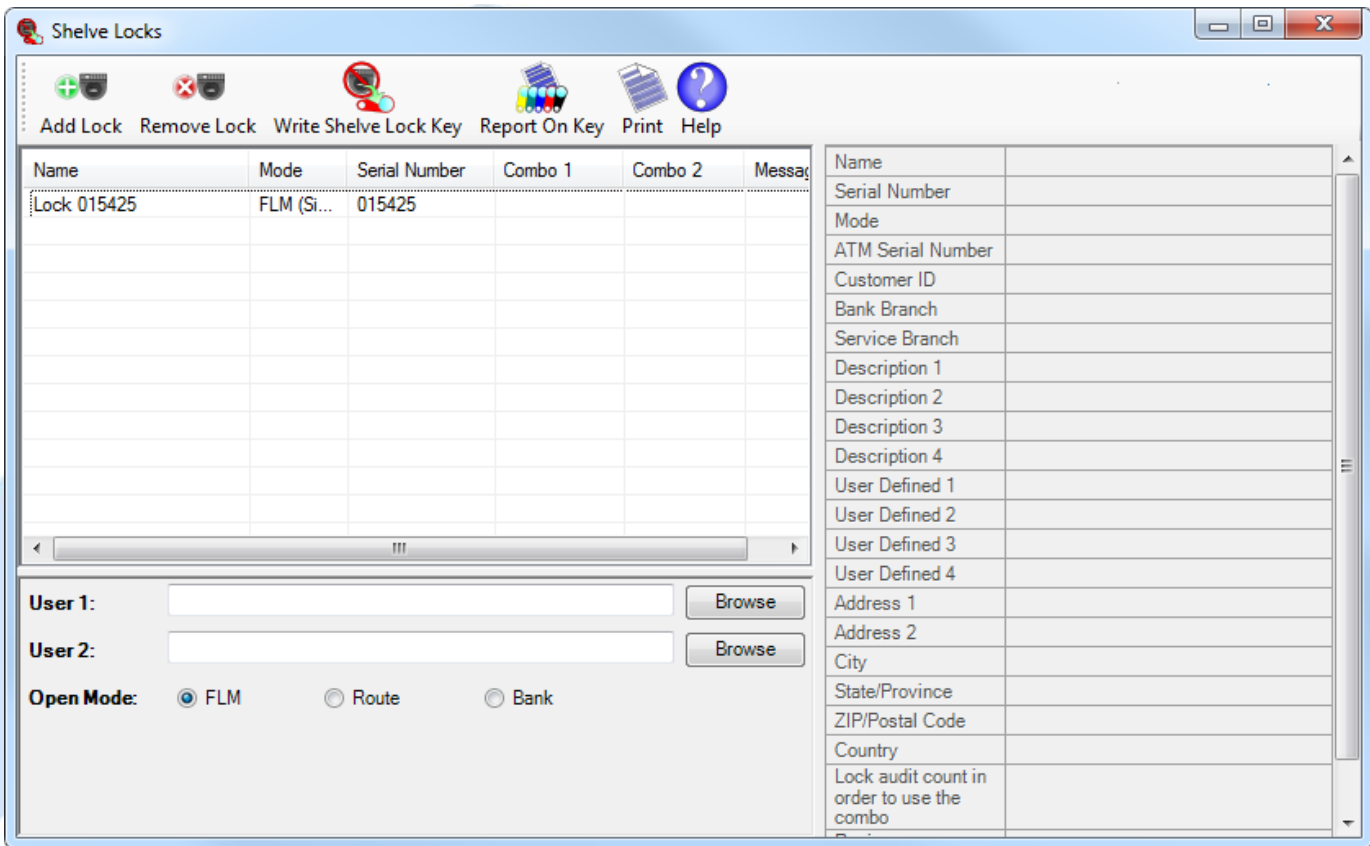
- If a lock name is specified and the **"Include all modes with same serial as named lock"** option is selected, the following locks will be added to the Shelve Locks dialog:
  - Those locks with the specified lock name and the specified lock modes that are eligible to be shelved.
  - Those locks having the same serial number as the lock with the specified name and specified mode(s) that are eligible to be shelved.
    - If all three modes are selected and each mode resides on a different serial number, a maximum of nine locks may be added to the Shelve Locks dialog.
    - These locks may or may not have the lock name that was specified by the user on the Shelve Lock Selection dialog.

Extending the the lock name selection example above:

1. Click the Lock Name radio button.
2. Enter a lock name in the Lock Name text box.
3. Select "Include all modes with same serial as named lock".
4. Select one or more lock modes.
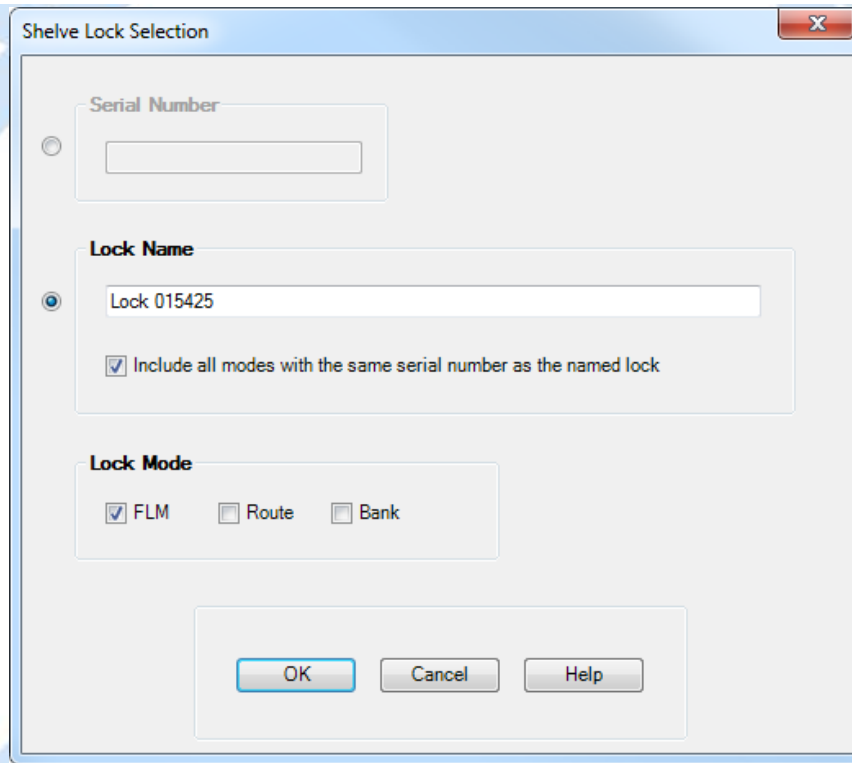
5. Click OK.

6. All locks that have the same serial number as any lock that matches the specified lock name and lock modes and that are eligible for shelving will be added to the Shelve Locks dialog.
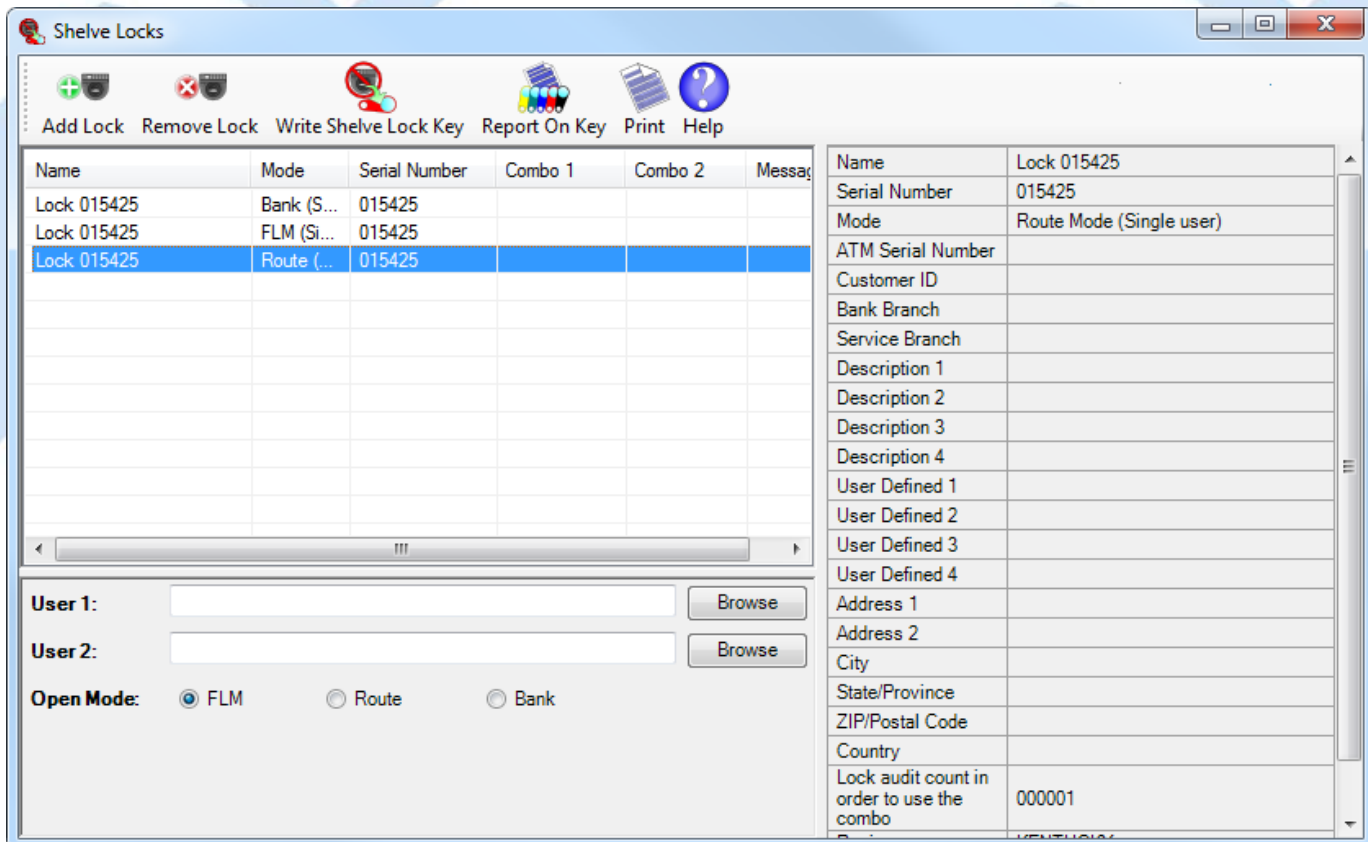
Additional locks can be added to the **Shelve Locks** dialog by repeatedly performing the techniques described for specifying locks to shelve until **Write Shelve Lock Key** is clicked.

When the list of locks to shelve is complete the shelve key can be programmed:

1. Insert an **SA** key into the Key Reader.
2. Click on a lock to view its details before processing.
3. Click on **Write Shelve Lock Key**.
4. A Shelve success summary message is displayed and the shelving combinations are displayed in the shelve form.
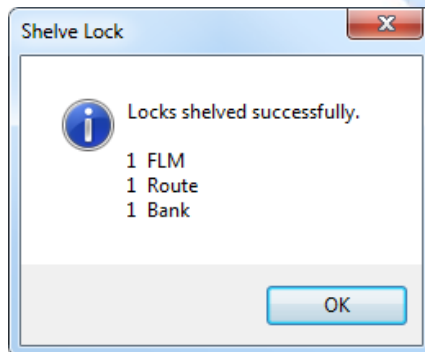
The SA Key is now ready to be taken to the Lock(s) for shelving at the lock.

(See section 4.2.10 Shelve Lock (at Lock) for details using the key at a lock.)

(See section 4.3.10 Shelve Lock (at Lock) for details using the key at a Gen 2 Swing Bolt lock.)

Once shelving at the lock has been completed, the SA Key must be returned to the PC System to verify the process for each lock shelved.

(See section 3.1.1.27 Verify Shelve Lock for details.)

Note
If a lock was opened and closed but not shelved while it was opened, another combination must be issued to the FLM or Route Person as a Service Call. This dispatch will change the lock status from Pending Shelve back to Active; however, the shelving key that was previously created is still valid to be used. The lock can then be opened again and the shelving can be completed.

Note
If a lock is being shelved in all modes, the Shelved Mode combination **returns to the Default Factory Combination of 50-25-50**.

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3.1.1.24 Unassign an FLM Service Call

An FLM Lock User can be "unassigned" from an FLM service call. This option is designed for use when a user has accidentally been dispatched to the wrong lock and must be freed up to service the correct lock. To unassign a service call, complete the following steps:

- Select an open lock from one of the lock reports and then choose the Unassign menu item. This operation pertains only to FLM mode locks; the menu item is disabled for Route mode locks.

- The Name of the user to whom the service call is currently assigned is displayed, along with the lock combination. If the Lock was assigned in Dual mode, both names and both combinations are displayed.
- Click on **Unassign Lock**.

  If the unassign is successful, the system displays a message in the Result area of the Unassign window.

Caution
Unassigning a FLM user from a call does not cancel the call. The lock is still in an open status in the software. In fact, be aware that if the FLM user was told the combination before the unassign occurred, the FLM technician could still use the combination to open the lock. Once a combination is dispatched to a user, the only way to prevent that user's combination from working at the lock is to reassign the combination to a 2nd user, and have the 2nd user open the lock with that combination before the 1st user.

Note
When an FLM lock is in an unassigned state, the next time a user needs to service that lock, the Reassign function must be used. Even if the original user that had been unassigned opens the lock, the lock still must be reassigned (or assigned back to the original user) in order to close the call. See section 3.1.1.17 Reassign a Service Call for details on the **Reassign** function.

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3.1.1.25 Undo Replace/Deleted Lock History Report

This report lists a history of deleted lock records. Each time a lock is deleted or replaced, the record from the Lock report is moved to the Deleted Lock History report. Thus, the two reports have the same initial search screen and report format. See the Lock Report for more information.

The following operations result in an entry in the Deleted Lock History report:

- Delete shelved lock
- Force delete of unshelved lock
- Replace lock
- Update activation of Gen2 locks activated in compatibility mode

The only Operations for this report are:

- **Restore the Lock (Selected Mode Only)**, This function attempts to restore only the lock data on the selected line (does not look for other modes of the same lock). This function handles restoring a lock for the following four different cases:
  - **Closed FLM or Route Mode Lock.** The following dialog is displayed with information about the closed lock:
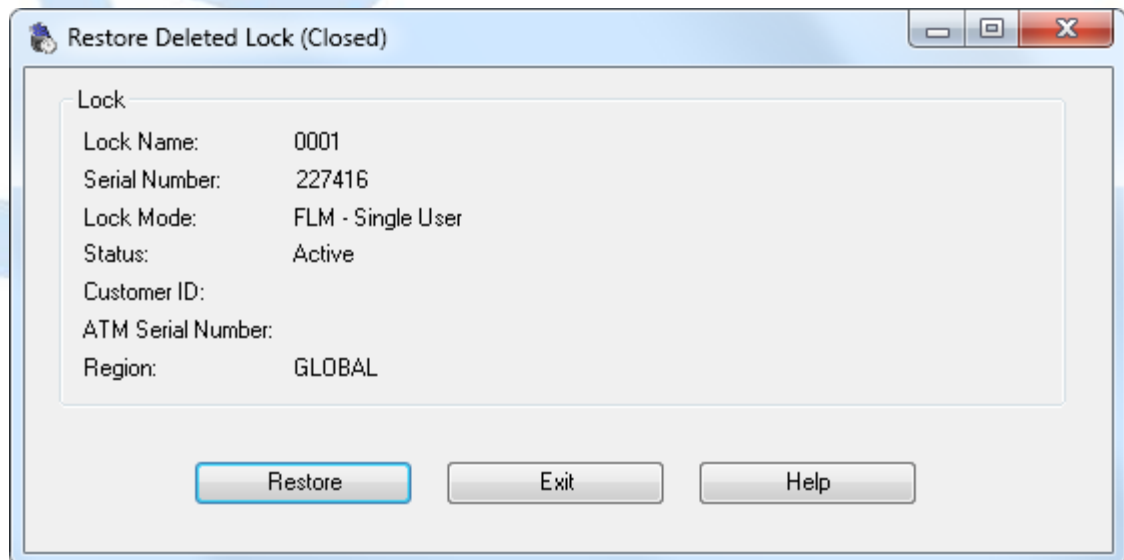
  - **Open FLM or Route Mode Lock.** The following dialog is displayed with information about the open lock:
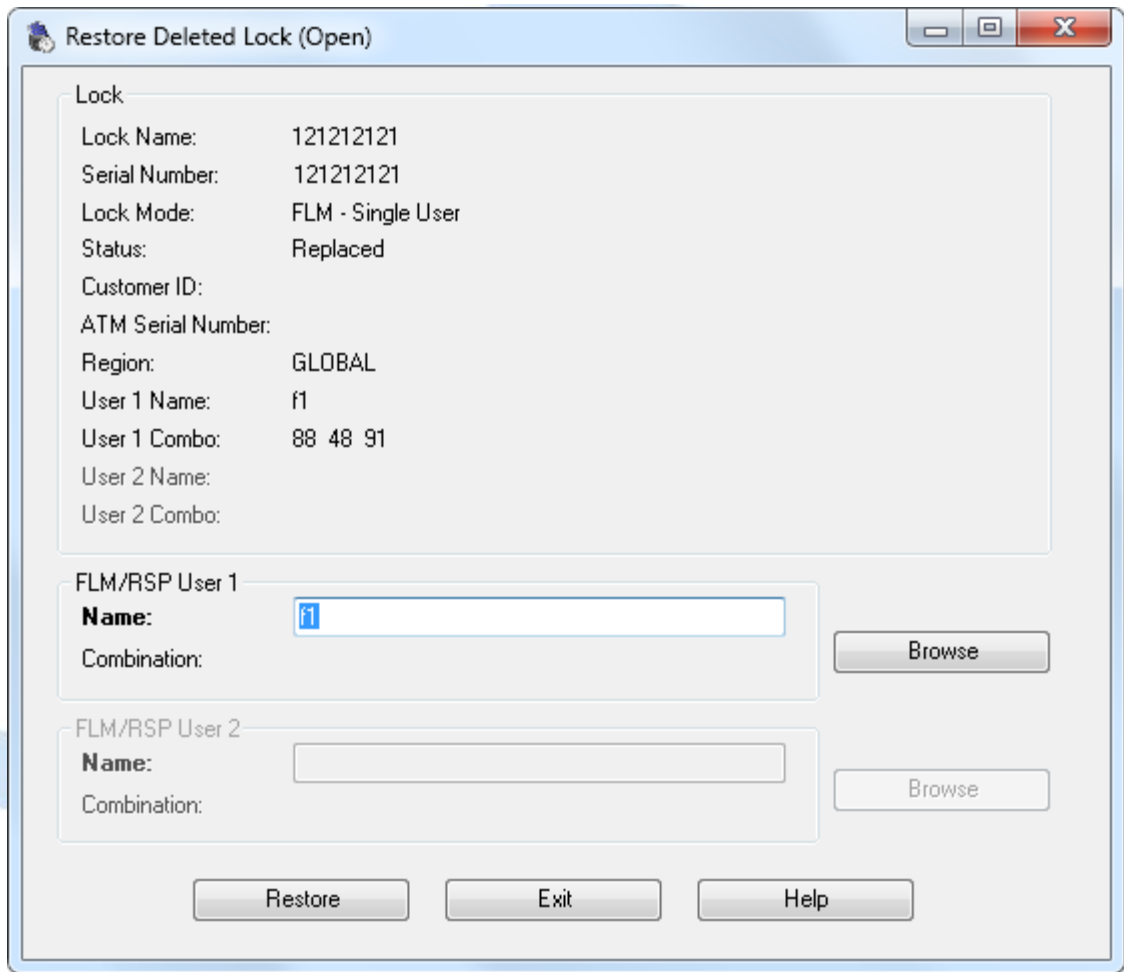
- **Route Mode Lock Open on one or more route sequences.** The following dialog is displayed with information about the open route mode lock and the route sequences:

Restore Deleted Lock (Open Route)

Lock

Lock Name: Gen2 Lock 1000105
Serial Number: 1000105
Lock Mode: Route - Single User

Status: Active
Customer ID: North Bank
ATM Serial Number: Kaba Mas ATM
Region: Kentucky

Route Sequence 1

Route Name: Lexington   Combination:
User 1 Name: nr1   **87 86 36**
User 2 Name:

Route Sequence 2

Route Name: Lexington   Combination:
User 1 Name: nr1   **89 81 00**
User 2 Name:

Route Sequence 3

Route Name: Lexington   Combination:
User 1 Name: nr1   **56 11 99**
User 2 Name:

Route User 1

Name: | [Browse]

Route User 2

Name: [Browse]

[Restore]   [Exit]   [Help]

- **Bank Mode Lock.** The following dialog is displayed with information about the bank mode lock:

Restore Deleted Lock (Bank)

Lock

Lock Name:	Gen2 Lock 1000106
Serial Number:	1000106
Lock Mode:	Bank - Single User
Status:	Active
Customer ID:	North Bank
ATM Serial Number:	Kaba Mas ATM
Region:	Kentucky
Bank Branch Name:	North Bank Branch

Bank Users

Name	Bank Branch ID	Default Combo	Must Change Co..
BU02	2	000000	No
BU04	4	000000	No
BU07	7	000000	No
BU01	1	000000	Yes
BU06	6	000000	Yes

[Restore]   [Exit]   [Help]

To restore the lock, select the **Restore** button. You may have to select users to dispatch to the lock if the lock is already open. This occures in a manner similar to reassigning a lock. In this case, the combinations for the users for the restored lock will be displayed in the dialog.

- **Undo the Replacement of the Lock (All Modes)**. Use this function on locks with a Status of "Replaced" to undo (restore) the replacement of all modes of the selected lock.

A successful restore displays the following:
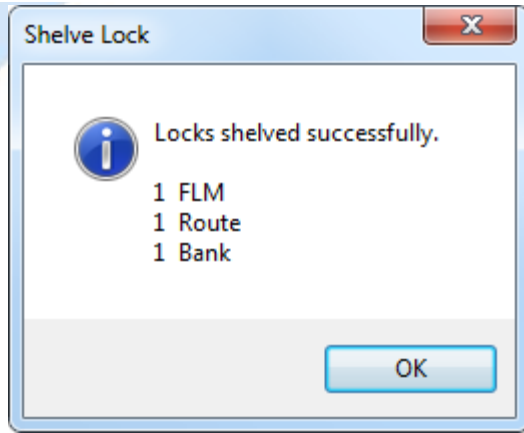
Shelve Lock

Locks shelved successfully.

1 FLM
1 Route
1 Bank

OK

3.1.1.26 Update Activation of Gen2 Locks Activated in Compatibility Mode

This option allows you to change the status of a Gen2 lock which was activated in Gen1 compatibility mode. Gen2 locks which are activated under a previous version of Cencon or which were activated with Cencon 5 using a PCI card are automatically placed in what is called "compatibility mode". In this mode, Gen2 locks behave mostly like Gen1 locks and do not support many Gen2 unique functions. When a Cencon Key Box is available for use with the Cencon 5 system, these locks should be updated to give them full Gen2 functionality. To update Gen2 locks in compatibility mode:

1. Open a lock report.
2. Select the Gen2 lock(s) to be updated. (The Gen2 Compatibility Mode locks will have the Lock Name highlighted in grey rather than white or blue.)
3. Select the **Administration Menu**.
4. Press **Update Activation of Gen2 Locks Activated in Compatibility Mode**. The following form is displayed:

5. Select an appropriate user(s) and user dispatch mode (the user who will open the lock to perform the update)
6. Modify the Time and Region values if necessary.
7. Insert a red **SA** key into the Key Reader.
8. Click on a lock to view its details before processing.
9. Click on **Update Gen 2 Lock Status and Write Update Activate Lock Key**.
10. A success message is displayed and the user combinations are presented in the dialog.
11. The SA Key is now ready to be taken to the lock(s) for reactivation.

   (See 4.2.21 Update Activate of Gen 2 Lock Activated as Gen 1 Lock for actions to perform at a Gen 2 lock.)

   (See 4.3.21 Update Activate of Gen 2 Lock Activated as Gen 1 Lock for actions to perform at a Gen 2 Swing Bolt lock.)

   Once the Update Activation has been completed, the lock close seal(s) must be reported to the PC System to verify the process.

Note

If the SA key is lost or needs to be regenerated:

- Delete the lock's entry from the lock table (Force Delete of Unshelved Lock from the lock report).
- Open the Lock History Report and Restore the lock's original record.
- Start again with step #1 above.

3.1.1.27 Verify Shelve Lock

> **Note**
>
> You must first close the call generated in the shelving process before you attempt to verify the shelving of a lock.

This process completes the shelving of a Lock in the software by reading the contents of the red SA Key that was used to shelve the Lock. After a Lock is shelved, the Close Seal must be reported first, and then the SA key needs to be returned so that shelving can be verified at the PC System. Once shelving for a lock is verified, the lock status is changed from Pending Shelve to Shelved. To verify the shelve of a Lock:

1. Insert the **red SA** key used to shelve the lock into the key reader.

2. Open a lock report.

3. Select the **Administration Menu**. (It is not necessary to highlight any locks since the software will read the key to determine which locks are being verified.)

4. Select **Verify Shelve Lock**. The SA key is read and the Verify Shelve dialog is displayed. If the key contains valid shelve data, the verify shelve process is automatically performed.

   The locks which have been shelved by the SA key are displayed in the dialog as shown below:
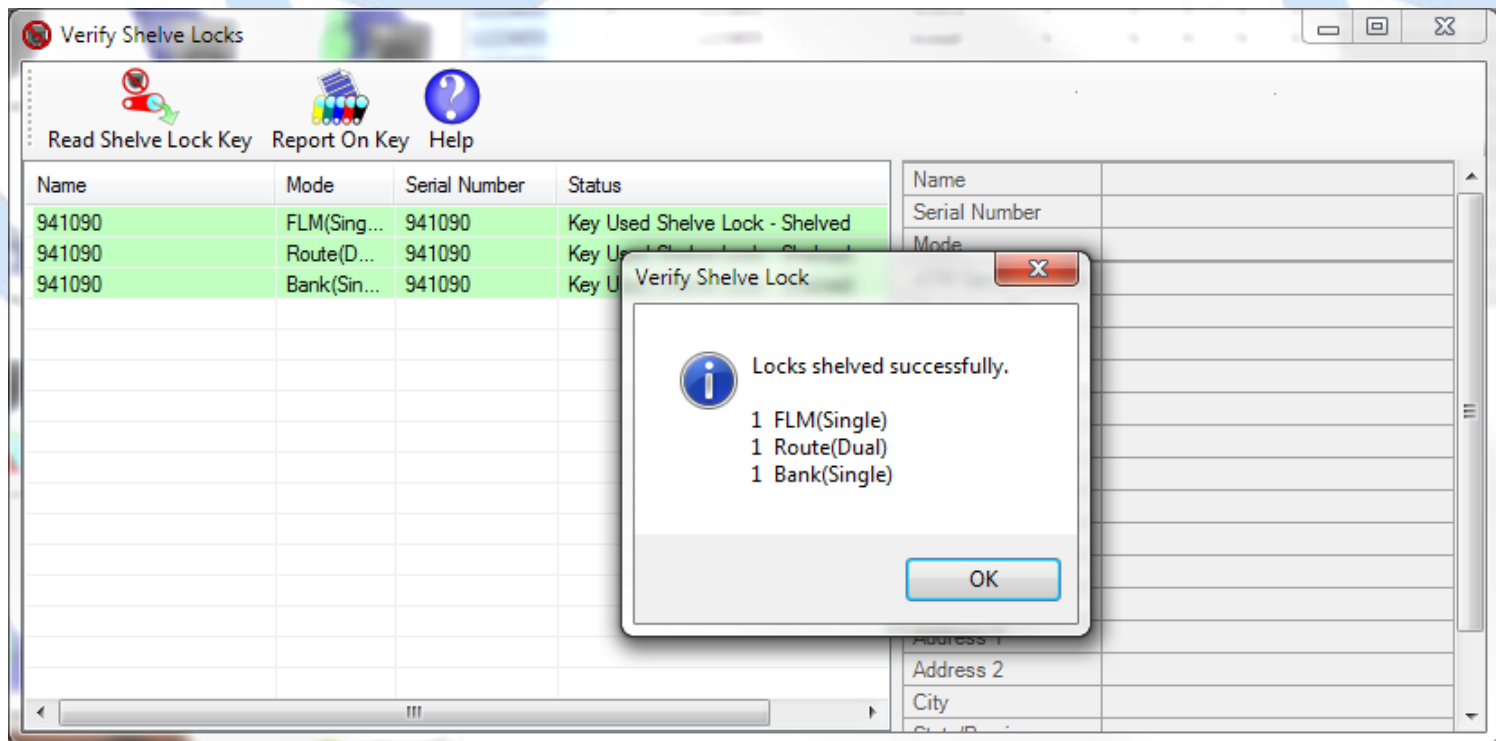
5. If you need to process a different SA key, insert the key into the Key Reader and click on **Read Shelve Lock Key**.

If the process is successful, the message "Locks shelved successfully" is displayed, and the database records for the Locks shelved through the use of the Supervisor Audit Key are placed in the "Shelved" mode. These Locks cannot be used again until the "Activate Lock" process is used to re-activate them.

> **Note**
>
> If a lock was opened and closed but not shelved while it was opened, another combination must be issued to the FLM or Route Person as a Service Call. This dispatch will change the lock status from Pending Shelve back to Active; however, the shelving key that was previously created is still valid to be used. The lock can then be opened again and the shelving can be completed.

3.1.2 Open Lock Log

A variety of common operations can be done with reports, to include printing, saving in various formats, and sorting the contents of the report. You can refer to these common report operations in section 3.0 Reports.

This report lists information pertaining to open locks. It displays the open lock log data table within the Cencon database. When a lock is dispatched, an entry for the lock is placed in the open lock log data table within the Cencon database. When a lock is closed, the entry for that open lock is moved to the lock log history data table within the Cencon database.

To view the Open Lock Log report, select **Lock Log Report** from the main Cencon Window. The following Search screen is displayed prior to generating the report to allow filtering for specific lock records:

The tabs in the search screen will be highlighted if they contain search settings that are not immediately visible.

Upon selecting 'OK', the locks matching the given search parameters will be displayed. Depending on the number of matching locks and the speed of your database connection, it may take several seconds for the locks to be displayed. You can still do operations with the report even while locks are still being loaded into memory. If your computer does not have enough memory to keep all of the locks in memory, then the report will fetch locks as needed depending on the portion of the report you are looking at. If this occurs, then the word 'Partial' will be displayed on the report status bar.

Sample Open Lock Log:

Lock	Mode	Dispatcher	FLM1/RSP1	FLM2/RSP2	Open Date Time	Close Date Time	Route	Seq	Disp Route	SLM Call	Ac Ca
VLK1000300	RD	MHG\LST...	nr1	nr2	2013-04-10 15:28...		TestRoute2	3	Y	N	N
VLK1000300	RD	MHG\LST...	nr1	nr2	2013-04-10 15:28...		TestRoute2	2	Y	N	N
VLK1000300	RD	MHG\LST...	nr1	nr2	2013-04-10 15:28...		TestRoute2	1	Y	N	N
VLK652	RD	MHG\LST...	nr1	nr2	2013-04-10 15:25...		TestRoute2	1	Y	N	N
VLK651	RD	MHG\LST...	nr1	nr2	2013-04-10 15:25...		TestRoute2	1	Y	N	N
VLK1111123	R	MHG\LST...	nr1		2013-04-10 15:25...		TestRoute2	1	Y	N	N
VLK1000123	R	MHG\LST...	nr1		2013-04-10 15:25...		TestRoute2	1	Y	N	N
VLK080	R	MHG\LST...	nr1		2013-04-10 15:25...		TestRoute2	1	Y	N	N
VLK051	R	MHG\LST...	nr1		2013-04-10 15:25...		TestRoute2	1	Y	N	N
VLK021	R	MHG\LST...	nr1		2013-04-10 15:25...		TestRoute2	1	Y	N	N
VLK020	R	MHG\LST...	nr1		2013-04-10 15:25...		TestRoute2	1	Y	N	N
VLK018	R	MHG\LST...	nr1		2013-04-10 15:25...		TestRoute2	1	Y	N	N
VLK017	R	MHG\LST...	nr1		2013-04-10 15:25...		TestRoute2	1	Y	N	N
VLK001	R	MHG\LST...	nr1		2013-04-10 15:25...		TestRoute2	1	Y	N	N
NPLock1	R	MHG\LST...	nr1		2013-04-10 15:25...		TestRoute2	3	Y	N	N
NPLock1	R	MHG\LST...	nr1		2013-04-10 15:25...		TestRoute2	2	Y	N	N
NPLock1	R	MHG\LST...	nr1		2013-04-10 15:25...		TestRoute2	1	Y	N	N
VLK1000301	R	MHG\LST...	nr1		2013-04-10 10:47...				N	N	Y
VLK1000302	R	MHG\LST...	nr1		2013-04-10 10:47...				N	N	Y
VLK1000303	R	MHG\LST...	nr1		2013-04-10 10:47...				N	N	Y
VLK681	F	MHG\LST...	F3		2013-04-03 10:50...				N	N	Y
VLK680	R	MHG\LST...	rjrb		2013-03-29 09:58...				N	N	N
VLK661	R	MHG\LST...	rjrb7		2013-03-29 09:44...				N	N	N
VLK675	F	MHG\LST...	nf3		2013-03-29 09:16...				N	N	N
VLK663	F	MHG\LST...	nf1		2013-03-29 09:15...				N	N	N
A New Lock 1	F	MHG\LST...	Lee F1		2013-02-06 11:13...				N	N	Y

37051 lock log audits found. (37051 records currently in memory.) (1 - 28 displayed.)   DONE

All of the locks are highlighted in light green because they are dispatched (open). Note that the Cencon Gen 2 locks have their name highlighted in light blue. The Cencon Gen 1 locks have their name in the default highlight of light green.

Operations may be performed on the locks on this list using the following procedure:

1. Select a lock by left-clicking on the desired row in the report. Multiple locks may be selected by holding the Ctrl key while left-clicking (not all operations are available for groups of locks). Click on the Operations menu to access the supported functions for the selected lock(s).

2. Operations may also be selected from the popup menu obtained by right-clicking on the desired row in the report.

Open Lock Log showing the operations menu items:

Lock Log Report Functions:

- [Close](#)
- [Close Locks With User Key](#)
- [Close Locks Based on Verify of Open With Lock User Key](#)
- [Close Lock with Remote Serial Operation (Gen2)](#)
- [Reassign](#)
- [Unassign](#)
- [Edit Lock Data](#)
- [Individual Lock report](#)
- [Display the lock location on a map](#)
- [Add to Collection](#)
- [Add to Route](#)

Open Lock Log with Administration Menu:

Open Lock Log

File Edit Font Operations Administration Format Help

Administration menu (open):
- Rename Lock
- Replace Lock
- Manager Force Close w/o Seal
- Force Delete Of Unshelved Lock
- Remote Serial Operations with Lock (Gen2)

Lock			P1	FLM2/RSP2	Open Date Time	Close Date Time	Route	Seq	Disp Route	SLM Call	Ac Ca
VLK1000300				nr2	2013-04-10 15:28...		TestRoute2	3	Y	N	N
VLK1000300				nr2	2013-04-10 15:28...		TestRoute2	2	Y	N	N
VLK1000300				nr2	2013-04-10 15:28...		TestRoute2	1	Y	N	N
VLK652				nr2	2013-04-10 15:25...		TestRoute2	1	Y	N	N
VLK651	RD	MHG\LST...	nr1	nr2	2013-04-10 15:25...		TestRoute2	1	Y	N	N
VLK1111123	R	MHG\LST...	nr1		2013-04-10 15:25...		TestRoute2	1	Y	N	N
VLK1000123	R	MHG\LST...	nr1		2013-04-10 15:25...		TestRoute2	1	Y	N	N
VLK080	R	MHG\LST...	nr1		2013-04-10 15:25...		TestRoute2	1	Y	N	N
VLK051	R	MHG\LST...	nr1		2013-04-10 15:25...		TestRoute2	1	Y	N	N
VLK021	R	MHG\LST...	nr1		2013-04-10 15:25...		TestRoute2	1	Y	N	N
VLK020	R	MHG\LST...	nr1		2013-04-10 15:25...		TestRoute2	1	Y	N	N
VLK018	R	MHG\LST...	nr1		2013-04-10 15:25...		TestRoute2	1	Y	N	N
VLK017	R	MHG\LST...	nr1		2013-04-10 15:25...		TestRoute2	1	Y	N	N
VLK001	R	MHG\LST...	nr1		2013-04-10 15:25...		TestRoute2	1	Y	N	N
NPLock1	R	MHG\LST...	nr1		2013-04-10 15:25...		TestRoute2	3	Y	N	N
NPLock1	R	MHG\LST...	nr1		2013-04-10 15:25...		TestRoute2	2	Y	N	N
NPLock1	R	MHG\LST...	nr1		2013-04-10 15:25...		TestRoute2	1	Y	N	N
VLK1000301	R	MHG\LST...	nr1		2013-04-10 10:47...				N	N	Y
VLK1000302	R	MHG\LST...	nr1		2013-04-10 10:47...				N	N	Y
VLK1000303	R	MHG\LST...	nr1		2013-04-10 10:47...				N	N	Y
VLK681	F	MHG\LST...	F3		2013-04-03 10:50...				N	N	Y
VLK680	R	MHG\LST...	rjrb		2013-03-29 09:58...				N	N	N
VLK661	R	MHG\LST...	rjrb7		2013-03-29 09:44...				N	N	N
VLK675	F	MHG\LST...	nf3		2013-03-29 09:16...				N	N	N
VLK663	F	MHG\LST...	nf1		2013-03-29 09:15...				N	N	N
A New Lock 1	F	MHG\LST...	Loc F1		2013-03-06 11:13...				N	N	Y

37051 lock log audits found. (37051 records currently in memory.) (1 - 28 displayed.)   DONE

Administration Functions:

- [Rename](#)
- [Replace](#)
- [Manager Force Close w/o Seal](#)
- [Force Delete of Unshelved Lock](#)
- [Remote Serial Operations with Lock (Gen2)](#)

3.1.3 Route Report

For information on common usage of the reports, refer to the following section: 3.0 Using Cencon Reports

The Route Report is used to display and manage routes of locks.

From the main window, click on **Route Report**. The following Search screen is displayed prior to generating the report to allow filtering for specific routes:

The tabs in the search screen will be highlighted if they contain search settings that are not immediately visible.

Upon selecting 'OK', the routes matching the given search parameters will be displayed.

The fields on the 'Routes' tab of the search dialog are compared against the route data in the Cencon database to identify routes of interest.

The fields on the 'Route Locks' tab of the search dialog are compared against the identified routes' lock specific data, such as open and close date and route sequence, to identify locks of interest.

The fields in the remaining tabs of the search dialog are compared against the lock specific data of the identified locks of interest. If a lock's data matches the search parameters then the containing route will be returned as part of the search results.

Depending on the number of matching routes and the speed of your database connection, it may take several seconds for the routes to be displayed. You can still do operations with the report even while routes are still being loaded into memory. If your computer does not have enough memory to keep all of the routes in memory, then the report will fetch routes as needed depending on the portion of the report you are looking at. If this occurs, then the word 'Partial' will be displayed on the report status bar.

Sample Route report:
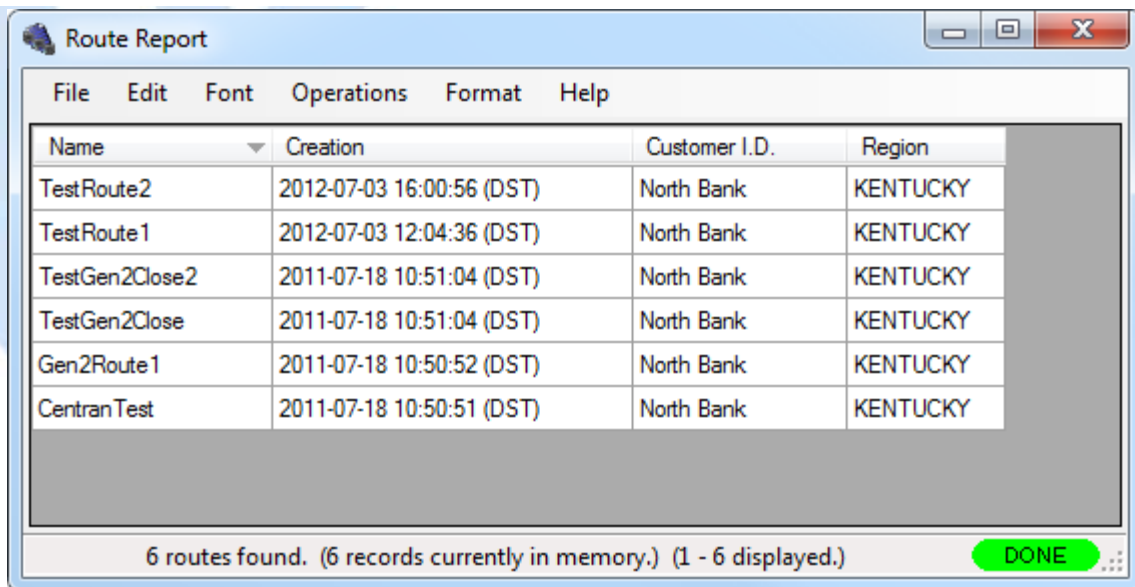
A variety of common operations can be done with the report, to include printing, saving in various formats, and sorting the contents of the report. You can refer to these common report operations in section 3.0 Reports.
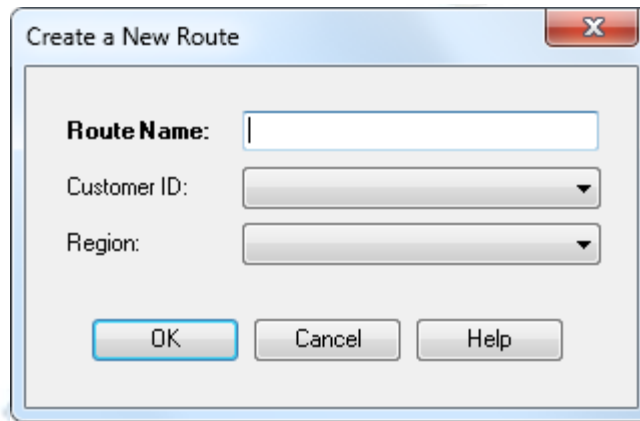
The operations menu provides access to a set of operations unique to the Route Report as shown below:
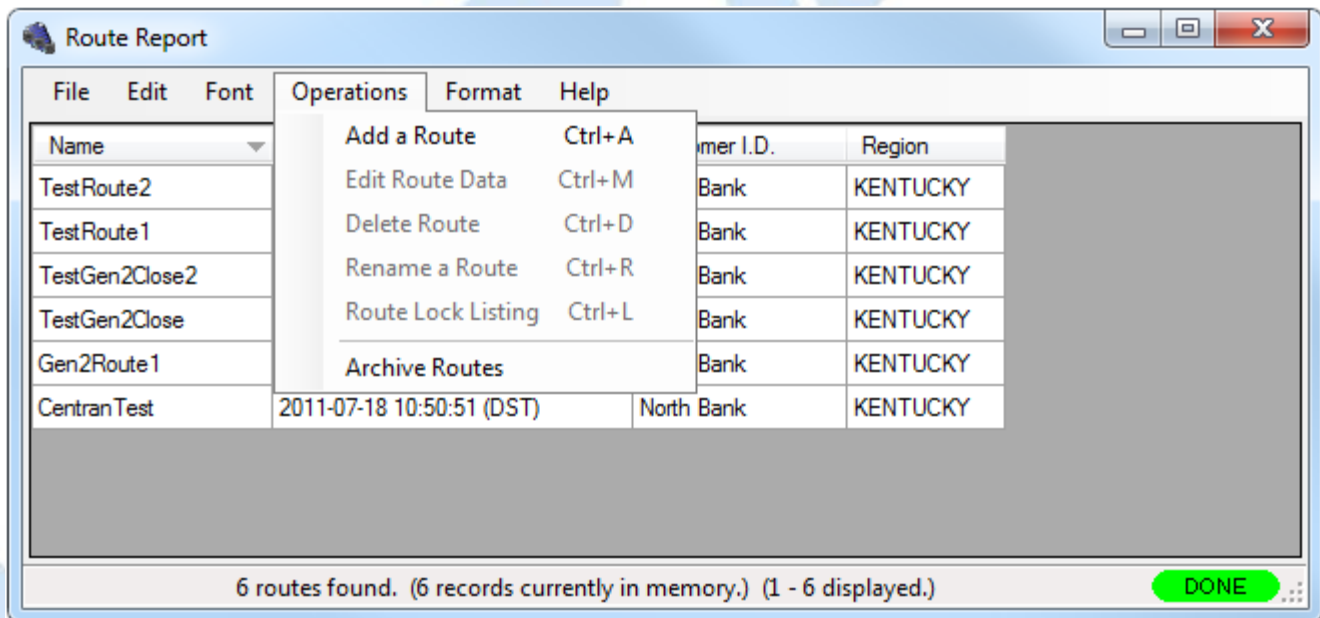
Add Route

This operation allows you to add a new route. You can do this by selecting **Add a Route** from the **Operations** menu.

The following dialog is displayed:
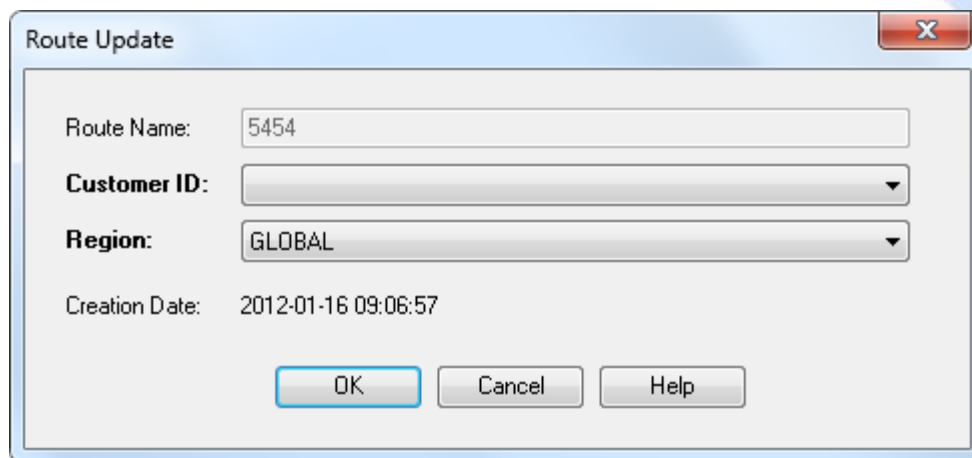
You will need to enter a name for the route you want to create. Optionally you can set a customer ID and region ID. If you are using region control, and currently logged in as a Global user, you will need to set the region ID to match the region assigned to the locks you are going to place on the route. If the current dispatcher is restricted to a local region, then that region will automatically be assigned to a new route being created. Once you have set up the information for the new route, click the **OK** button.

Edit Route Data

This operation allows you to edit the information for an existing route. You will need to first select the route you want to edit from the report. Then select **Edit Route Data** from the **Operations** menu. A dialog similar to the following is displayed.

Edit the information for the route as desired, and then click on **OK**. A confirmation message will be displayed for the update of the route.

Delete Route

This operation allows you to delete an existing route. You will need to first select the route you want to delete from the report. Then select **Delete Route** from the **Operations** menu. A dialog similar to the following will be displayed.
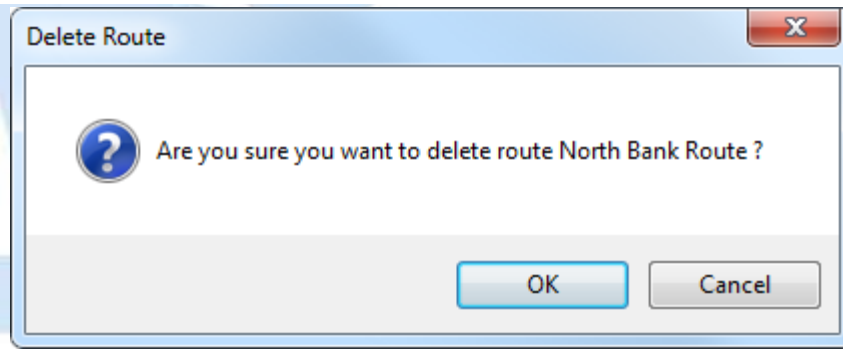
Select **Yes** to proceed with deleting the route. If the route has locks open, they can still be closed out from the Lock Report or the Open Lock Log Report. If the route is later recreated with the same name, any open locks on the route will automatically be added back to the report.

Rename Route

This operation allows you to rename an existing route. You will need to first select the route you want to rename from the report. Then select **Rename Route** from the **Operations** menu. A dialog similar to the following is displayed.
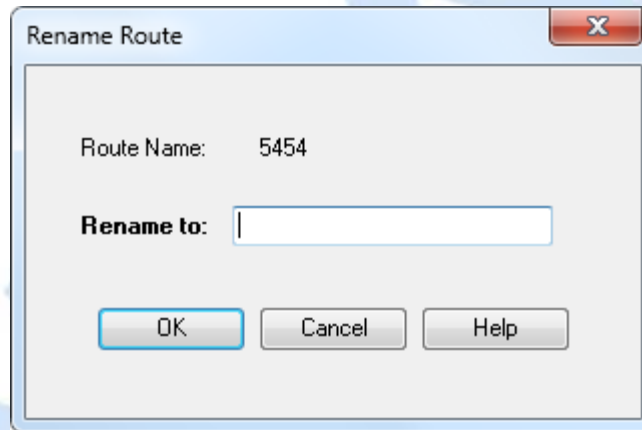
Enter a new name and press **OK** to proceed with renaming the route.

Route Lock Listing

This operation allows you to display a report of the locks on a route, as well as manage the locks on a route. You will first need to select the route you want to display from the report. Then select **Route Lock Listing** from the **Operations** menu. The Route Listing Report will be displayed for the route you selected. See section 3.1.3.1 Route Listing Report for details on using the Route Listing Report. An alternative method is to double-click on the route you want to display. This operates in the same manner as selecting the option from the **Operations** menu.

Archive Routes

Selecting **Archive** opens the following window:
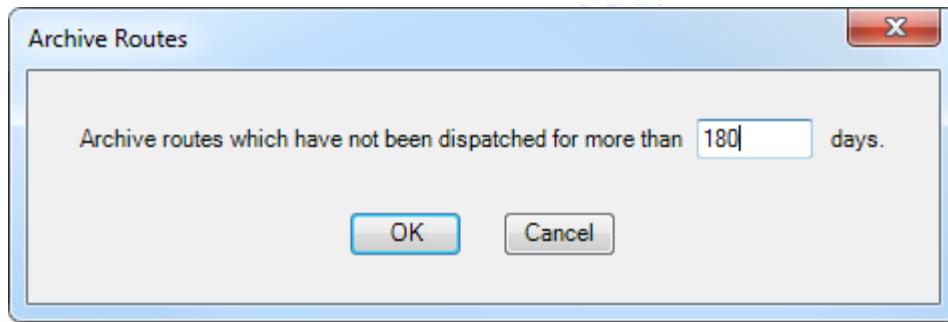
Enter the number of days for the archive (based on the last date the locks on the route were dispatched) and press **OK** to proceed to the confirmation screen:
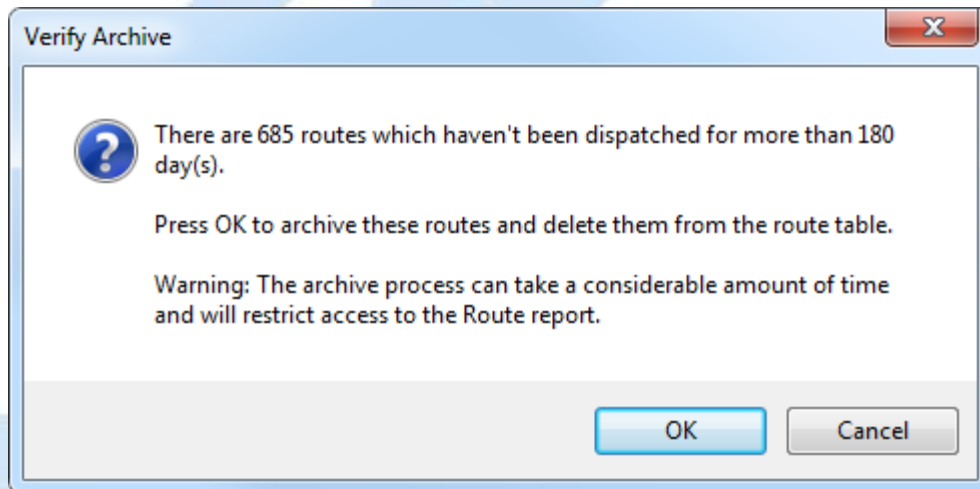
The records are copied to the Route Archive table and removed from the Route table.

Note
Import of legacy route files (.RTE) has been removed from Cencon. This function is still present in the Cencon Database Setup Utility. This is done in the following manner: 1) Run the Cencon Database Setup Utility, select your database as needed, and select Maintenance only. In the following screens, do not select to update tables, etc.   2) In the screen to import Cencon 1.5x files, check the box to import files. You will then see the options to import files.   3) Select the directory to import files from and select only the route file type to be imported.   4) Select **Next** until you get to selecting a region to import the routes to. Select the region you want to assign to the imported routes.   5) Select **Next** until you get to the final summary screen for the operations to be done. Check the operations to be done and then click on **Start** to import the route files.
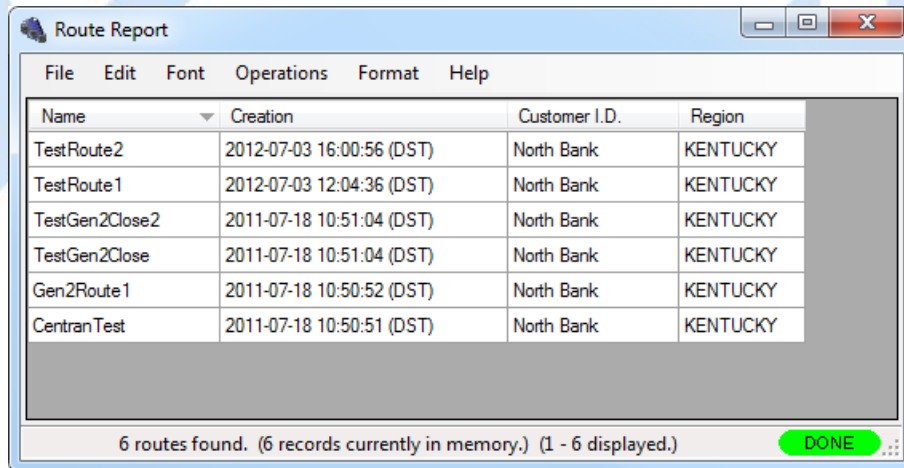
3.1.3.1 Route Listing Report

The Route Listing Report is used to display the details of a route of locks, and to allow administration of a route. It provides support for the following operations:

- Adding locks to a route
- Deleting locks from a route
- Setting the RSP user(s) for dispatch on a route
- Dispatching a route and listing the dispatched combinations
- Reassigning all or part of a route and listing the updated combinations
- Closing all or part of a route by manual entry of lock close seals
- Closing all or part of a route by reading from an RSP key
- Display additional details on selected individual locks.
- Copy/Paste locks between routes

You can open this report on a route in the following manner:

Open the Route report from the main Cencon window by clicking on **Route Report**.

Open the route you want to display, by selecting the route name and double-clicking on it.

Alternatively, you can select the route name and right-click on it. A popup menu will be displayed. From the popup menu, select **Route Lock Listing**. A window similar to the following will be displayed:

Route Listing Report: TestRoute2

File　Edit　Font　Sort　Operations　Format　Help

Add Locks　Set Users　Dispatch　Reassign　Close With Menu　Close With Key

Lock	Serial	Seq	RSP 1	Combo 1	RSP 2	Combo 2	Seal	Route Seq Open	Single Open	Result	Region	Open Date Time
NPLock1	973050	1	nr1					N	N		KENTUCKY	2013-04-10 14:39
NPLock1	973050	2	nr1					N	N		KENTUCKY	2013-04-10 14:39
NPLock1	973050	3	nr1					N	N		KENTUCKY	2013-04-10 14:39
VLK001	532001	1	nr1					N	N		KENTUCKY	2013-04-10 14:39
VLK017	532017	1	nr1					N	N		KENTUCKY	2013-04-10 14:39
VLK018	532018	1	nr1					N	N		KENTUCKY	2013-04-10 14:39
VLK020	532020	1	nr1					N	N		KENTUCKY	2013-04-10 14:39
VLK021	532021	1	nr1					N	N		KENTUCKY	2013-04-10 14:39
VLK051	532051	1	nr1					N	N		KENTUCKY	2013-04-10 14:39
VLK080	532080	1	nr1					N	N		KENTUCKY	2013-04-10 14:39
VLK1000123	001000123	1	nr1					N	N		KENTUCKY	2013-04-10 14:39
VLK1000300	001000300	1	nr1		nr2			N	Y		KENTUCKY	
VLK1000300	001000300	2	nr1		nr2			N	Y		KENTUCKY	
VLK1000300	001000300	3	nr1		nr2			N	Y		KENTUCKY	
VLK1111123	001111123	1	nr1					N	N		KENTUCKY	2013-04-10 14:39
VLK651	512651	1	nr1		nr2			N	N		KENTUCKY	
VLK652	512652	1	nr1		nr2			N	N		KENTUCKY	

17 locks on route TestRoute2 found. (17 records currently in memory.) (1 - 17 displayed.)　　　DONE

Note

The Route Listing report will update its colors depending on the status of the report. If a lock is not open, then the lock name and RSP user ID can be edited, as well as its route sequence number. Fields that can be edited are shown in yellow. If a lock is open, then the lock will be highlighted in green. The field for the close seal of the lock will be in yellow, indicating that field can be edited for entering the close seal of the lock.

- **White** - Indicates a lock is closed and that the field can't be edited.
- **Green** - Indicates a lock is open.
- **Yellow** - Indicates a field can be edited. If a lock is open, the close seal can be entered. If a lock is not open, then the RSP ID can be entered, or the lock name or sequence can be changed.
- **Red** - Indicates that an error occurred with the last operation attempted against the lock, or that the lock is already open on another route with the same sequence number. The reason for the error with the lock will be displayed in the **Result** field of the report.
- **Light Blue** - If the lock name is highlighted in light blue, this indicates that the lock is a Gen 2 lock.

A variety of common operations can be done with the report, to include printing, saving in various formats, and sorting the contents of the report. You can refer to these common report operations in section 3.0 Reports.

The following window shows the set of operations unique to the Route Listing Report:

Browse To Add Lock To Route

This operation allows you to add locks to the route. 1 route listing report must be currently open to add locks to it. From the **Operations** menu, select **Browse To Add Lock To Route**. Alternatively, click on the **Add Locks** button on the tool bar. The Lock Report will be displayed, with the search automatically set up for route mode locks. If region control is active, the region will automatically be set up as is assigned to the route. From the lock report, select a lock or a group of locks and then press Operations followed by **Add to Route**. If you add a lock multiple times, it will be added using the next route sequence number. A single lock can only have up to three dispatches on a route.

Remove Lock From Route

This operation allows you to delete a lock from the route. Select a lock within the route. From the **Operations** menu, select **Remove Lock From Route**. Alternatively, select a lock within the route and right-click on the lock. Select **Remove Lock From Route** from the popup menu. A third method is to select a lock within the route and press the **Delete** key on your keyboard. The lock you have selected will be deleted from the route.

Set Users

This sets the RSP user names to the selected locks on the route. If no locks are selected, then this will set the entered RSP user names to the entire route. If the route locks are open, then this can be done using **Reassign.** From the **Operations** menu, select **Set Users**. The following window will be displayed:

Dispatch User Selection

User Name 1: [_____] Browse

User Name 2: [_____] Browse

OK   Cancel

If all the locks on the route are in single mode, then the second RSP user field will be disabled in the window. If one or more locks on the route are in dual mode, then both RSP user fields will be enabled. Enter the RSP user ID that you want to assign to the route and click on **OK**.

Dispatch

This dispatches the route to the currently assigned RSP users. If RSP users are not assigned, or if RSP users are not the same for the entire route, then the **Set Users** window will be displayed to prompt you for the RSP User IDs to dispatch. After you set the users, then the route will be updated with the combinations dispatched to the RSP users.

From the **Operations** menu, select **Dispatch**. Alternatively, click on the **Dispatch** button on the toolbar. The window similar to the following will be displayed.

Route Listing Report: TestRoute2

File Edit Font Sort Operations Format Help

Add Locks | Set Users | Dispatch | Reassign | Close With Menu | Close With Key

Lock	Serial	Seq	RSP 1	Combo 1	RSP 2	Combo 2	Seal	Route Seq Open	Single Open	Result	Region	Open Date Time
NPLock1	973050	1	nr1	89 35 98				Y	N		KENTUCKY	2013-04-10 15:25
NPLock1	973050	2	nr1	59 25 04				Y	N		KENTUCKY	2013-04-10 15:25
NPLock1	973050	3	nr1	17 60 70				Y	N		KENTUCKY	2013-04-10 15:25
VLK001	532001	1	nr1	43 45 82				Y	N		KENTUCKY	2013-04-10 15:25
VLK017	532017	1	nr1	74 89 88				Y	N		KENTUCKY	2013-04-10 15:25
VLK018	532018	1	nr1	47 32 84				Y	N		KENTUCKY	2013-04-10 15:25
VLK020	532020	1	nr1	14 22 47				Y	N		KENTUCKY	2013-04-10 15:25
VLK021	532021	1	nr1	93 21 82				Y	N		KENTUCKY	2013-04-10 15:25
VLK051	532051	1	nr1	39 77 16				Y	N		KENTUCKY	2013-04-10 15:25
VLK080	532080	1	nr1	54 31 75				Y	N		KENTUCKY	2013-04-10 15:25
VLK1000123	001000123	1	nr1	22 82 75				Y	N		KENTUCKY	2013-04-10 15:25
VLK1000300	001000300	1	nr1	08 08 29	nr2	21 34 59		Y	N		KENTUCKY	2013-04-10 15:28
VLK1000300	001000300	2	nr1	40 00 79	nr2	63 21 90		Y	N		KENTUCKY	2013-04-10 15:28
VLK1000300	001000300	3	nr1	21 15 58	nr2	50 80 81		Y	N		KENTUCKY	2013-04-10 15:28
VLK1111123	001111123	1	nr1	53 08 62				Y	N		KENTUCKY	2013-04-10 15:25
VLK651	512651	1	nr1	91 06 93	nr2	47 01 24		Y	N		KENTUCKY	2013-04-10 15:25
VLK652	512652	1	nr1	63 05 59	nr2	19 00 90		Y	N		KENTUCKY	2013-04-10 15:25

17 locks on route TestRoute2 found. (17 records currently in memory.) (1 - 17 displayed.)   DONE

Reassign

This operation reassigns open locks on the route to another RSP user ID(s). You can reassign the entire route, or just part of the route. The report will update with the new RSP user IDs and their combinations.

To reassign part of a route, select those locks on the route you want to reassign. Alternatively, leave all the locks unselected, and the entire route will be reassigned. From the **Operations** menu, select **Reassign**, or click on **Reassign** in the toolbar. The **Set Users** dialog will be displayed, allowing you to enter the new RSP user IDs you are wanting to reassign the route locks to. Click on **Set Users** and the report will be updated with the new RSP user IDs and the assigned combinations.

<table>
<tr><td>**Note**</td></tr>
<tr><td>Note that both combinations have the ability to open the lock. However, only the combination that is entered first will actually open the lock. Once a combination is entered, the other combination will be invalid and will not open the lock. Only one Close Seal can be retrieved from the lock for the opening.</td></tr>
</table>

Close

This operation allows you to close the locks on the route by entering in the close seals for the locks. This is done by first entering in the close seals into the yellow edit field in the report, in the **Seal** column. The close seal must be for the correct route sequence of the lock, if the lock has been dispatched multiple times on the route.

If a lock route sequence has been skipped by the personnel dispatched to the lock, then the skipped sequence can be "forced closed" by entering 'F' for the close seal. When you enter 'F' for a close seal, it will automatically be expanded to 'FF' or to 'FFFF'. You can not force close the last sequence of a lock on a route.

Once you have entered the close seals for the locks you are going to close, open the **Operations** menu and select **Close**, or click on **Close** in the toolbar. If any close seals are incorrect, then the lock will be highlighted in red and the error displayed in the **Result** field. If this occurs, you will need to re-enter the correct close seal, and try to close the lock again.

Close with Key

This operation allows you to close the locks on a route by reading the close seals from the RSP user's key. You will need to place the RSP user's key into the key reader in order to read the lock close seals from the key. From the **Operations** menu, select **Close with Key**, or click on **Close with Key** in the toolbar.

Individual Lock Report

This operation allows you to display details on an individual lock on the route. Select a lock on the route. Then, from the **Operations** menu, select **Individual Lock Report**. Alternatively, you can right-click on a lock, and select **Individual Lock Report** from the popup menu. A report window is displayed detailing the status of the selected lock. See the Individual Lock Report for details on the individual lock report.

Edit Menu Operations

Copy / Paste

These Edit operations allow you to copy and paste locks between routes, or to copy the locks on a route to another application. Select the locks on the route you want to copy, and select **Copy** from the **Edit** menu. Then open the route you want to copy the locks to, from the Route report, or create a new route as desired. Then select **Paste** from the **Edit** menu. The copied locks will be pasted into the other route.

You can also copy locks from the report using **Copy As HTML** from the **Edit** menu. This allows you an easy way to paste locks from a route into Microsoft© Excel or Word, and preserve the formatting of the data. However, this method is not supported for copying locks between routes. The **Copy** operation must be used for that.
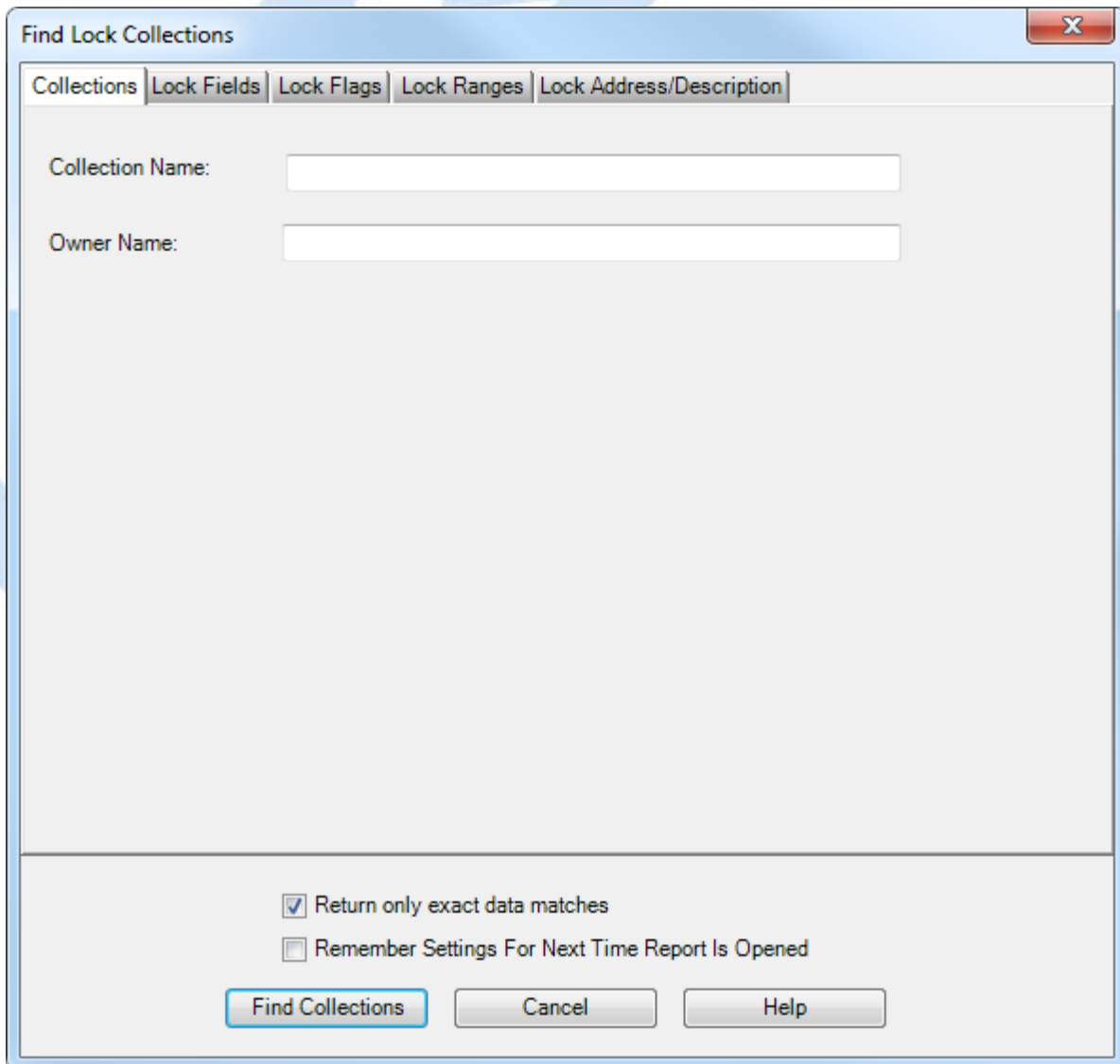
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3.1.4 Collection Report

For information on common usage of the reports, refer to the following section: 3.0 Using Cencon Reports

The Collection Report is used to display and manage collections of locks. Lock Collections can be created with a combination of any locks in any modes and can be used for any purpose the user sees fit. One use of a collection is the type of customer who activates many locks at a time on 1 given SA key for locks being staged in an office or a manufacturing facility. After the activation process is completed, the user may want to re-dispatch another test opening combination to 1 Lock User Key for all those locks simultaneously rather than dispatching each lock individually. Collections may also be used to manage locks in a particular geographic grouping, a customer grouping, or locks that have the same standard service day.

From the main window, click on **Lock Collections**. The following Search screen is displayed prior to generating the report to allow filtering for specific lock records:

The tabs in the search screen will be highlighted if they contain search settings that are not immediately visible.

Upon selecting 'Find Collections', the collections matching the given search parameters will be displayed. The fields on the 'Collections' tab of the search dialog are compared against the collections in the Cencon database. The fields in the remaining tabs of the search dialog are compared against the locks contained within the collections in the Cencon database. If the search parameters for one or more locks within a collection matches, then that collection will be returned as part of the result of the search.

Depending on the number of matching collections and the speed of your database connection, it may take several seconds for the collections to be displayed. You can still do operations with the report even while collections are still being loaded into memory. If your computer does not have enough memory to keep all of the collections in memory, then the report will fetch collections as needed depending on the portion of the report you are looking at. If this occurs, then the word 'Partial' will be displayed on the report status bar.

Sample Collection report:
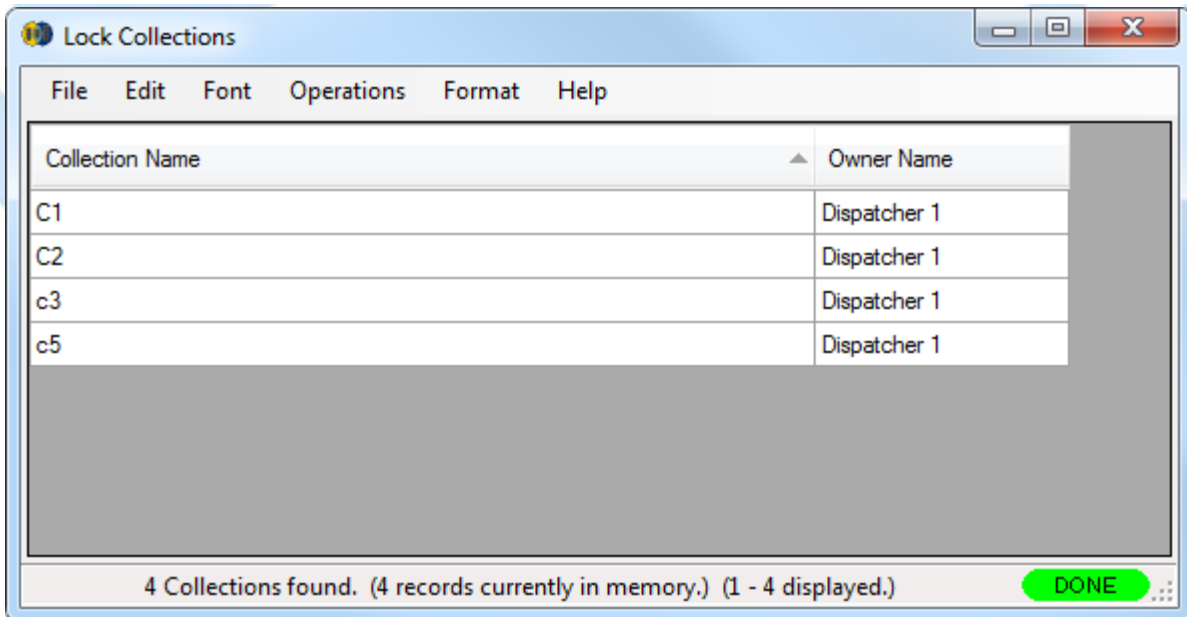
A variety of common operations can be done with the report, to include printing, saving in various formats, and sorting the contents of the report. You can refer to these common report operations in section 3.0 Reports.

The operations menu provides access to a set of operations unique to the Collection Report as shown below:
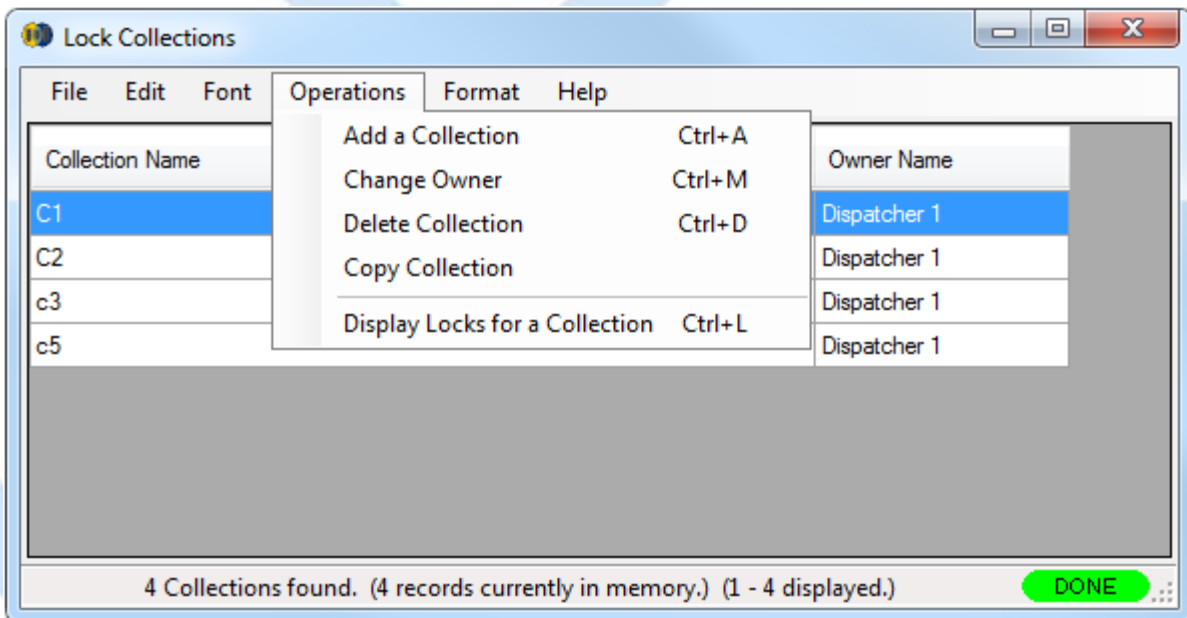
Add Collection

This operation allows you to add a new Collection. You can do this by selecting **Add a Collection** from the **Operations** menu.

The following dialog is displayed:

Enter a name for the collection you want to create. The Owner name is automatically initialized to the name of the current Cencon user. Once you have set up the information for the new collection, click on **OK**.

Change Owner

This operation allows you to change the owner for an existing Collection. You will need to first select the Collection you want to edit from the report. Then select **Change Owner** from the **Operations** menu. A dialog similar to the following is displayed.

Edit the Owner Name and then click on **OK**. A confirmation message is displayed.

Delete Collection
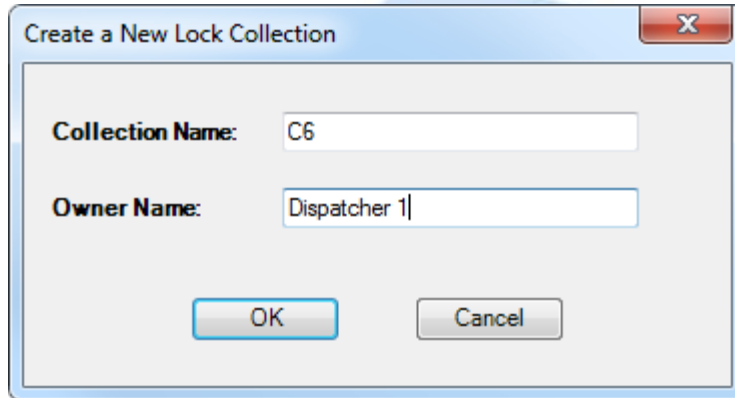
This operation allows you to delete an existing Collection. You will need to first select the collection you want to delete from the report. Then select **Delete Collection** from the **Operations** menu. A dialog similar to the following will be displayed.

Select **OK** to proceed with deleting the Collection.
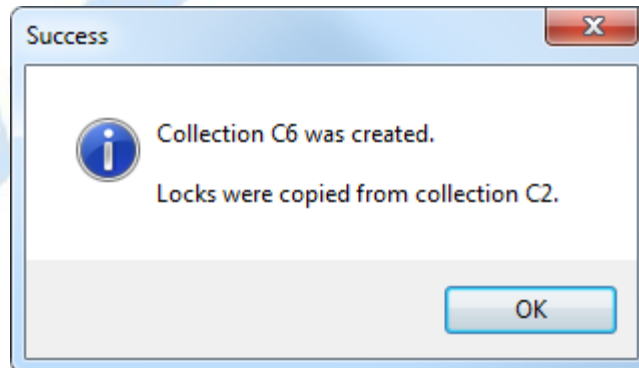
Copy Collection

This operation allows you to copy an existing Collection to a new collection. You will need to first select the collection you want to copy. Then select **Copy Collection** from the **Operations** menu. A dialog similar to the following will be displayed.

Enter a name of the new collection and optionally change the default owner name. Select **OKs** to proceed with copying the Collection. The following confirmation message indicates success:

Display Locks for a Collection

This operation allows you to display a report of the locks in a Collection, as well as manage the locks in a Collection. You will first need to select the Collection you want to display from the report. Then select **Display Locks for a Collection** from the **Operations** menu. The Collection Listing Report is displayed for the collection you selected. See section 3.1.4.1 Collection Locks Report for details on using this report. An alternative method is to double-click on the collection you want to display. This operates in the same manner as selecting the option from the **Operations** menu.

3.1.4.1 Collection Lock Report

The Collection Lock Report is used to display and manage the locks in a lock collection. From the Lock Collection's Operations menu, click on **Display Locks for a Collection**. A window similar to the following is displayed:

Collection	Serial	Mode	Name	Audit	Status	Single Open	1 Route Seq Open	2 Route Seq Open	3 Route Seq Open	Unass Call Open	FLM1/RSP1	Combo 1	FLM2/RSP2	Combo 2	Last Used
C1	512669	B	VLK669	1	Active	N	N	N	N	N					2013-03-12 ...
C1	512668	B	VLK668	1	Active	N	N	N	N	N					2013-03-12 ...
C1	512667	B	VLK667	1	Active	N	N	N	N	N					2013-03-12 ...
C1	512666	B	VLK666	1	Active	N	N	N	N	N					2013-03-12 ...
C1	512665	B	VLK665	1	Active	N	N	N	N	N					2013-03-12 ...
C1	512664	R	VLK664	2	Active	N	N	N	N	N	rjrb7				2008-08-27 ...
C1	001378237	F	VLK008	3	Active	N	N	N	N	N	npuf1				2013-04-17 ...
C1	134123	F	Some Lock - A	7	Active	N	N	N	N	N	npuf1				2013-04-17 ...
C1	999999	FD	LockTrial9	2	Active	N	N	N	N	N	nf1		nf3		2013-04-17 ...
C1	312321	FD	Lock Trial 1	8	Active	N	N	N	N	N	npuf1		npuf2		2013-04-17 ...
C1	333333333	F	Lock All 3s	13	Active	N	N	N	N	N	CF01				2013-04-17 ...
C1	101010	F	Lock 10	2	Active	N	N	N	N	N	CSCINIT-F2				2013-04-17 ...
C1	789797	F	Lock 1	10	Active	N	N	N	N	N	npuf1				2013-04-17 ...
C1	001000102	B	Gen2Lock Serial 002	1	Shelved	N	N	N	N	N					2009-11-19 ...
C1	369852	F	Dual Mode Lock	9	Active	N	N	N	N	N	npuf1				2013-04-17 ...
C1	100811	R	100811	29	Active	N	N	N	N	N	JMROUTE				2013-04-17 ...
C1	100789	R	100789	21	Active	N	N	N	N	N	JMROUTE				2013-04-17 ...
C1	100649	F	100649	5	Active	N	N	N	N	N	npuf1				2013-04-17 ...
C1	100488	R	100488	9	Active	N	N	N	N	N	JMROUTE				2009-06-18 ...
C1	100341	R	100341	80	Active	N	N	N	N	N	CSC4				2009-06-18 ...
C1	100086	R	100086	190	Shelved	N	N	N	N	N					1999-05-26 ...
C1	100054	R	100054	48	Shelved	N	N	N	N	N					2009-03-16 ...
C1	100005	F	100005	7	Shelved	N	N	N	N	N					2003-08-25 ...

23 Locks in Collection C1 found. (23 records currently in memory.) (1 - 23 displayed.)   DONE

Operations Menu:

Collection Listing Report

File Edit Font Operations Administration Format Help

Operations menu:

- Browse to add lock to collection — Ctrl+B
- Remove lock from collection
- Dispatch — Ctrl+D
- Dispatch all FLM locks
- Dispatch all Route locks
- Close — Ctrl+L
- Close Locks with User Key
- Close Locks Based On Verify Of Open With Lock User Key
- Close Lock with Remote Serial Operation (Gen2)
- Reassign — Ctrl+R
- Unassign — Ctrl+U
- Edit Lock Data — Ctrl+M
- Individual Lock Report — Ctrl+I
- Display the Lock Location on a Map
- Add To Collection
- Add To Route
- Display the Users Assigned to the Bank Lock Report
- Display the Users Assigned to the Bank Lock Mini-Report
- Display the Routes Containing the Lock

Collection	Serial						1 Route Seq Open	2 Route Seq Open	3 Route Seq Open	Unass Call Open	FLM1/RSP1	Combo 1	FLM2/RSP2	Combo 2	Last Used
C1	512669						N	N	N	N					2013-03-12 …
C1	512668						N	N	N	N					2013-03-12 …
C1	512667						N	N	N	N					2013-03-12 …
C1	512666						N	N	N	N					2013-03-12 …
C1	512665						N	N	N	N					2013-03-12 …
C1	512664						N	N	N	N	rjrb7				2008-08-27 …
C1	00137823						N	N	N	N	npuf1				2013-04-17 …
C1	134123						N	N	N	N	npuf1				2013-04-17 …
C1	999999						N	N	N	N	nf1		nf3		2013-04-17 …
C1	312321						N	N	N	N	npuf1	npuf2			2013-04-17 …
C1	33333333						N	N	N	N	CF01				2013-04-17 …
C1	101010						N	N	N	N	CSCINIT-F2				2013-04-17 …
C1	789797						N	N	N	N	npuf1				2013-04-17 …
C1	00100010						N	N	N	N					2009-11-19 …
C1	369852						N	N	N	N	npuf1				2013-04-17 …
C1	100811						N	N	N	N	JMROUTE				2013-04-17 …
C1	100789						N	N	N	N	JMROUTE				2013-04-17 …
C1	100649						N	N	N	N	npuf1				2013-04-17 …
C1	100488	R	100488	9	Active	N	N	N	N	N	JMROUTE				2009-06-18 …
C1	100341	R	100341	80	Active	N	N	N	N	N	CSC4				2009-06-18 …
C1	100086	R	100086	190	Shelved	N	N	N	N	N					1999-05-26 …
C1	100054	R	100054	48	Shelved	N	N	N	N	N					2009-03-16 …
C1	100005	F	100005	7	Shelved	N	N	N	N	N					2003-08-25 …

23 Locks in Collection C1 found. (23 records currently in memory.) (1 - 23 displayed.)   DONE

The operations of the Collection Locks report are the same as for the Lock Report/Lock Operations Reports except for the following:

Dispatch All FLM Locks/Dispatch All Route Locks

If either of the dispatch all locks functions is selected, the **Dispatch User Selection** window allows you to select the name(s) of the users for the dispatch:

Collection Listing Report

File　Edit　Font　Operations　Administration　Format　Help

Collection	Serial	Mode	Name	▼	Audit	Status	Single Open	1 Route Seq Open	2 Route Seq Open	3 Route Seq Open	Unass Call Open	FLM1/RSP1	Combo 1	FLM2/RSP2	Combo 2	Last Used
C1	512669	B	VLK669		1	Active	N	N	N	N	N					2013-03-12 …
C1	512668	B	VLK668		1	Active	N	N	N	N	N					2013-03-12 …
C1	512667	B	VLK667		1	Active	N	N	N	N	N					2013-03-12 …
C1	512666	B	VLK666		1	Active	N	N	N	N	N					2013-03-12 …
C1	512665	B	VLK665		1	Active	N	N	N	N	N					2013-03-12 …
C1	512664	R	VLK664													2008-08-27 …
C1	001378237	F	VLK008													2013-04-17 …
C1	134123	F	Some Lock - A													2013-04-17 …
C1	999999	FD	LockTrial9											nf3		2013-04-17 …
C1	312321	FD	Lock Trial 1											npuf2		2013-04-17 …
C1	333333333	F	Lock All 3s													2013-04-17 …
C1	101010	F	Lock 10									NIT-F2				2013-04-17 …
C1	789797	F	Lock 1													2013-04-17 …
C1	001000102	B	Gen2Lock Serial 002													2009-11-19 …
C1	369852	F	Dual Mode Lock													2013-04-17 …
C1	100811	R	100811		29	Active	N	N	N	N	N	JMROUTE				2013-04-17 …
C1	100789	R	100789		21	Active	N	N	N	N	N	JMROUTE				2013-04-17 …
C1	100649	F	100649		5	Active	N	N	N	N	N	npuf1				2013-04-17 …
C1	100488	R	100488		9	Active	N	N	N	N	N	JMROUTE				2009-06-18 …
C1	100341	R	100341		80	Active	N	N	N	N	N	CSC4				2009-06-18 …
C1	100086	R	100086		190	Shelved	N	N	N	N	N					1999-05-26 …
C1	100054	R	100054		48	Shelved	N	N	N	N	N					2009-03-16 …
C1	100005	F	100005		7	Shelved	N	N	N	N	N					2003-08-25 …

Dispatch User Selection

User Name 1: [ ]　　[Browse]

User Name 2: [ ]　　[Browse]

[OK]　　[Cancel]

23 Locks in Collection C1 found. (23 records currently in memory.) (1 - 23 displayed.)　　　　　DONE

Enter a user (or users if you have any dual mode locks) and press **OK** to dispatch the locks. The locks are all dispatched to the selected user and the combinations displayed as shown in the example below:

Collection Listing Report

File　Edit　Font　Operations　Administration　Format　Help

Collection	Serial	Mode	Name	Audit	Status	Single Open	1 Route Seq Open	2 Route Seq Open	3 Route Seq Open	Unass Call Open	FLM1/RSP1	Combo 1	FLM2/RSP2	Combo 2	Last Used
C1	512669	B	VLK669	1	Active	N	N	N	N	N					2013-03-12 …
C1	512668	B	VLK668	1	Active	N	N	N	N	N					2013-03-12 …
C1	512667	B	VLK667	1	Active	N	N	N	N	N					2013-03-12 …
C1	512666	B	VLK666	1	Active	N	N	N	N	N					2013-03-12 …
C1	512665	B	VLK665	1	Active	N	N	N	N	N					2013-03-12 …
C1	512664	R	VLK664	2	Active	N	N	N	N	N	rjrb7				2008-08-27 …
C1	001378237	F	VLK008	3	Active	Y	N	N	N	N	nf3	53 84 44			2013-04-17 …
C1	134123	F	Some Lock - A	7	Active	Y	N	N	N	N	nf3	34 09 75			2013-04-17 …
C1	999999	FD	LockTrial9	2	Active	Y	N	N	N	N	nf3	67 54 50	nf4	80 91 92	2013-04-17 …
C1	312321	FD	Lock Trial 1	8	Active	Y	N	N	N	N	nf3	20 49 51	nf4	27 74 44	2013-04-17 …
C1	333333333	F	Lock All 3s	13	Active	Y	N	N	N	N	nf3	07 08 80			2013-04-17 …
C1	101010	F	Lock 10	2	Active	Y	N	N	N	N	nf3	13 11 19			2013-04-17 …
C1	789797	F	Lock 1	10	Active	Y	N	N	N	N	nf3	95 05 12			2013-04-17 …
C1	001000102	B	Gen2Lock Serial 002	1	Shelved	N	N	N	N	N					2009-11-19 …
C1	369852	F	Dual Mode Lock	9	Active	Y	N	N	N	N	nf3	82 53 22			2013-04-17 …
C1	100811	R	100811	29	Active	N	N	N	N	N	JMROUTE				2013-04-17 …
C1	100789	R	100789	21	Active	N	N	N	N	N	JMROUTE				2013-04-17 …
C1	100649	F	100649	5	Active	Y	N	N	N	N	nf3	96 81 91			2013-04-17 …
C1	100488	R	100488	9	Active	N	N	N	N	N	JMROUTE				2009-06-18 …
C1	100341	R	100341	80	Active	N	N	N	N	N	CSC4				2009-06-18 …
C1	100086	R	100086	190	Shelved	N	N	N	N	N					1999-05-26 …
C1	100054	R	100054	48	Shelved	N	N	N	N	N					2009-03-16 …
C1	100005	F	100005	7	Shelved	N	N	N	N	N					2003-08-25 …

23 Locks in Collection C1 found. (23 records currently in memory.) (1 - 23 displayed.)　　　DONE

Browse to Add Locks to Collection

This operation allows you to add locks to the open collection. From the Operations menu, select **Browse to Add Locks to Collection**. Alternatively, select the lock (or locks) you want to add, right-click on the selection, and click on **Browse to Add Locks to Collection**. The Lock Operations Report is displayed (preceded by the search form). From the lock report, select a lock or a group of locks and then press **Operations** followed by **Add to Collection**. You will be asked if you want to add the selected locks to the open collection (if a collection lock report screen is currently displayed.) If you click on **"Yes"**, the selection is automatically added to the open collection. If you click on **"No"**, Cencon opens the collection selection form which allows you select an alternate collection.

Remove Lock From Collection

This operation allows you to delete a lock from a collection. Select a lock within the collection. From the Operations menu, select **Remove Lock From Collection**. Alternatively, select a lock within the collection and right-click on the lock. Select **Remove Lock From Collection** from the popup menu. The lock you have selected is deleted from the collection.

Administration Menu - The Administration Menu is the same as that of the Lock Reports:

Collection Listing Report

File Edit Font Operations Administration Format Help

Administration menu:

Menu item	Shortcut
Activate Locks	Ctrl+A
Reissue Activate Key For Locks	
Update Activation of Gen 2 Locks Activated As Gen 1	
Shelve Locks	
Verify Shelve Locks	
Delete Shelved Lock	
Reset Pending Shelve State (Bank Locks)	
Force Delete Of Unshelved Lock	
Replace Lock	
Rename Lock	
Manager Force Close w/o Seal	
Import Locks From XML File	
Export Locks To XML File	
Add Users to a Bank Mode Lock	
Remove Users from a Bank Mode Lock	
Initialize a Key to Resynchronize Lock (Gen2)	
Cancel a Resynchronize Lock Operation (Gen2)	
Resynchronize the Database with Lock Data (Gen2)	
Remote Serial Operations with Lock (Gen2)	

Collection	Serial	Mode	(cols hidden)	3 Route Seq Open	Unass Call Open	FLM1/RSP1	Combo 1	FLM2/RSP2	Combo 2	Last Used
C1	512669	B		N	N					2013-03-12 …
C1	512668	B		N	N					2013-03-12 …
C1	512667	B		N	N					2013-03-12 …
C1	512666	B		N	N					2013-03-12 …
C1	512665	B		N	N					2013-03-12 …
C1	512664	R		N	N	rjrb7				2008-08-27 …
C1	001378237	F		N	N	nf3	53 84 44			2013-04-17 …
C1	134123	F		N	N	nf3	34 09 75			2013-04-17 …
C1	999999	FD		N	N	nf3	67 54 50	nf4	80 91 92	2013-04-17 …
C1	312321	FD		N	N	nf3	20 49 51	nf4	27 74 44	2013-04-17 …
C1	333333333	F		N	N	nf3	07 08 80			2013-04-17 …
C1	101010	F		N	N	nf3	13 11 19			2013-04-17 …
C1	789797	F		N	N	nf3	95 05 12			2013-04-17 …
C1	001000102	B		N	N					2009-11-19 …
C1	369852	F		N	N	nf3	82 53 22			2013-04-17 …
C1	100811	R		N	N	JMROUTE				2013-04-17 …
C1	100789	R		N	N	JMROUTE				2013-04-17 …
C1	100649	F		N	N	nf3	96 81 91			2013-04-17 …
C1	100488	R	100488	9	Active	N	N	N	N	N	JMROUTE				2009-06-18 …
C1	100341	R	100341	80	Active	N	N	N	N	N	CSC4				2009-06-18 …
C1	100086	R	100086	190	Shelved	N	N	N	N	N					1999-05-26 …
C1	100054	R	100054	48	Shelved	N	N	N	N	N					2009-03-16 …
C1	100005	F	100005	7	Shelved	N	N	N	N	N					2003-08-25 …

23 Locks in Collection C1 found. (23 records currently in memory.) (1 - 23 displayed.)

DONE

3.1.5 Lock Open Alarm

The Lock Open Alarm allows you to display a list of those locks which have been open within a set time window. The Lock Open Alarm Settings form allows you to select the desired time constraints and to create a filter which specifies which locks are allowed to trigger the alarm. An automatic check is made at intervals specified in the Setup dialog.

The open lock interval check function is active if **Start Alarm** has been pressed in the Lock Open Alarm dialog. When the interval expires the Lock Open Alarm dialog window appears with a listing of the locks which have an open time within the set time window. Press Start Alarm to continue.

If the alarm has not been started, the **Refresh Results** toolbar button may be used to to manually initiate a status check.

Name	Serial Number	Mode	▽ Open Time	User 1	User 2	Route Sequence
VLK681	512681	FLM(Single)	2013-04-03 10:50:26 (DST)	F3		
VLK680	512680	Route(Single)	2013-03-29 09:58:38 (DST)	rjrb		
VLK661	512661	Route(Single)	2013-03-29 09:44:22 (DST)	rjrb7		
VLK675	512675	FLM(Single)	2013-03-29 09:16:40 (DST)	nf3		
VLK663	512663	FLM(Single)	2013-03-29 09:15:42 (DST)	nf1		
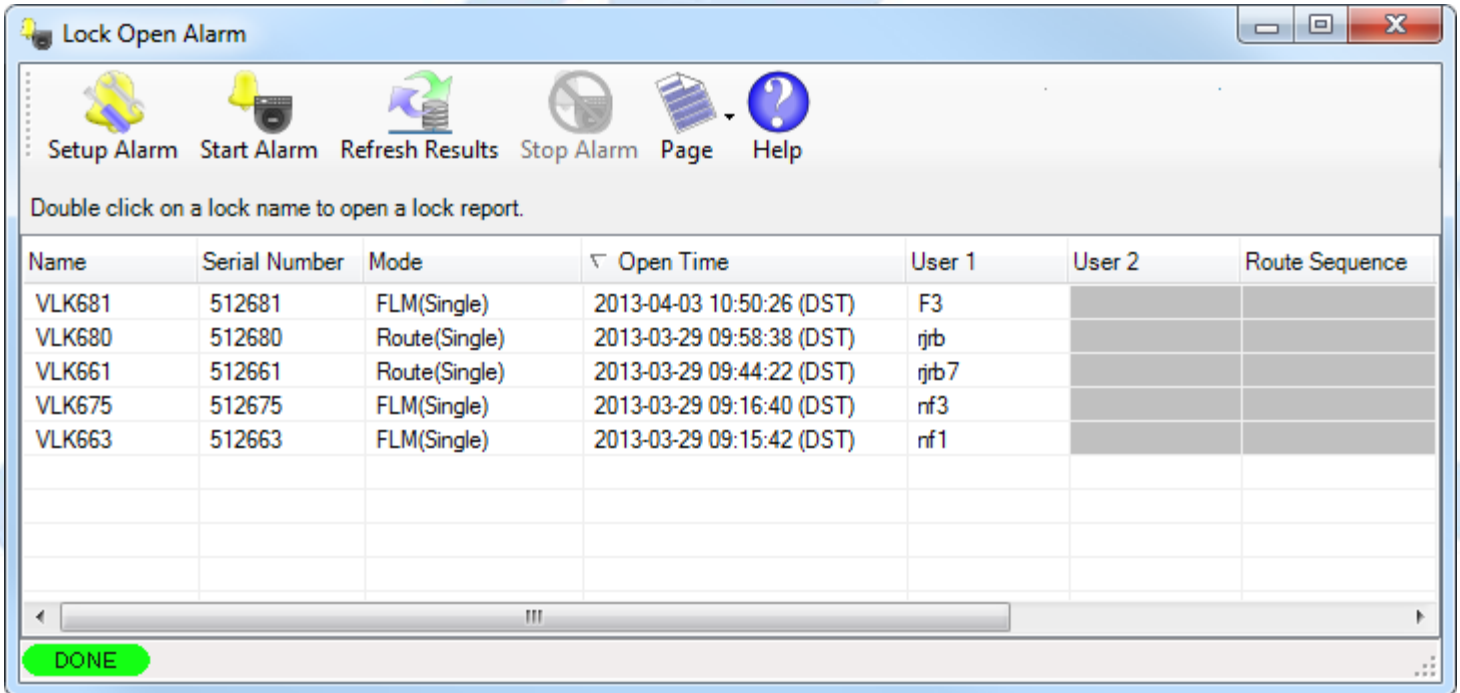
Note

To work with one of the displayed locks, double-click on its row. Cencon will open the Lock Operations report for the selected lock.

Setup Alarm

This operation allows you to select the open time window and to create a filter which specifies that the time window is only checked for a certain set of locks. There are also control settings which can cause the alarm window to be hidden while the alarm is running and which remember the settings between uses of the alarm function.

The following dialog is displayed:

The tabs in the Lock Open Alarm Settings screen will be highlighted if they contain search settings that are not immediately visible.

The **Check for Locks Open Longer than** value tells the alarm to display all locks with an open time greater than or equal to this length of time. At least one of the values must be non-zero.

The **Ignore Locks Open Longer than** value tells the alarm to ignore locks which have been open longer than this time value. The ignore feature is not active if all three values are zero. An error is displayed if the ignore time is more recent than the limit time.

The **Ignore Locks Open for Second Line Maintenance** option prevents the monitoring of locks which were dispatched as second line maintenance calls (calls which are known in advance to require an extended period of open time for maintenance). If this box is checked, locks dispatched as second line maintenance calls will not trigger an open alarm.

The **Hide Lock Open Alarm Form While Alarm Is Running** check box makes the form invisible until there are open locks to display. If you want to view the form while it is hidden, click on the **Lock Open Alarm** icon on the main window.

> **Note**
>
> If you select the check box **Start the Lock Open Alarm When Cencon Starts**, the "Hide" selection is ignored when Cencon starts to insure that you aware the alarm is running.

The **Update Interval** specifies how often the software checks the open locks for the criteria you have specified. This value must be greater than zero minutes.

Example:

If you want to know when any locks have been open for more than 8 hours but don't care about older opens from a month ago, set the "Check for Locks Open Longer than" **Hours** value to 8 and the "Ignore Locks Open Longer than" **Day** value to 30. Select a time interval at which Cencon should refresh the lock status, such as every 15 minutes.

Once you have set up the information for the alarms, click on **OK**.

Start Alarm

Activate the alarm.

Stop Alarm

Deactivate the alarm.

Page

Provides access to Save, Copy, and Sort operations.

Refresh Results

Force an immediate check of the lock open status.

Cencon Version 5 System Reference Manual

3.1.6 Bank Branch Report

For information on common usage of the reports, refer to the following section: 3.0 Using Cencon Reports

The Bank Branch Report is used to display and manage Bank Branches. All Bank mode locks and Bank users must be assigned to a Bank Branch. Each bank mode user's numeric ID is unique within their assigned Bank Branch.

To create or maintain Bank Branch data, select **Bank Branch Report** from the main Cencon Window. The **Find Bank Branches** window allows you to specify information for searching for particular bank branches:

Upon selecting 'OK', the bank branches matching the given search parameters will be displayed in the report.

Sample Bank Branch Report:

A variety of common operations can be done with the report, to include printing, saving in various formats, and sorting the contents of the report. You can refer to these common report operations in Reports.

The operations menu provides access to a set of operations unique to the Bank Branch Report as shown below:

Add a Branch

This operation allows you to add a new Bank Branch. You can do this by selecting **Add a Branch** from the **Operations** menu.
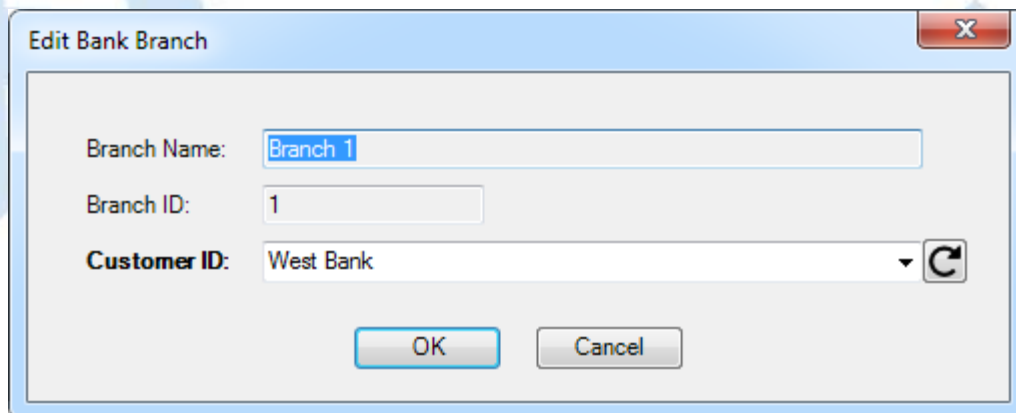
The following dialog is displayed:

Enter a Name, Branch ID, and Customer ID (optional) for the bank branch you want to create. Once you have set up the information for the new branch, click **OK**.

Change Customer ID

This operation allows you to edit the information for an existing Bank Branch. You will need to first select the Bank Branch you want to edit from the report. Then select **Change Customer ID** from the **Operations** menu. A dialog similar to the following is displayed.

Select the desired Customer ID and then click on **OK**. A confirmation message is displayed when the update is complete.

Delete Branch

This operation allows you to delete one or more Bank Branches. You will need to first select the Bank Branch(es) you want to delete from the report. Then select **Delete Branch** from the **Operations** menu. A dialog similar to the following will be displayed.
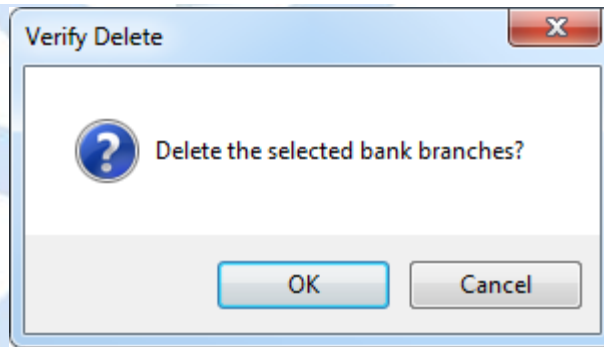
Select **OK** to proceed with the deletion.

Display the Locks in the Branch

This operation allows you to display a report of the locks in a Bank Branch, as well as manage the locks in a Bank Branch. You will first need to select the Bank Branch you want to display from the report. Then select **Display the Locks in the Branch** from the **Operations** menu (or by right-clicking on the desired Bank Branch). A Lock Operations Report is generated to display the locks assigned to the selected Bank Branch.

Display the Users in the Branch

This operation allows you to display a report of the users in a Bank Branch, as well as manage the users in a Bank Branch. You will first need to select the Bank Branch you want to display from the report. Then select **Display the Users in the Branch** from the **Operations** menu (or by right-clicking on the desired Bank Branch). A User Report is generated to display all the users assigned to the selected Bank Branch.

3.1.6.1 Bank Users Mini-Reports

The Bank Users Mini-Reports are used to display and manage the assignment of Bank users to Bank Mode locks. There are two of these reports, one of which displays the Bank users assigned to a specific Bank Mode lock, and one that displays the Bank Mode locks to which a specific Bank user is assigned.

Unlike the User Operations and the Lock Operations reports, the Bank Users Mini-Reports are not limited to a single instance of each report type.

3.1.6.1.1 User List for Lock Bank User Mini-Report

It is possible to display the list of Bank users that have been assigned to a Bank Mode lock in the User Operations report. The full range of operations that may be performed on a user is available.

However, only one instance of the User Operations report can be open at any one time. The Bank Users Mini-Reports do not have this limitation, and as many of them as are necessary can be open simultaneously.
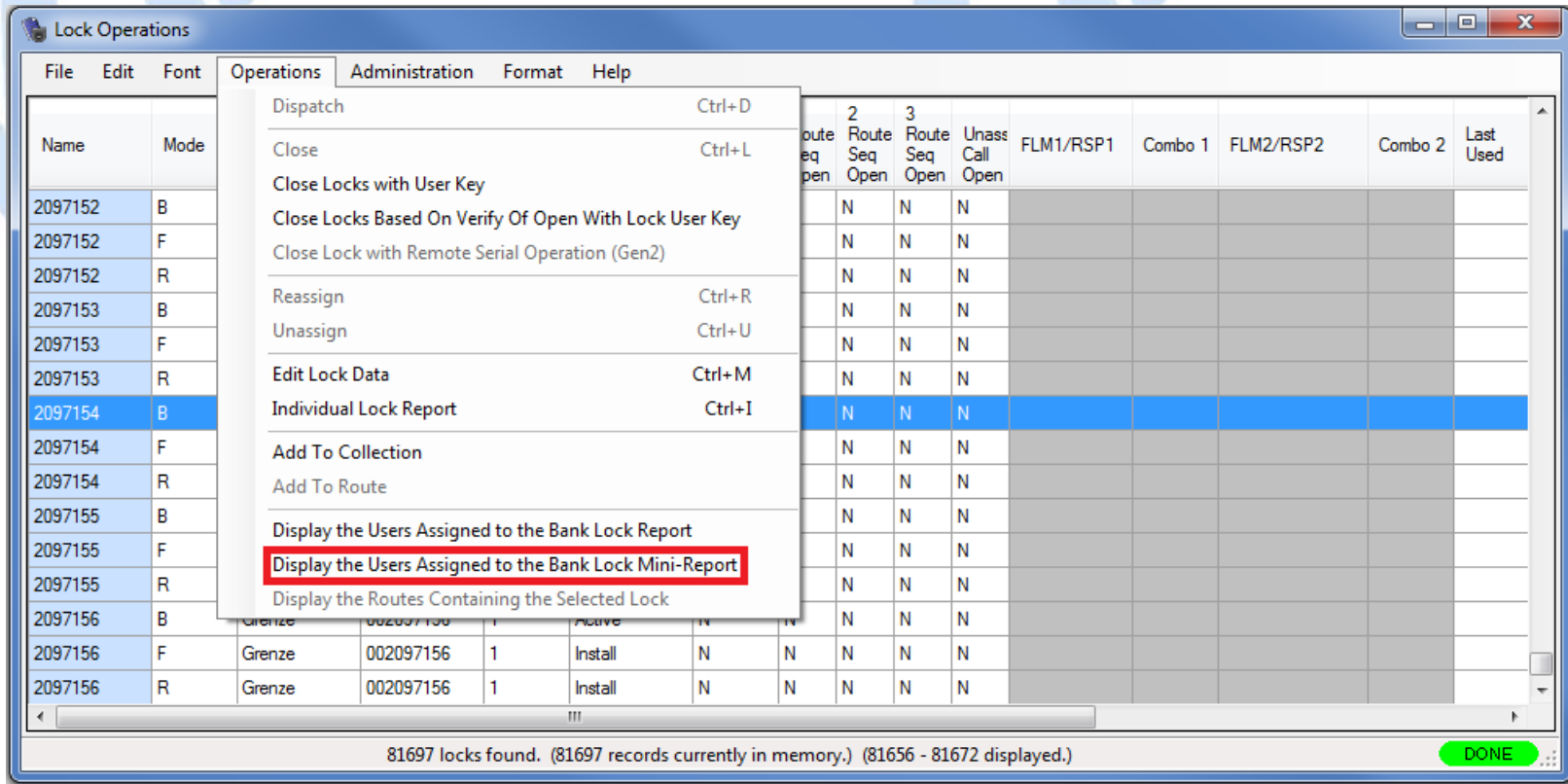
The following operations used to display and manage the assignment of Bank users to Bank Mode locks are available through the User List for Lock Bank User Mini-Report:

- **Add Users To Lock**

  This operation opens the **Add Users to Bank Locks** dialog for the lock for which the mini-report has been generated. See 3.1.1.4 Add Users to a Bank Lock for details.

- **Delete Users From Lock**

  This operation opens the **Remove Users from Bank Locks** dialog for the lock for which the mini-report has been generated. See 3.1.1.19 Remove Users from a Bank Lock for details.

- **Show Locks For User**

  This operation opens a **Lock List For User** mini-report for the selected user.

User List for Lock: 2097152

Lock Name: 2097152
Lock Serial Number: 002097152
Bank Branch Name: Grenzer Bank South

User ID	Key Serial Number	Bank User ID
GrenzeBank000001	7656B246F2CE	1
GrenzeBank000003	92A9FBE530B3	3
GrenzeBank000005	5139A6F1DD02	5
GrenzeBank000007	492A42A069FA	7
GrenzeBank000009	D5E315785666	9

Add Users To Lock
Delete Users From Lock
Show Locks for User

Close   Help

Add Users To Bank Locks

Selected Bank Locks
2097152

Available Users
GrenzeBank000002
GrenzeBank000004
GrenzeBank000006
GrenzeBank000008
GrenzeBank000010
GrenzeBank000011
GrenzeBank000012
GrenzeBank000013
GrenzeBank000014
GrenzeBank000015
GrenzeBank000016
GrenzeBank000017
GrenzeBank000018
GrenzeBank000019
GrenzeBank000020

Selected Users

Add   Add All   Remove   Remove All

You can add at most 95 more bank mode users to the lock.

OK   Cancel   Help

Lock List for User: GrenzeBank000009

User ID: GrenzeBank000009
Key Serial Number: D5E315785666
Bank Branch: Grenzer Bank South
Bank User ID: 9

Lock Name	Lock Serial Number
2097152	002097152
2097153	002097153
2097154	002097154
2097155	002097155
2097156	002097156

Delete User From All Locks
Add Users To Lock
Delete Users From Lock
Show Users for Lock

Close   Help

Remove Users From a Bank Lock

Selected Bank Locks
2097152

Lock Users
GrenzeBank000001
GrenzeBank000003
GrenzeBank000005
GrenzeBank000007
GrenzeBank000009

Users to be Removed

Remove   Restore   Restore All

OK   Cancel   Help

3.1.6.1.2 Lock List for User Bank User Mini-Report

It is possible to display the list of Bank Mode locks to which a Bank user is assigned in a Lock Operations Report. The full range of operations that may be performed on a lock is available.

User Operations

File	Edit	Font	Operations	Format	Help

Operations menu (open):
- Add a User — Ctrl+A
- Add a Windows Logon User — Ctrl+W
- Edit the Data for the Key in the Reader
- Display a Key Report for the Key in the Reader
- Change User Information — Ctrl+M
- Change Information for Multiple Users — Ctrl+N
- Rename User — Ctrl+R
- Delete Users — Ctrl+D
- **Display Open / Assigned Locks for the Selected User — Ctrl+L**
- Display Bank Locks for the Selected User Mini-Report
- Remove User From All Bank Locks

User ID	Window 1	Window 2	Window 3	Creation
GrenzeRoute000020				2013-10-18
GrenzeBank000012				2013-10-18
GrenzeBank000016				2013-10-18
GrenzeFLM000013				2013-10-18
GrenzeFLM000016				2013-10-18
GrenzeBank000014				2013-10-18
GrenzeRoute000001				2013-10-18
GrenzeFLM000005				2013-10-18
GrenzeRoute000007				2013-10-18
GrenzeBank000010				2013-10-18

Lock Operations

File	Edit	Font	Operations	Administration	Format	Help

Name	Mode	Region	Serial	Audit	Status	Single Open	1 Route Seq Open	2 Route Seq Open	3 Route Seq Open	Unass Call Open	FLM1/RSP1	Combo 1	FLM2/RSP2	Combo 2	Last Used
2097152	B	Grenze	002097152	1	Active	N	N	N	N	N					
2097153	B	Grenze	002097153	1	Active	N	N	N	N	N					
2097154	B	Grenze	002097154	1	Active	N	N	N	N	N					
2097155	B	Grenze	002097155	1	Active	N	N	N	N	N					
2097156	B	Grenze	002097156	1	Active	N	N	N	N	N					

5 locks found. (5 records currently in memory.) (1 - 5 displayed.) DONE

However, only one instance of the Lock Operations report can be open at any one time. The Bank Users Mini-Reports do not have this limitation, and as many of them as are necessary can be open simultaneously.
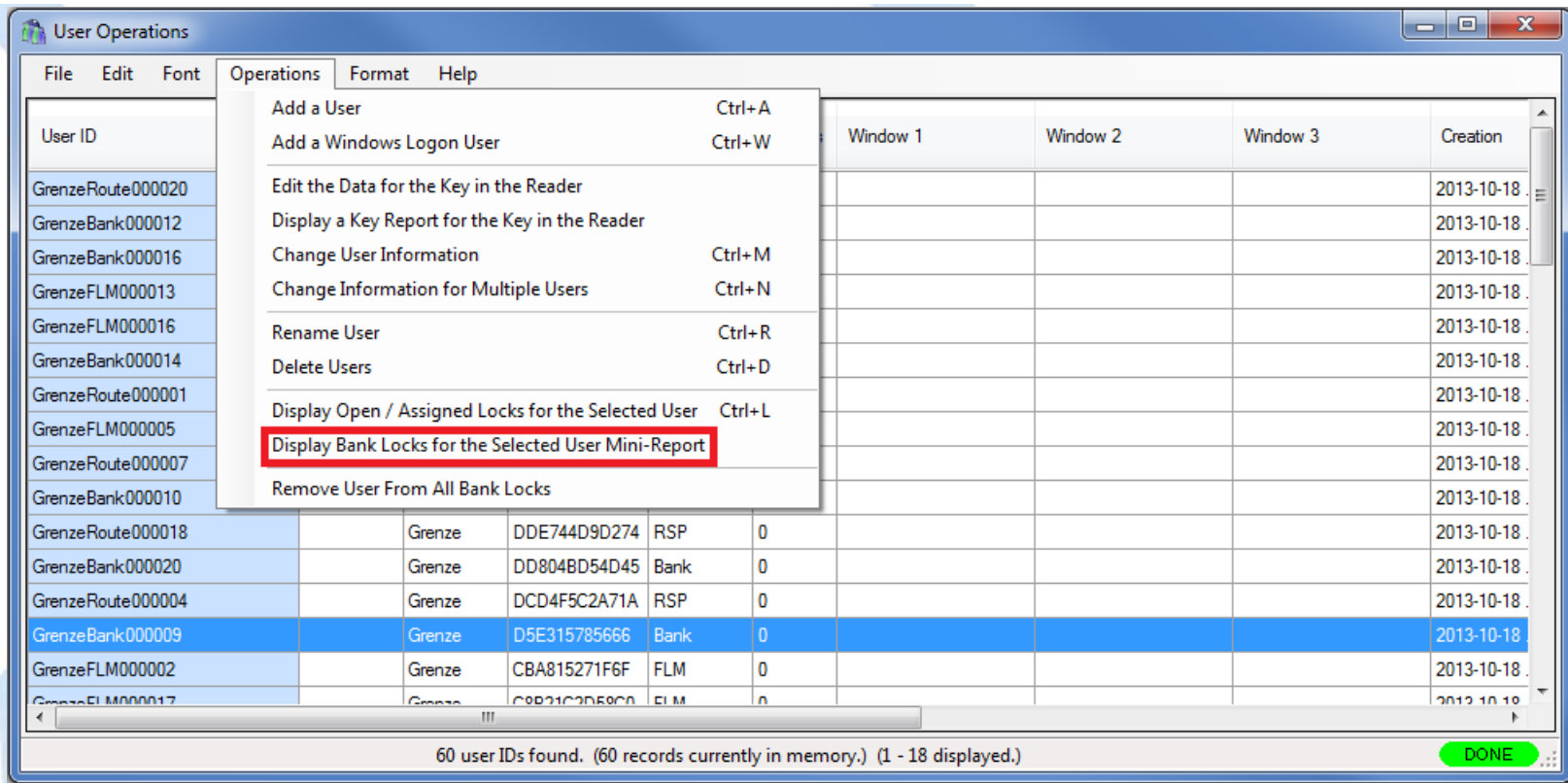
The following operations used to display and manage the assignment of Bank users to Bank Mode locks are available through the Lock List for User Bank User Mini-Report:

- **Delete User From All Locks**

  This operation initializes an SA key for removing the Bank user for which the mini-report has been generated from all of the Bank Mode locks to which the Bank user is assigned. The locks will be those listed in the **Lock List for User** mini-report on which the button appears.

Note
This function displays an error if you try to delete the last user from a lock (or the last but 1 user for a lock in dual mode). You must have at least the minimum number of users required to open the lock.

  You will be prompted to verify the operation:
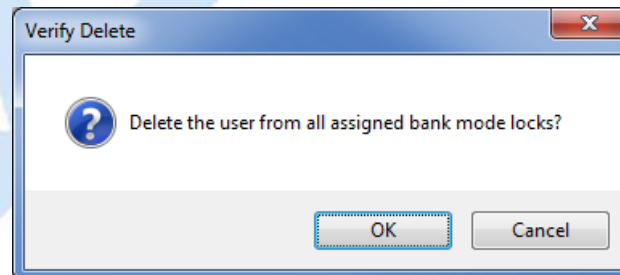
  Press OK to proceed. You will be prompted to insert the SA key to be written:
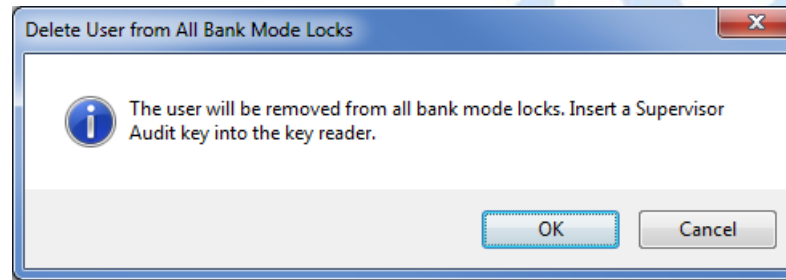
Press OK to write the SA key with the information for removing the user from all of the locks.

The SA key then can be taken to each of the Bank Mode locks to which the Bank user is assigned and used to remove the Bank user from the lock.

See 4.2.14 Bank Mode - Remove Users for details on using the SA key at a lock to remove the user.

See 4.3.14 Bank Mode - Remove Users for details on using the SA key at a Gen 2 Swing Bolt lock to remove the user.

- **Add Users To Lock**

  This operation opens the **Add Users to Bank Locks** dialog for the selected lock. See 3.1.1.4 Add Users to a Bank Lock for details.

- **Delete Users From Lock**

  This operation opens the **Remove Users from Bank Locks** dialog for the selected lock. See 3.1.1.19 Remove Users from a Bank Lock for details.

- **Show Users For Lock**

  This operation opens a **User List For Lock** mini-report for the selected lock.

Lock List for User: GrenzeBank000009

User ID:	**GrenzeBank000009**
Key Serial Number:	**D5E315785666**
Bank Branch:	**Grenzer Bank South**
Bank User ID:	**9**

Delete User From All Locks

Lock Name	Lock Serial Number	
2097152	002097152	
2097153	002097153	
2097154	002097154	
2097155	002097155	
2097156	002097156	

Add Users To Lock

Delete Users From Lock

Show Users for Lock

Close Help

Add Users To Bank Locks

Selected Bank Locks

2097152

Available Users

GrenzeBank000002
GrenzeBank000004
GrenzeBank000006
GrenzeBank000008
GrenzeBank000010
GrenzeBank000011
GrenzeBank000012
GrenzeBank000013
GrenzeBank000014
GrenzeBank000015
GrenzeBank000016
GrenzeBank000017
GrenzeBank000018
GrenzeBank000019
GrenzeBank000020

Selected Users

Add   Add All   Remove   Remove All

You can add at most 95 more bank mode users to the lock.

OK   Cancel   Help

User List for Lock: 2097152

Lock Name:	**2097152**
Lock Serial Number:	**002097152**
Bank Branch Name:	**Grenzer Bank South**

User ID	Key Serial Number	Bank User ID
GrenzeBank000001	7656B246F2CE	1
GrenzeBank000003	92A9FBE530B3	3
GrenzeBank000005	5139A6F1DD02	5
GrenzeBank000007	492A42A069FA	7
GrenzeBank000009	D5E315785666	9

Add Users To Lock

Delete Users From Lock

Show Locks for User

Close Help

Remove Users From a Bank Lock

Selected Bank Locks

2097152

Lock Users

GrenzeBank000001
GrenzeBank000003
GrenzeBank000005
GrenzeBank000007
GrenzeBank000009

Users to be Removed

Remove   Restore   Restore All

OK   Cancel   Help

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3.1.6.2 Select a Bank Branch for an Operation

This dialog is displayed for searching for a bank branch from any of a number of operations when the magnifying glass button beside a Bank Branch Name field is clicked. The search is specified using the desired branch's name, ID, and/or customer ID, or the initial substrings of these attributes. This function is available for the following operations:

- 3.1.1.1 Activate Locks
- 3.1.17.1 Lock Operations with Serial Connect - Activate Bank Mode (Dead Bolt)
- 3.1.18.1 Lock Operations with Serial Connect - Activate Bank Mode (Swing Bolt)
- 3.2.1 Add a User
- 3.5.1 Initialize Audit Download Key

The Select Bank Branch dialog is initially empty, unless the bank branch name field with which it is associated already has a branch entered. As the user enters data into the Bank Branch Name, Bank Branch ID, and Customer ID fields of the dialog, the bank branches matching the values or partial values are displayed. The Select Bank Branch dialog is resizable to assist with the display of the list of branches. An example of the Select Bank Branch dialog is displayed below:

Select Bank Branch			X
Bank Branch Name:	fair		
Bank Branch ID:			
Customer ID:	1		
Begin typing in the fields above to see matching bank branches below:			
Bank Branch Name	**Bank Branch ID**	**Customer ID**	
FAIRFIELD DR	9072	1234	
FAIRGROUNDS CT	4463	123332	
FAIRLAWN AVE	5054	123332	
FAIRMONT CT	4043	123456	

Select Branch   Cancel   Help

To select a bank branch, click on the displayed row for that branch, and click on 'Select Branch'. The dialog will close and the selected bank branch name will be filled into the form for your current operation. You can also double-click on your desired branch, and that will automatically select that branch and close the Select Bank Branch dialog.

3.1.7 Lock Operations with Serial Connect

Note
This feature is only available for Cencon Gen 2 locks.

This function allows you to communicate with a Gen 2 lock using a serial connection to your PC through a Cencon serial adapter. The serial connection can be made through a Cencon Lock USB Serial Interface Box or through a Cencon USB ATM Lock Adaptor.

This function also allows you to communicate with a remote Gen 2 lock through the network connection provided by the CenTran Agent service running on an ATM console computer connected to the Gen 2 lock with a Cencon USB ATM Lock Adaptor.

The user interface allows you to retrieve information from the lock and perform most of the lock operations which are normally done with keys (such as activate, shelve, set the time, etc.).

Warning
Operators may become statically charged in a normal working environment if they are not wearing a ground strap. In this case the USB communications may stop working, un-plug and re-plug the USB cable between the computer and the USB Interface Box to resume operation. It is recommended that operators working on the inside of the ATM or in a factory connecting to the Gen 2 10 pin connector to always wear a wrist strap to prevent possible ESD damage from occurring while using the USB Interface Box.

Cencon Lock USB Serial Interface Box:

Typical Connection Procedure Using the Cencon Lock USB Serial Interface Box:

- Connect a USB cable between your PC and the Cencon Lock USB Serial Interface Box. The Cencon Lock USB Serial Interface Box may require drivers to be installed. This can be done automatically through Windows Update. The Cencon Lock USB Serial Interface Box will be labeled as **USB Serial Port**.
- Connect the 10 pin Cencon lock serial cable between the Cencon Lock USB Serial Interface Box and the Cencon lock.
- Start Cencon and select **Lock Operations with Serial Connect**.

- To communicate with the connected lock via the **Lock Operations with Serial Connect** dialog click in the **Connection** box and select the type of connection you are using (**USB Serial Port (COM3)** for this example). Each serial communications port on your computer will be listed in the drop-down selection for the **Connection** box.
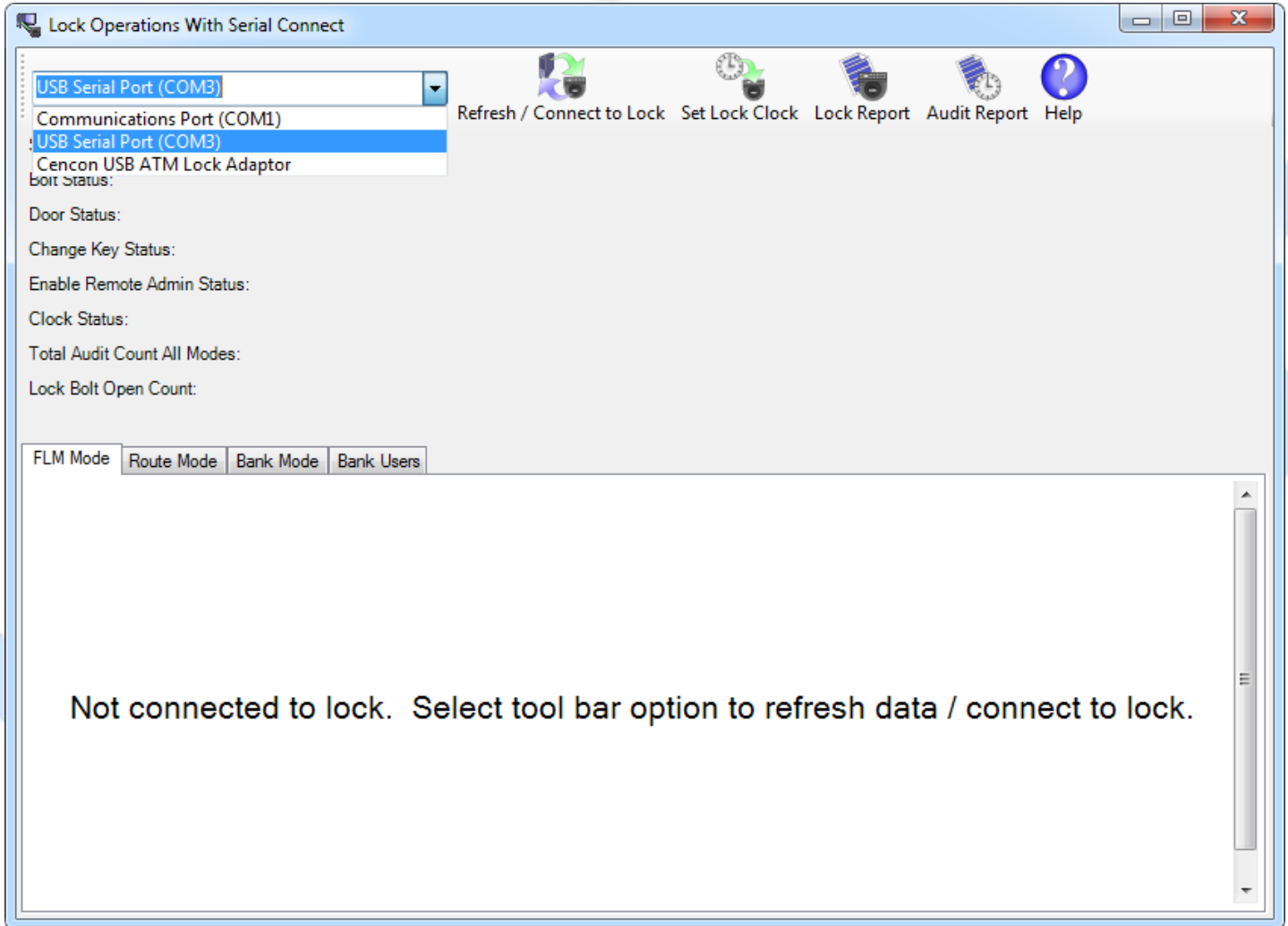
- Press **Refresh/Connect to Lock** to complete the connection.

Typical Connection Procedure Using Cencon USB ATM Lock Adaptor

- Connect a USB cable between your PC and the Cencon USB ATM Lock Adaptor. The Cencon USB ATM Lock Adaptor may require drivers to be installed. This can be done automatically through Windows Update. The Cencon USB ATM Lock Adaptor will be labeled as **Cencon USB ATM Lock Adaptor**.
- Start Cencon and select **Lock Operations with Serial Connect**.
- To communicate with the connected lock via the **Lock Operations with Serial Connect** dialog

  - Through a serial connection - click in the **Connection** box and select the type of connection you are using (**Cencon USB ATM Lock Adaptor** for this example). Each serial communications port on your computer will be listed in the drop-down selection for the **Connection** box.

- Through a network connection - type the lock's network address in the **Connection** box. The target lock must be connected to a PC using a Cencon USB ATM Lock Adaptor. The CenTran Agent service must be started on the PC to which the lock is connected. If a network port other than the default needs to be set, that port can be entered after the network address, separated by a colon:

- Press **Refresh/Connect to Lock** to complete the connection.

Toolbar functions:

Refresh/Connect to Lock
Connect to the attached lock and update the status displayed for the connected lock.

Set Lock Clock
Set the time in the lock, based off of the time on your host computer. If one or more modes are active from your software, this will also set the daylight savings time transition table for each mode based off of the selected time zone. A form will be displayed to select the time zone for each authorized active mode.

Lock Report
Display a report similar to the Cencon Individual Lock report but also including additional information which can only be accessed through the direct connection. This report will display the current status of the lock and information for each active mode of the lock.

Audit Report
Display a standard Cencon lock audit report. This report displays all the available audits since it is not subject to the memory limitations of storing the audits on the SA key.

Note

In order to read the status of a lock, set the clock, generate a lock report, or generate an audit report, you must have authorization to access the lock. If the lock is shelved, then anyone can set the clock or get an audit report from the lock. If one or more modes are active on the lock, then you must have control of at least one of the modes of the lock to get information from the lock. Each lock mode may be under the control of a different company, and each mode has it's own security implemented. If you attempt to access a lock that you don't control one of the modes of, you will not be able to read information from the lock. Additionally, you will only be able to access information specific to the lock modes you control and the audit trail of the lock.

Mode Specific Functions

Click on specific function to view details.

- FLM Mode
  - [Activate FLM Mode](#)
  - [Shelve FLM Mode](#)
  - [Resynchronize Dispatching for FLM Mode](#)
  - [Set Access Between Single and Dual User for FLM Mode](#)
  - [Close Dispatch for FLM Mode](#)
- Route Mode
  - [Activate Route Mode](#)
  - [Shelve Route Mode](#)
  - [Resynchronize Dispatching for Route Mode](#)
  - [Set Access Between Single and Dual User for Route Mode](#)
  - [Close Dispatch for Route Mode](#)
- Bank Mode
  - [Activate Bank Mode](#)
  - [Shelve Bank Mode](#)
  - [Resynchronize Users for Bank Mode](#)
  - [Set Access Between Single and Dual User for Bank Mode](#)
  - [Set Time Delay and Open Time Window for Bank Mode](#)
  - [View Bank Mode Users](#)
  - [Add Bank Mode Users](#)
  - [Delete Bank Mode Users](#)

3.1.7.1 Lock Operations with Serial Connect - Activate FLM Mode

FLM Activation

To activate the attached lock in FLM mode:

- Select the **FLM Mode** tab on the Serial Connect form.
- Press the **Activate Lock Mode** button.
- Enter the lock data (required items are in bold type).
- Press **Apply Activation**

> **Note**
>
> When activating a lock mode using the serial connection to the lock, a change key must be inserted into the back of the lock to validate that you have physical access to the lock. Other functions such as shelving the lock, setting access between single and dual user, and reading the status of the lock do not require a change key to be inserted in the back of the lock. This is because the security of the serial communications for the activated mode has already been set up during activation.

Initial activation form:

Successful activation:

Lock Operations With Serial Connect

10.108.6.96:35005

Refresh / Connect to Lock   Set Lock Clock   Lock Report   Audit Report   Help

Serial Number: 1000105

Bolt Status: Bolt Extended

Door Status: The container door sensor is not connected.

Change Key Status: The lock change key is inserted.

Clock Status: 2010-02-24 13:46:09 UTC (Time Read: 2010-02-24 13:46:09 UTC) (Time Difference: -00:00:00.6532082) (Battery: 3.054 V)

Total Audit Count All Modes: 42

Lock Bolt Open Count: 1

FLM Mode | Route Mode | Bank Mode | Bank Users

Lock Name: Gen2 Lock 1000105
Lock Mode: FLM Mode (Single user)
Mode Audit Count: 1

Status: Active
Customer ID   North Bank
ATM Serial Number: Kaba Mas ATM
Region: Testing

Lock Operations With Serial Connect

ⓘ Lock FLM mode has been activated successfully.

OK

Shelve   Resync Dispatching   Set Access   Close Call

The lock FLM mode is now active, and can have users dispatched to open it.

3.1.7.2 Lock Operations with Serial Connect - Shelve FLM Mode

FLM Shelve

To shelve the attached lock in FLM mode:

- Select the **FLM Mode** tab on the Serial Connect form.
- Press the **Shelve** button.
- Press **OK** when asked if you are sure you want to shelve the lock.

Note

Once you have shelved a lock mode using the serial connection to the lock, you can not reactivate the lock mode without having physical access to the back of the lock to insert a change key. This is because the security of the serial communications for a mode being activated is set up during activation of the lock mode. When shelving a mode, that security for the mode is already set up. You can shelve a mode remotely, however you must have physical access to the inside of the lock container to insert in a change key into the back of the lock to reactivate the lock.

Note

If the configuration option to require a change key be present in the lock for remote shelve is set, you will not be able to remotely shelve the lock across a remote connection without first having someone present to open the lock and insert a change key. In the case of the Cencon Gen 2 swing bolt lock, you can alternatively open the lock and enter #50 at the lock to allow remote administration of the lock. See Change Configuration Settings to set this configuration option in the Cencon database.

Initial form for active FLM mode:

Prompt for shelving FLM mode:

Successful Shelve:

The lock FLM mode has been shelved.

Resynchronize Dispatching for FLM Mode

This operation reads the current dispatching status of the lock and updates the Cencon database entry for the lock to match. It will ensure that the Cencon database matches the lock in the case of having to recover from a backup of the database.

To resynchronize dispatching for the the attached lock in FLM mode:

- Select the **FLM Mode** tab on the Serial Connect form.
- Press the **Resync Dispatching** button.

> **Note**
>
> You can not resynchronize the Cencon database dispatching with the Cencon Gen 2 lock while a call is dispatched to the lock. If you have a call open to the lock and the lock is out of synchronization with the Cencon database, you will need to do a Manager Auto-Close w/o Close Seal to close out the call first. You would then resynchronize the Cencon database with the lock. After resynchronizing the Cencon database with the lock you would be able to dispatch to the lock again.

Initial form for active FLM mode:

Successful resynchronization of the Cencon database with the lock:

Lock Operations With Serial Connect

10.108.6.108:35005

Refresh / Connect to Lock   Set Lock Clock   Lock Report   Audit Report   Help

Serial Number:	001037890
Bolt Status:	Bolt Extended
Door Status:	The container door is closed.
Change Key Status:	The lock change key is not inserted.
Enable Remote Admin Status:	Remote administration of the lock is not enabled. (This is #50 at lock followed by opening lock.)
Clock Status:	2013-08-16 18:03:33 UTC (Time Read: 2013-08-16 18:02:47 UTC) (Time Difference: 00:00:45.1246962) (Battery: 3.261 V)
Total Audit Count All Modes:	197
Lock Bolt Open Count:	63

FLM Mode   Route Mode   Bank Mode   Bank Users

Lock Name:	Gen2 Swingbolt 1037890
Lock Mode:	FLM Mode (Single user)
Mode Audit Count:	5
Status:	Active
Customer ID	North Bank
ATM Serial Number:	
Region:	KENTUCKY

Lock Operations With Serial Connect

ⓘ Lock FLM mode has been resynchronized successfully.

OK

Shelve   Resync Dispatching   Set Access   Close Call   Cancel Dispatch

The lock FLM mode has been resynchronized, and can have users dispatched to open it.

3.1.7.4 Lock Operations with Serial Connect - Set Access Between Single and Dual User for FLM Mode

Set Access Between Single and Dual User for FLM Mode

This operation sets the lock between needing a single user or needing dual users to open the lock, and also updates the Cencon database as needed.

To set access between single and dual users for the the attached lock in FLM mode:

- Select the **FLM Mode** tab on the Serial Connect form.
- Press the **Set Access** button.
- Select the type of access required between single and dual user to open the lock.
- Press the **Set Access** button.

> **Note**
>
> You can not change single or dual user access while a call is dispatched to the lock. You will need to wait until the call has been completed first. After the call has been completed, you will be able to change the access between single user or dual user being required to open the lock.

Initial form for active FLM mode:

Form for selecting single or dual user mode access on the lock:

The lock FLM mode has been set between single and dual user mode.

Close Dispatch for FLM Mode

This operation reads the status and the audit trail of the lock, determines if a valid dispatch has opened and closed the lock, and closes out the dispatch to the lock in the Cencon system. This is primarily intended for locks connected remotely on a network, to allow dispatches to locks to be closed out in a convenient and secure manner without having to call in a close seal from the lock.

To close a dispatch for the the attached lock in FLM mode:

- Select the **FLM Mode** tab on the Serial Connect form.
- Press the **Close Call** button.
- A report of the results of the close operation will be displayed.

Note
The lock must be completely closed for this operation to work. If the bolt is retracted, the door sensor indicates the container door is open (if connected), or the change key is in the lock, then the dispatch to the lock can't be closed out in this manner.

Initial form for active FLM mode:

Report for the results of closing the dispatch to the lock:

Close Lock FLM Mode Report

Lock Status

Lock Serial Number	001037890
Lock Version	2.02.1078
FLM Mode Status	Single Mode Active (Pending Close)
Route Mode Status	Single Mode Active
Bank Mode Status	Single Mode Active
Bolt Status	Bolt Is Extended
Duress Open Status	Not Opened With Duress Combination
Delayed Open Status	No Delayed Opening In Progress
All Modes Shelved Open Status	Lock Is Not Open With Factory Combination
Lock Out Status	No Lock Out In Progress
Lock Total Number of Opens	64
Audit Trail Event Count	205
Audit Trail Event Total Odometer	205
Is Door Sensor Connected On Open	Door Sensor Was Connected On Open
Is Bolt Works Sensor Connected On Open	Bolt Works Sensor Was Connected On Open
Is Remote Administration Enabled	Remote Administration Is Not Enabled

Note

The history of the lock's error conditions is empty. No lock errors have occurred.

Note

Closed FLM mode dispatched call successfully.

Lock Audit Information

Transaction	Mode	Key ID	User ID	Open Time	Close Time	Close Seal	Seal Count
Open Lock	FLM	0000006A71AC	FLM SHA Key 4	2013-08-16 14:22:57 (DST)			7

Lock Open Log Entries

Dispatch Type	Single Dispatch

3.1.7.6 Lock Operations with Serial Connect - Cancel FLM Dispatch and Advance FLM Lock Mode to Next Combination

Cancel FLM Dispatch and Advance FLM Lock Mode to Next Combination

This operation is used to cancel the dispatch of a mode of a Cencon Gen 2 or higher lock that is connected to a network IP address. It does this by checking the status of the lock to determine if the dispatched user has reached the lock and opened it. If the user has opened and closed the lock, this operation closes out the dispatch and returns that the user already opened the lock. If the user has not opened the lock, then the combination for that mode of the lock is advanced to the next combination at the lock, and the dispatch is force closed in the Cencon database.

If this operation is used without a dispatched user, then the combination of the mode of the lock is advanced at the lock and in the Cencon database.

If this operation is used and the lock is currently open, then an error will be returned.

To cancel a dispatch and advance the lock mode to the next combination for the the attached lock in FLM mode:

- Select the **FLM Mode** tab on the Serial Connect form.
- Press the **Cancel Dispatch** button.
- A report of the results of the cancel dispatch operation will be displayed.

> **Note**
>
> The lock must be completely closed for this operation to work. If the bolt is retracted, the door sensor indicates the container door is open (if connected), or the change key is in the lock, then the dispatch to the lock can't be canceled in this manner.

Initial form for active FLM mode:

Lock Operations With Serial Connect

10.108.6.108:35005

Refresh / Connect to Lock   Set Lock Clock   Lock Report   Audit Report   Help
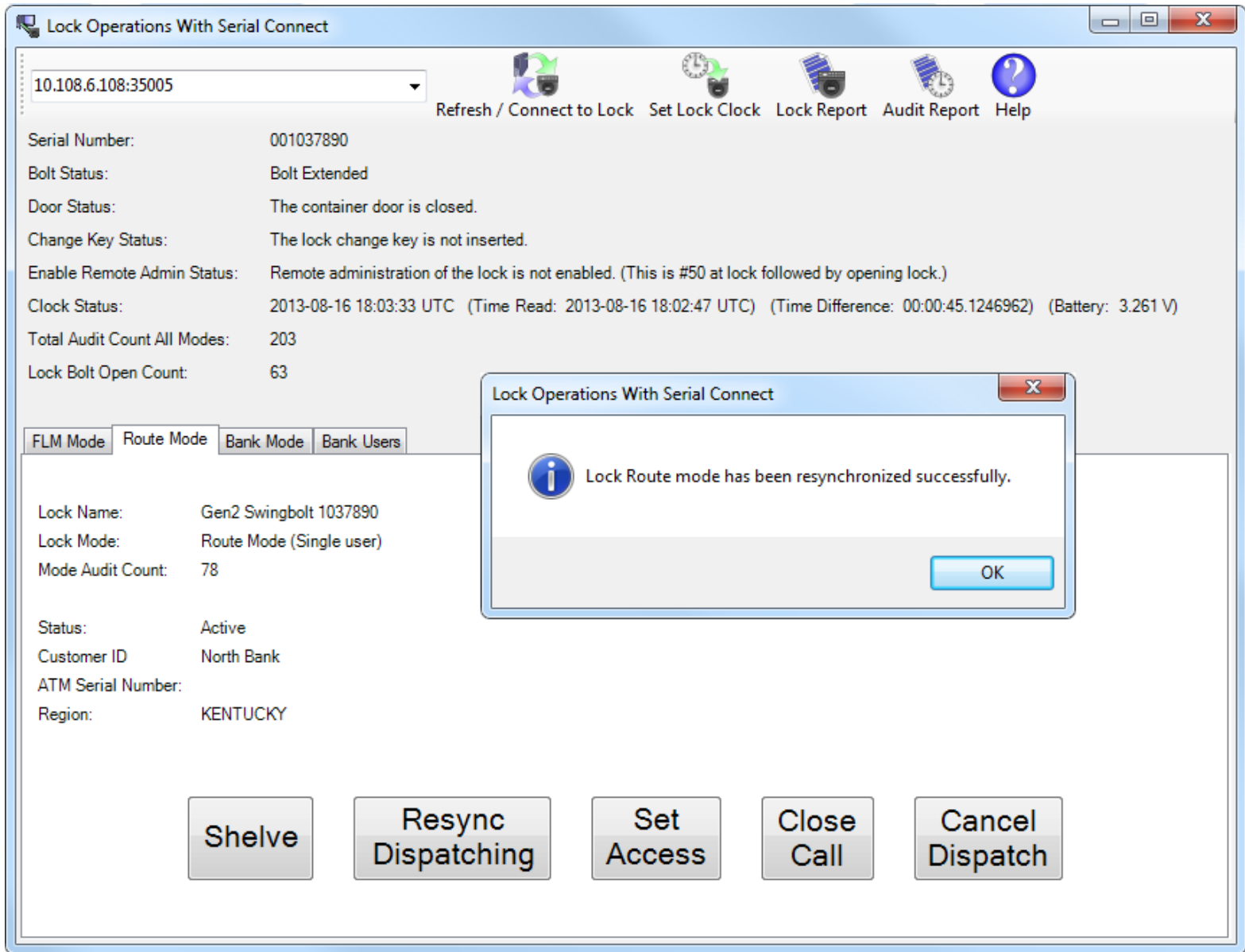
Serial Number: 001037890

Bolt Status: Bolt Extended

Door Status: The container door is closed.

Change Key Status: The lock change key is not inserted.

Enable Remote Admin Status: Remote administration of the lock is not enabled. (This is #50 at lock followed by opening lock.)

Clock Status: 2013-08-16 18:03:33 UTC (Time Read: 2013-08-16 18:02:47 UTC) (Time Difference: 00:00:45.1246962) (Battery: 3.266 V)

Total Audit Count All Modes: 197

Lock Bolt Open Count: 63

FLM Mode | Route Mode | Bank Mode | Bank Users

Lock Name: Gen2 Swingbolt 1037890
Lock Mode: FLM Mode (Single user)
Mode Audit Count: 5

Status: Active
Customer ID   North Bank
ATM Serial Number:
Region: KENTUCKY

Shelve   Resync Dispatching   Set Access   Close Call   Cancel Dispatch

Report for the results of cancelling the dispatch and advancing the lock mode to the next combination:

Save Save As Page Setup Print Exit

Cancel Lock FLM Mode Dispatch and Advance to Next Combination Report

Lock Status

Lock Serial Number	001037890
Lock Version	2.02.1078
FLM Mode Status	Single Mode Active
Route Mode Status	Single Mode Active
Bank Mode Status	Single Mode Active
Bolt Status	Bolt Is Extended
Duress Open Status	Not Opened With Duress Combination
Delayed Open Status	No Delayed Opening In Progress
All Modes Shelved Open Status	Lock Is Not Open With Factory Combination
Lock Out Status	No Lock Out In Progress
Lock Total Number of Opens	63
Audit Trail Event Count	203
Audit Trail Event Total Odometer	203
Is Door Sensor Connected On Open	Door Sensor Not Connected On Open
Is Bolt Works Sensor Connected On Open	Bolt Works Sensor Not Connected On Open
Is Remote Administration Enabled	Remote Administration Is Not Enabled

Note

The history of the lock's error conditions is empty. No lock errors have occurred.

Note

Canceled FLM mode dispatched call of user FLM SHA Key 4. Advanced lock to next combination successfully.

Note

No audits were read from the lock for canceling the FLM mode dispatch.

Lock Open Log Entries

3.1.7.7 Lock Operations with Serial Connect - Activate Route Mode

Route Activation

To activate the attached lock in Route mode:

- Select the **Route Mode** tab on the Serial Connect form.
- Press the **Activate Lock Mode** button.
- Enter the lock data (required items are in bold type).
- Press **Apply Activation**

> **Note**
>
> When activating a lock mode using the serial connection to the lock, a change key must be inserted into the back of the lock to validate that you have physical access to the lock. Other functions such as shelving the lock, setting access between single and dual user, and reading the status of the lock do not require a change key to be inserted in the back of the lock. This is because the security of the serial communications for the activated mode has already been set up during activation.

Initial activation form:

Successful activation:

Lock Operations With Serial Connect

10.108.6.96:35005 ▾

Refresh / Connect to Lock   Set Lock Clock   Lock Report   Audit Report   Help

Serial Number: 1000105

Bolt Status: Bolt Extended

Door Status: The container door sensor is not connected.

Change Key Status: The lock change key is inserted.

Clock Status: 2010-02-24 13:46:09 UTC (Time Read: 2010-02-24 13:46:09 UTC) (Time Difference: -00:00:00.6532082) (Battery: 3.054 V)

Total Audit Count All Modes: 46

Lock Bolt Open Count: 1

FLM Mode | **Route Mode** | **Bank Mode** | **Bank Users**

Lock Name: Gen2 Lock 1000105
Lock Mode: Route Mode (Single user)
Mode Audit Count: 1

Status: Active
Customer ID   North Bank
ATM Serial Number: Kaba Mas ATM
Region: Pacific West

Lock Operations With Serial Connect

ℹ Lock Route mode has been activated successfully.

OK

Shelve   Resync Dispatching   Set Access   Close Call

The lock Route mode is now active, and can have users dispatched to open it.

3.1.7.8 Lock Operations with Serial Connect - Shelve Route Mode

Route Shelve

To shelve the attached lock in Route mode:

- Select the **Route Mode** tab on the Serial Connect form.
- Press the **Shelve** button.
- Press **OK** when asked if you are sure you want to shelve the lock.

Note
Once you have shelved a lock mode using the serial connection to the lock, you can not reactivate the lock mode without having physical access to the back of the lock to insert a change key. This is because the security of the serial communications for a mode being activated is set up during activation of the lock mode. When shelving a mode, that security for the mode is already set up. You can shelve a mode remotely, however you must have physical access to the inside of the lock container to insert in a change key into the back of the lock to reactivate the lock.

Note
If the configuration option to require a change key be present in the lock for remote shelve is set, you will not be able to remotely shelve the lock across a remote connection without first having someone present to open the lock and insert a change key. In the case of the Cencon Gen 2 swing bolt lock, you can alternatively open the lock and enter #50 at the lock to allow remote administration of the lock. See Change Configuration Settings to set this configuration option in the Cencon database.

Initial form for active Route mode:

Prompt for shelving Route mode:

Successful Shelve:

The lock Route mode has been shelved.

3.1.7.9 Lock Operations with Serial Connect - Resynchronize Dispatching for Route Mode

Resynchronize Dispatching for Route Mode

This operation reads the current dispatching status of the lock and updates the Cencon database entry for the lock to match. It will ensure that the Cencon database matches the lock in the case of having to recover from a backup of the database.

To resynchronize dispatching for the the attached lock in Route mode:

- Select the **Route Mode** tab on the Serial Connect form.
- Press the **Resync Dispatching** button.

> **Note**
>
> You can not resynchronize the Cencon database dispatching with the Cencon Gen 2 lock while a call is dispatched to the lock. If you have a call open to the lock and the lock is out of synchronization with the Cencon database, you will need to do a Manager Auto-Close w/o Close Seal to close out the call first. You would then resynchronize the Cencon database with the lock. After resynchronizing the Cencon database with the lock you would be able to dispatch to the lock again.

Initial form for active Route mode:

Successful resynchronization of the Cencon database with the lock:

Lock Operations With Serial Connect

10.108.6.108:35005

Refresh / Connect to Lock   Set Lock Clock   Lock Report   Audit Report   Help

Serial Number: 001037890

Bolt Status: Bolt Extended

Door Status: The container door is closed.

Change Key Status: The lock change key is not inserted.

Enable Remote Admin Status: Remote administration of the lock is not enabled. (This is #50 at lock followed by opening lock.)

Clock Status: 2013-08-16 18:03:33 UTC (Time Read: 2013-08-16 18:02:47 UTC) (Time Difference: 00:00:45.1246962) (Battery: 3.261 V)

Total Audit Count All Modes: 203

Lock Bolt Open Count: 63

| FLM Mode | Route Mode | Bank Mode | Bank Users |

Lock Name: Gen2 Swingbolt 1037890
Lock Mode: Route Mode (Single user)
Mode Audit Count: 78

Status: Active
Customer ID   North Bank
ATM Serial Number:
Region: KENTUCKY

Lock Operations With Serial Connect

Lock Route mode has been resynchronized successfully.

OK

Shelve   Resync Dispatching   Set Access   Close Call   Cancel Dispatch

The lock Route mode has been resynchronized, and can have users dispatched to open it.

3.1.7.10 Lock Operations with Serial Connect - Set Access Between Single and Dual User for Route Mode

Set Access Between Single and Dual User for Route Mode

This operation sets the lock between needing a single user or needing dual users to open the lock, and also updates the Cencon database as needed.

To set access between single and dual users for the the attached lock in Route mode:

- Select the **Route Mode** tab on the Serial Connect form.
- Press the **Set Access** button.
- Select the type of access required between single and dual user to open the lock.
- Press the **Set Access** button.

Note
You can not change single or dual user access while a call or a route is dispatched to the lock. You will need to wait until the call or route has been completed first. After the call or route has been completed, you will be able to change the access between single user or dual user being required to open the lock.

Initial form for active Route mode:

Form for selecting single or dual user mode access on the lock:

The lock Route mode has been set between single and dual user mode.

3.1.7.11 Lock Operations with Serial Connect - Close Dispatch for Route Mode

Close Dispatch for Route Mode

This operation reads the status and the audit trail of the lock, determines if a valid dispatch has opened and closed the lock, and closes out the dispatch to the lock in the Cencon system. This is primarily intended for locks connected remotely on a network, to allow dispatches to locks to be closed out in a convenient and secure manner without having to call in a close seal from the lock.

If the route mode lock has been dispatched to multiple sequences on a route, then this operation will close out route sequences as well. If a route sequence has been skipped at the lock, then that route sequence will be force closed as needed in the route dispatch.

To close a dispatch for the the attached lock in Route mode:

- Select the **Route Mode** tab on the Serial Connect form.
- Press the **Close** button.
- A report of the results of the close operation will be displayed.

> **Note**
>
> The lock must be completely closed for this operation to work. If the bolt is retracted, the door sensor indicates the container door is open (if connected), or the change key is in the lock, then the dispatch to the lock can't be closed out in this manner.

Initial form for active Route mode:

Report for the results of closing the dispatch to the lock:

Save Save As | Page Setup Print | Exit

Close Lock Route Mode Report

Lock Status

Lock Serial Number	001037890
Lock Version	2.02.1078
FLM Mode Status	Single Mode Active
Route Mode Status	Single Mode Active (Pending Close)
Bank Mode Status	Single Mode Active
Bolt Status	Bolt Is Extended
Duress Open Status	Not Opened With Duress Combination
Delayed Open Status	No Delayed Opening In Progress
All Modes Shelved Open Status	Lock Is Not Open With Factory Combination
Lock Out Status	No Lock Out In Progress
Lock Total Number of Opens	65
Audit Trail Event Count	207
Audit Trail Event Total Odometer	207
Is Door Sensor Connected On Open	Door Sensor Was Connected On Open
Is Bolt Works Sensor Connected On Open	Bolt Works Sensor Was Connected On Open
Is Remote Administration Enabled	Remote Administration Is Not Enabled

Note

The history of the lock's error conditions is empty. No lock errors have occurred.

Note

Closed Route mode dispatched call successfully.

Lock Audit Information

Transaction	Mode	Key ID	User ID	Open Time	Close Time	Close Seal	Seal Count
Open Lock	Route	0000006A70CD	Route SHA Key 4	2013-08-16 14:37:23 (DST)			79

Lock Open Log Entries

Dispatch Type	Single Dispatch

3.1.7.12 Lock Operations with Serial Connect - Cancel Route Dispatch and Advance Route Lock Mode to Next Combination

Cancel Route Dispatch and Advance Route Lock Mode to Next Combination

This operation is used to cancel the dispatch of a mode of a Cencon Gen 2 or higher lock that is connected to a network IP address. It does this by checking the status of the lock to determine if the dispatched user has reached the lock and opened it. If the user has opened and closed the lock, this operation closes out the dispatch and returns that the user already opened the lock. If the user has not opened the lock, then the combination for that mode of the lock is advanced to the next combination at the lock, and the dispatch is force closed in the Cencon database.

If this operation is used and the lock is dispatched on one or more route sequences, each call to this transaction will cancel the dispatch for the next route sequence. If the lock was dispatched on route sequence 1, 2, and 3, then the first call will cancel the dispatch for route sequence 1, the second call will cancel the dispatch for route sequence 2, and the third call will cancel the dispatch for route sequence 3. If a route sequence is skipped, such as sequences 2 and 3 are the only ones dispatched, then sequence 1 will be dispatched and closed to prevent it from being used and the combination for the lock mode will be advanced.

If this operation is used without a dispatched user, then the combination of the mode of the lock is advanced at the lock and in the Cencon database.

If this operation is used and the lock is currently open, then an error will be returned.

To cancel a dispatch and advance the lock mode to the next combination for the the attached lock in FLM mode:

- Select the **Route Mode** tab on the Serial Connect form.
- Press the **Cancel Dispatch** button.
- A report of the results of the cancel dispatch operation will be displayed.

Note
The lock must be completely closed for this operation to work. If the bolt is retracted, the door sensor indicates the container door is open (if connected), or the change key is in the lock, then the dispatch to the lock can't be canceled in this manner.

Initial form for active Route mode:

Lock Operations With Serial Connect

10.108.6.108:35005

Refresh / Connect to Lock   Set Lock Clock   Lock Report   Audit Report   Help

Serial Number:	001037890
Bolt Status:	Bolt Extended
Door Status:	The container door is closed.
Change Key Status:	The lock change key is not inserted.
Enable Remote Admin Status:	Remote administration of the lock is not enabled. (This is #50 at lock followed by opening lock.)
Clock Status:	2013-08-16 18:03:33 UTC (Time Read: 2013-08-16 18:02:47 UTC) (Time Difference: 00:00:45.1246962) (Battery: 3.266 V)
Total Audit Count All Modes:	197
Lock Bolt Open Count:	63

FLM Mode | **Route Mode** | **Bank Mode** | **Bank Users**

Lock Name:	Gen2 Swingbolt 1037890
Lock Mode:	Route Mode (Single user)
Mode Audit Count:	78
Status:	Active
Customer ID	North Bank
ATM Serial Number:	
Region:	KENTUCKY

Shelve	Resync Dispatching	Set Access	Close Call	Cancel Dispatch

Report for the results of cancelling the dispatch and advancing the lock mode to the next combination:

Save Save As Page Setup Print Exit

Cancel Lock Route Mode Dispatch and Advance to Next Combination Report

Lock Status

Lock Serial Number	001037890
Lock Version	2.02.1078
FLM Mode Status	Single Mode Active
Route Mode Status	Single Mode Active
Bank Mode Status	Single Mode Active
Bolt Status	Bolt Is Extended
Duress Open Status	Not Opened With Duress Combination
Delayed Open Status	No Delayed Opening In Progress
All Modes Shelved Open Status	Lock Is Not Open With Factory Combination
Lock Out Status	No Lock Out In Progress
Lock Total Number of Opens	65
Audit Trail Event Count	209
Audit Trail Event Total Odometer	209
Is Door Sensor Connected On Open	Door Sensor Not Connected On Open
Is Bolt Works Sensor Connected On Open	Bolt Works Sensor Not Connected On Open
Is Remote Administration Enabled	Remote Administration Is Not Enabled

Note

The history of the lock's error conditions is empty. No lock errors have occurred.

Note

Canceled Route mode sequence 1 dispatched call of user Route SHA Key 4. Advanced lock to next combination successfully.

Note

No audits were read from the lock for canceling the Route mode dispatch.

Lock Open Log Entries

Dispatch Type	Route Sequence Dispatch	Route Sequence Dispatch	Route Sequence Dispatch
Route Name	TestRoute5	TestRoute5	TestRoute5
Route Sequence	1	2	3

3.1.7.13 Lock Operations with Serial Connect - Activate Bank Mode

Bank Mode Activation

To activate the attached lock in Bank mode using Serial Connect:

- Select the **Bank Mode** tab on the Serial Connect form.
- Press the **Activate Lock Mode** button.
- Enter the lock data (required items are in bold type).
- Select the **Bank Users** tab and add the users who need access to the lock.
- Press **Apply Activation** from either the **Bank Mode** or the **Bank Users** tab.

> **Note**
>
> You will need to first select a bank branch to assign the Bank mode lock to before selecting users to add to the lock. The list of users available to add to the lock is determined by the bank branch that the lock is assigned to. If you change what bank branch the lock is assigned to, any prior user selections will be cleared.

Initial activation form:

Select Bank Users:

Lock Operations With Serial Connect

10.108.6.96:35005 ▼

Refresh / Connect to Lock   Set Lock Clock   Lock Report   Audit Report   Help

Serial Number: 1000107

Bolt Status: Bolt Extended

Door Status: The container door sensor is not connected.

Change Key Status: The lock change key is inserted.

Clock Status: 2010-03-25 18:31:05 UTC   (Time Read: 2010-03-25 18:31:06 UTC)   (Time Difference: -00:00:01.0278183)   (Battery: 3.065 V)

Total Audit Count All Modes: 61

Lock Bolt Open Count: 14

FLM Mode | Route Mode | Bank Mode | Bank Users

Users Available To Add To Lock

Name	Bank User ID	
BU05	5	
BU06	6	
BU07	7	
33	33	
BU999999	999999	

Users Being Added To Lock

Name	Bank User ID	
BU01	1	
BU02	2	
BU03	3	
BU04	4	

>>

<<

Bank Branch: North Bank Branch

Cancel   Apply Activation

Successful activation

Lock Operations With Serial Connect

10.108.6.96:35005

Refresh / Connect to Lock   Set Lock Clock   Lock Report   Audit Report   Help

Serial Number: 1000107

Bolt Status: Bolt Extended

Door Status: The container door sensor is not connected.

Change Key Status: The lock change key is inserted.

Clock Status: 2010-03-25 18:31:05 UTC (Time Read: 2010-03-25 18:31:06 UTC) (Time Difference: -00:00:01.0278183) (Battery: 3.065 V)

Total Audit Count All Modes: 65

Lock Bolt Open Count: 14

FLM Mode | Route Mode | Bank Mode | Bank Users

Bank Users With Lock Access

Name	Bank User ID	Default Combo	Must Change Combo	
BU01	1	000000	Yes	
BU02	2			
BU03	3			
BU04	4			

Lock Operations With Serial Connect

ℹ Lock Bank mode has been activated successfully.

OK

Bank Branch: North Bank Branch

Add Users   Delete Users

The lock Bank mode is now active, and users assigned to the Bank mode lock can change their combinations and open it.

3.1.7.14 Lock Operations with Serial Connect - Shelve Bank Mode

Bank Shelve

To shelve the attached lock in Bank mode:

- Select the **Bank Mode** tab on the Serial Connect form.
- Press the **Shelve** button.
- Press **OK** when asked if you are sure you want to shelve the lock.

Note
Once you have shelved a lock mode using the serial connection to the lock, you can not reactivate the lock mode without having physical access to the back of the lock to insert a change key. This is because the security of the serial communications for a mode being activated is set up during activation of the lock mode. When shelving a mode, that security for the mode is already set up. You can shelve a mode remotely, however you must have physical access to the inside of the lock container to insert in a change key into the back of the lock to reactivate the lock.

Note
If the configuration option to require a change key be present in the lock for remote shelve is set, you will not be able to remotely shelve the lock across a remote connection without first having someone present to open the lock and insert a change key. In the case of the Cencon Gen 2 swing bolt lock, you can alternatively open the lock and enter #50 at the lock to allow remote administration of the lock. See Change Configuration Settings to set this configuration option in the Cencon database.

Initial form for active Bank mode:

Prompt for shelving Bank mode:

Successful Shelve:

The lock Bank mode has been shelved.

3.1.7.15 Lock Operations with Serial Connect - Resynchronize Users for Bank Mode

Resynchronize Users for Bank Mode

This operation reads the current user table of the lock and updates the Cencon database entry for the lock to match. It will ensure that the Cencon database matches the lock in the case of having to recover from a backup of the database.

To resynchronize dispatching for the the attached lock in Bank mode:

- Select the **Bank Mode** tab on the Serial Connect form.
- Press the **Resync Users** button.

> **Note**
>
> If a user that is assigned access to the bank mode lock is not in the Cencon database, that user can not be resynchronized as having access in the Cencon database. This might occur if the database had to be recovered from a backup that did not have the users set up yet. It could also occur if the users were removed from the lock by key, the users deleted from the Cencon database, and the remove user key was never used at the lock. If this occurs, you will need to add the users back to the Cencon database and then resynchronize the bank mode lock user table with the Cencon database again.

Initial form for active Bank mode:

Successful resynchronization of the Cencon database with the lock:

User is Out of their 'Time-Window'	Lock	2013-03-14 15:18:23 (DST)
User is Out of their 'Time-Window'	Lock	2013-03-14 14:23:43 (DST)
Writing Bank User Record	Memory Error	2013-03-08 11:20:22
Last Audit record not an 'Open' Audit	Lock	2013-03-08 11:18:21
Reading Add/Delete User Record	TM Key Error	2013-03-08 11:18:09
iButton combination resync data write error	TM Key Error	2010-04-27 16:30:42 (DST)
Reading Housekeeping Record	TM Key Error	2010-04-27 14:37:29 (DST)
iButton combination resync data write error	TM Key Error	2010-04-27 14:36:14 (DST)
	TM Key Error	2010-04-27 14:31:44 (DST)
	TM Key Error	2010-04-27 14:04:13 (DST)

Bank Mode Users Read From Lock

Bank Users

User Name	Bank User ID	Key Type	Key ID	Default Combination	Must Change Combo Flag
BU01	1	DS1427 - Bank Mode Key	000000146512	000000	Doesn't Have To Change Combo
BU02	2	DS1427 - Bank Mode Key	0000000C5C95	000000	Must Change Combo
BU03	3	DS1427 - Bank Mode Key	0000000DE164	000000	Doesn't Have To Change Combo
BU04	4	DS1427 - Bank Mode Key	0000000DD196	000000	Doesn't Have To Change Combo
BU05	5	DS1427 - Bank Mode Key	0000000B39D8	000000	Doesn't Have To Change Combo
BU06	6	DS1427 - Bank Mode Key	0000001466FC	000000	Doesn't Have To Change Combo

Note

No users had to be added to the Cencon lock database entry to resynchronize the user table for lock Bank mode.

Note

No users had to be removed from the Cencon lock database entry to resynchronize the user table for lock Bank mode.

Key Report Created On: 2013-04-17 13:54:37 (DST)
Cencon Version 4.1.5.3089

The lock Bank mode user table has been resynchronized.

3.1.7.16 Lock Operations with Serial Connect - Set Access Between Single and Dual User for Bank Mode

Set Access Between Single and Dual User for Bank Mode

This operation sets the lock between needing a single user or needing dual users to open the lock, and also updates the Cencon database as needed.

To set access between single and dual users for the the attached lock in Bank mode:

- Select the **Bank Mode** tab on the Serial Connect form.
- Press the **Set Access** button.
- Select the type of access required between single and dual user to open the lock.
- Press the **Set Access** button.

> **Note**
>
> You can not change single or dual user access while a call is dispatched to the lock. You will need to wait until the call has been completed first. After the call has been completed, you will be able to change the access between single and dual user required.

Initial form for active Bank mode:

Form for selecting single or dual user mode access on the lock:

Lock Operations With Serial Connect

10.108.6.96:35005 ▼

Refresh / Connect to Lock   Set Lock Clock   Lock Report   Audit Report   Help

Serial Number: 1000105

Bolt Status: Bolt Extended

Door Status: The container door sensor is not connected.

Change Key Status: The lock change key is not inserted.

Clock Status: 2010-02-24 14:41:01 UTC (Time Read: 2010-02-24 14:41:02 UTC) (Time Difference: -00:00:01.3265384) (Battery: 3.053 V)

Total Audit Count All Modes: 71

Lock Bolt Open Count: 1

FLM Mode | **Route Mode** | **Bank Mode** | **Bank Users**

Lock Access Type

Name	Gen2 Lock 1000105
Region	LocalBank
Customer ID	North Bank
Lock User Access	Single User Required To Open Lock ▼
	Single User Required To Open Lock
	Dual User Required To Open Lock

Cancel   Set Access

The lock Bank mode has been set between single and dual user mode.

3.1.7.17 Lock Operations with Serial Connect - Set Time Delay and Open Time Window for Bank Mode

Set Time Delay and Open Time Window for Bank Mode

This operation sets the time delay period after a bank mode user enters their combination and presents their key to the lock for the user to be able to actually open the lock. This operation also sets the time window that the user can open the lock once the time delay period has elapsed. The option to set a time delay before opening and a time window to open is available only to Bank mode.

To set the time delay and open time window for the the attached lock in Bank mode:

- Select the **Bank Mode** tab on the Serial Connect form.
- Press the **Set Delay** button.
- Enter the desired time delay and open time window. If a time delay value of 0 is entered, then the lock is allowed to open immediately.
- Press the **Set Open Delay** button.

Initial form for active Bank mode:

Form for entering the time delay and open time window for the lock:

10.108.6.96:35005

Refresh / Connect to Lock   Set Lock Clock   Lock Report   Audit Report   Help

Serial Number: 1000105

Bolt Status: Bolt Extended

Door Status: The container door sensor is not connected.

Change Key Status: The lock change key is not inserted.

Clock Status: 2010-02-24 14:41:01 UTC (Time Read: 2010-02-24 14:41:02 UTC) (Time Difference: -00:00:01.3265384) (Battery: 3.053 V)

Total Audit Count All Modes: 71

Lock Bolt Open Count: 1

FLM Mode | Route Mode | Bank Mode | Bank Users

Lock Open Delay and Time Window Duration

Name	Gen2 Lock 1000105
Bank Branch Name	Branch0001
Region	LocalBank
Customer ID	North Bank
Bank Mode Time Delay	00
Bank Mode Time Window	00

Cancel   Set Open Delay

The lock Bank mode time delay and open time window has been set.

3.1.7.18 Lock Operations with Serial Connect - View Bank Mode Users

View Bank Mode Users

To view the bank users assigned to the attached lock:

- Select the **Bank Users** tab on the Serial Connect form. The display shows the users currently assigned to the lock.

> **Note**
>
> This tab displays the users currently assigned to the Bank mode lock based off of the Cencon database. If the Cencon database is not up to date with the lock, then you can resynchronize the Cencon database with the lock using the Resynchronize Users for Bank Mode operation.

Form displaying the current users for the Bank mode lock:

Add Bank Mode Users

To add bank users to the attached lock:

- Select the **Bank Users** tab on the Serial Connect form. The display shows the users currently assigned to the lock.
- Select the **Add Users** button on the Bank Users tab. The display shows the form for adding users to the lock.
- Select which users you want to add to the lock from the list of available users.
- Select the **Apply Adding Users To Lock** button on the Bank Users tab. The selected users will be added to the lock.

> **Note**
>
> This tab displays the users currently assigned to the Bank mode lock based off of the Cencon database. If the Cencon database is not up to date with the lock, then you can resynchronize the Cencon database with the lock using the Resynchronize Users for Bank Mode operation.

Form displaying the current users for the Bank mode lock:

Form used to select users to add to the Bank mode lock:

Lock Operations With Serial Connect

10.108.6.96:35005

Refresh / Connect to Lock **Set Lock Clock** **Lock Report** **Audit Report** **Help**

Serial Number: 1000105

Bolt Status: Bolt Extended

Door Status: The container door sensor is not connected.

Change Key Status: The lock change key is inserted.

Clock Status: 2010-02-24 14:17:59 UTC   (Time Read: 2010-02-24 14:18:00 UTC)   (Time Difference: -00:00:01.0144747)   (Battery: 3.054 V)

Total Audit Count All Modes: 55

Lock Bolt Open Count: 1

FLM Mode	Route Mode	Bank Mode	Bank Users

Users Available To Add To Lock

Name	
23	

Users Being Added To Lock

Name	
15	

>>

<<

Bank Branch: Branch0001

Cancel   **Apply Adding Users To Lock**

3.1.7.20 Lock Operations with Serial Connect - Delete Bank Mode Users

Delete Bank Mode Users

To delete bank users from the attached lock:

- Select the **Bank Users** tab on the Serial Connect form. The display shows the users currently assigned to the lock.
- Select the **Delete Users** button on the Bank Users tab. The display shows the form for deleting users from the lock.
- Select which users you want to delete from the lock from the list of users assigned access to the lock.
- Select the **Apply Deleting Users From Lock** button on the Bank Users tab. The selected users will be deleted from the lock.

> **Note**
>
> This tab displays the users currently assigned to the Bank mode lock based off of the Cencon database. If the Cencon database is not up to date with the lock, then you can resynchronize the Cencon database with the lock using the Resynchronize Users for Bank Mode operation.

Form displaying the current users for the Bank mode lock:

Form used to select users to delete from the Bank mode lock:

Lock Operations With Serial Connect

10.108.6.96:35005

Refresh / Connect to Lock   Set Lock Clock   Lock Report   Audit Report   Help

Serial Number:	1000105
Bolt Status:	Bolt Extended
Door Status:	The container door sensor is not connected.
Change Key Status:	The lock change key is inserted.
Clock Status:	2010-02-24 14:17:59 UTC (Time Read: 2010-02-24 14:18:00 UTC) (Time Difference: -00:00:01.0144747) (Battery: 3.054 V)
Total Audit Count All Modes:	55
Lock Bolt Open Count:	1

FLM Mode | **Route Mode** | **Bank Mode** | **Bank Users**

Users Being Deleted From Lock

Name

Users With Access To Lock

Name
LocalBank User 02
LocalBank User 01
22
15

>>

<<

Bank Branch: Branch0001

[Cancel]   [Apply Deleting Users From Lock]

3.1.7.21 Lock Operations with Serial Connect - Set Lock Clock and Time Zone Daylight Savings Time Table

Set Lock Clock and Time Zone Daylight Savings Time Table

This operation sets the time in the lock, based off of the time on your host computer.

Note
Only the active modes you are authorized to set the time zone daylight savings time tables on will be updated. If you do not have authorization to update the appropriate active modes on the lock, or the modes on the lock are controlled by another company, you will not be able to update those modes.

To set the clock and time zone daylight savings time tables for the lock modes:

- Select the **Set Clock** button on the Lock Operations with Serial Connect toolbar.
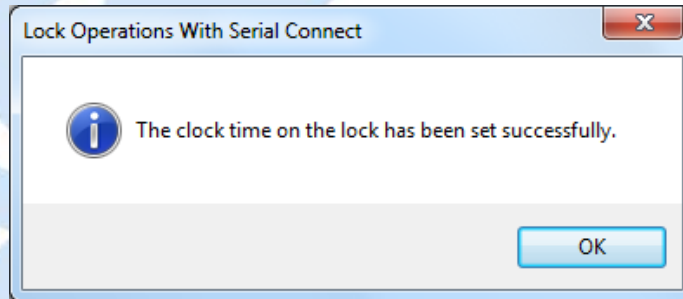
  Initial form for active FLM mode:

- If the lock has modes active, the clock will be set and any modes you have authorization to set will have their daylight savings time table updated. The **Set Clock** form will be displayed to select the time zone for each authorized active mode. Select the time zones for the different modes as needed, and then press the **Set Clock And Daylight Savings Time Tables** button. This will set the clock on the lock and also set the daylight savings time transition table for each mode based off of the selected time zone.

  Dialog for selecting the time zones to use to update the lock clock and time zone daylight savings time tables:

- If no modes are active, this will only set the clock on the lock. The clock on the lock will be set based off of the system time on your host system. If no modes are active, then daylight savings time data will not be saved at the lock. The only dialog displayed will be to indicate success or failure to set the clock on the lock.

  If no modes are active, only the clock will be set. You will see only the following message stating that the clock was set:

Create Lock Report

This operation reads the status of the lock as well as the status of each mode of the lock. It also reads the database information for each mode of the lock from the Cencon database. It then displays a report similar to the Cencon Individual Lock report but also including additional information which can only be accessed through the direct connection. This report will display the current status of the lock and information for each active mode of the lock. This report can be long, depending on the number of authorized active modes on the lock.

To create a lock report:

- Select the **Lock Report** button on the Lock Operations with Serial Connect toolbar.
- A report of the status of the lock will be displayed.

> **Note**
>
> Only information for the lock modes that your company controls will be displayed. If your company does not control any of the active lock modes on the lock, then you will not be able to display any of the mode information for that lock.

Initial form for active FLM mode:

Lock Report:

Save   Save As   Page Setup   Print   Exit

Lock Serial Communications Report

Lock Status

Lock Serial Number	001000106
Lock Version	2.00.820
FLM Mode Status	Single Mode Active
Route Mode Status	Dual Mode Active
Bank Mode Status	Single Mode Active
Bolt Status	Bolt Is Extended
Duress Open Status	Not Opened With Duress Combination
Delayed Open Status	No Delayed Opening In Progress
All Modes Shelved Open Status	Lock Is Not Open With Factory Combination
Lock Out Status	No Lock Out In Progress
Lock Total Number of Opens	4
Audit Trail Event Count	113

Lock Error History

Transaction	Mode	Event Time
Dual Mode/Same Key Error	Lock	2010-03-18 08:44:09

Lock Hardware Status

Key Reader Status	No Key Present
Keyboard Status	Keyboard Responding (No Keys Pressed)
Display Status	Display Responding (Cleared)
Cam Status	Bolt Cam Switch Is Open
Memory Status	Memory Device Is Responding
Memory Format Version	000
Clock Status	Clock Is Running
Clock Battery Voltage	3.063 V

Create Lock Audit Report

This operation reads the status of the lock as well as the audit trail of the lock. It then displays a report similar to the report from a supervisor audit key, however there is no size restriction on the number of audits. This report can be long, depending on the number of audits on the lock.

To create a lock audit report:

- Select the **Audit Report** button on the Lock Operations with Serial Connect toolbar.
- A report of the audit trail from the lock will be displayed.

> **Note**
>
> If the lock has one or more modes active and your company does not control any of the active lock modes on the lock, then you will not be able to download audit information from the lock.

> **Note**
>
> If the lock is opened in Factory/Shelved mode and then activated using the lock serial connection, the audit of the following bolt close will indicate it is a Factory/Shelved mode close. This is because the bolt close is associated with the open that occurred while the lock was in Factory/Shelved mode.

Initial form for active FLM mode:

Lock Audit Report:

Save	Save As	Page Setup	Print	Exit

Clock Write	Serial Communications FLM Operation			2009-06-23 13:07:21	2009-06-23 13:07:21		
Activate FLM Mode	Serial Communications Operation			2009-06-23 13:07:20			
Close Lock	Route	0000006CE901	rjrb7		2009-06-23 11:04:30	4429	2
Shelve a Route Lock mode	Supervisor Audit	000000036ACA		2009-06-23 11:04:04			
Open Lock	Route	0000006CE901	rjrb7	2009-06-23 11:03:44			2
Route Mode Time Zone DST Table Write	Serial Communications Route Operation			2009-06-23 11:02:32			
Clock Write	Serial Communications Route Operation			2009-06-23 11:02:31	2009-06-23 11:02:32		
Activate Route Mode	Serial Communications Operation			2009-06-23 11:02:30			
Close Lock	FLM	00000046107A	F3		2009-06-23 10:22:23	5703	2
Shelve an FLM Lock mode	Supervisor Audit	000000036ACA		2009-06-23 10:22:04			
Open Lock	FLM	00000046107A	F3	2009-06-23 10:20:48			2
FLM Mode Time Zone DST Table Write	Serial Communications FLM Operation			2009-06-23 10:18:04			
Clock Write	Serial Communications FLM Operation			2009-06-23 10:18:42	2009-06-23 10:18:04		
Activate FLM Mode	Serial Communications Operation			2009-06-23 10:18:41			
Shelve Bank Mode	Serial Communications Bank Operation			2009-06-23 10:18:05			
Shelve Route Mode	Serial Communications Route			2009-06-23			

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3.1.8 Swing Bolt Lock Operations with Serial Connect

Note
This feature is only available for Cencon Gen 2 locks.

This function allows you to communicate with a Gen 2 Swing Bolt lock using a USB connection to your PC through the Breakout Box. The USB connection is directly through a Cencon Swing Bolt Breakout Box. It can also be through a network connection, as through ATM machine's PC. The user interface allows you to retrieve information from the lock and perform most of the lock operations which are normally done with keys (such as activate, shelve, set the time, etc.).

Warning
Operators may become statically charged in a normal working environment if they are not wearing a ground strap. In this case the USB communications may stop working, un-plug and re-plug the USB cable between the computer and the Breakout Box to resume operation. It is recommended that operators working on the inside of the ATM or in a factory connecting to the Gen 2 Swing Bolt Breakout Box to always wear a wrist strap to prevent possible ESD damage from occurring while using the Breakout Box.

Cencon USB ATM Lock Adapter:

Typical Procedure (serial connection):

- Connect a USB cable between your PC and the Cencon Swing Bolt Breakout Box. The Cencon Swing Bolt Breakout Box may have to have drivers installed. This can be done by going to the Drivers folder located on the Cencon software CD. The Cencon Swing Bolt Breakout Box will be displayed as **Cencon USB ATM Lock Adapter**.
- Start Cencon and select **Lock Operations with Serial Connect**.
- To connect to the lock:
  - Directly through a USB cable - click in the **Connection** box and select the type of connection you are using (**Cencon USB ATM Lock Adapter)** for this example). You will need to have connected the lock using a USB cable from the Cencon Swing Bolt Breakout Box to a USB port on your computer. Each communications port on your computer will be listed in the drop-down selection in the form.
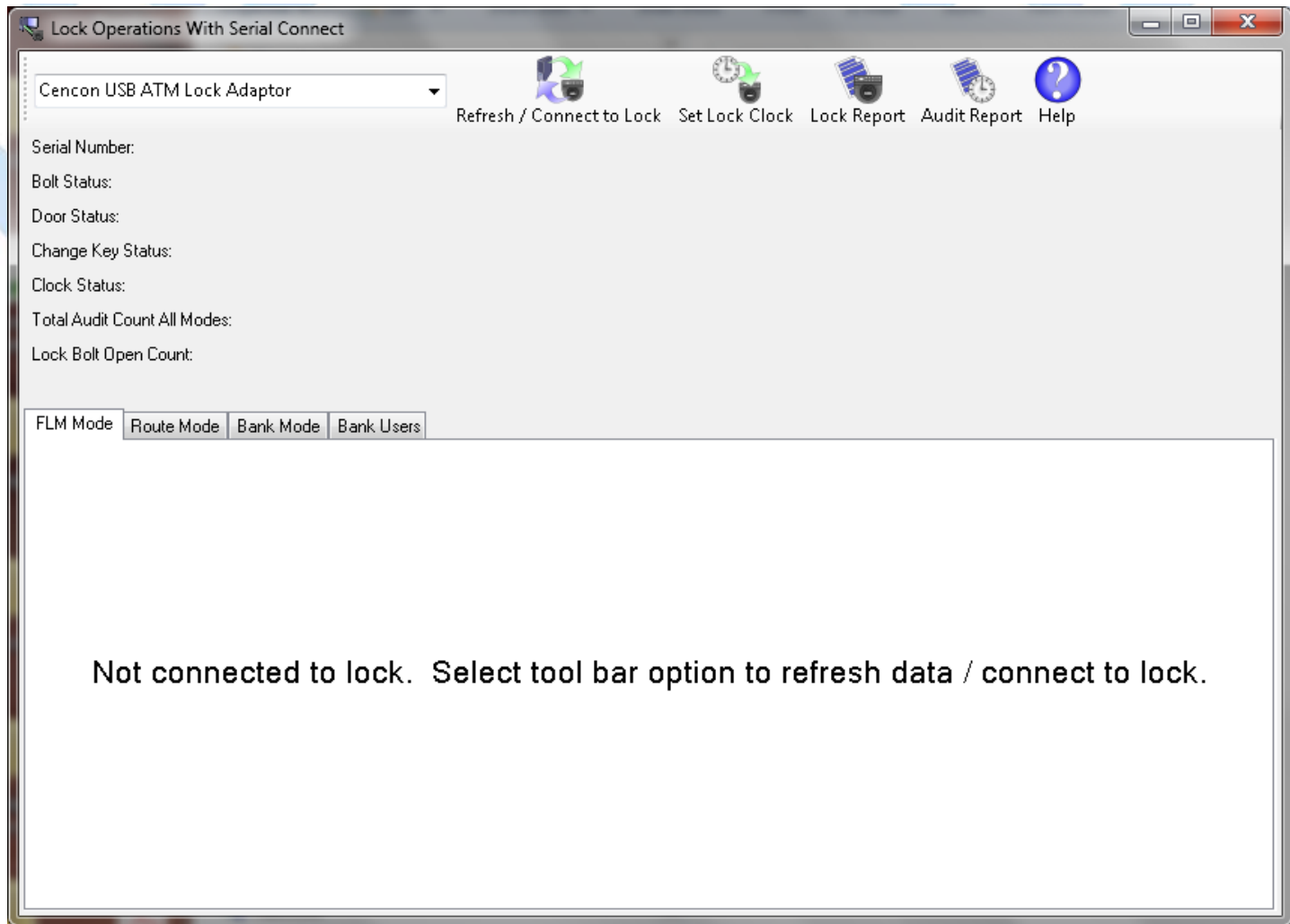
- Through a network connection - type the lock's network address in the **Connection** box at the top of the form. You will need to have connected the lock using a Cencon Lock Network Serial Interface Box to your network, and configured it as needed using the Cencon Lock Network Serial Interface Box Utility. If a network port other than the default needs to be set, then that can be entered after the network address, separated by a colon:
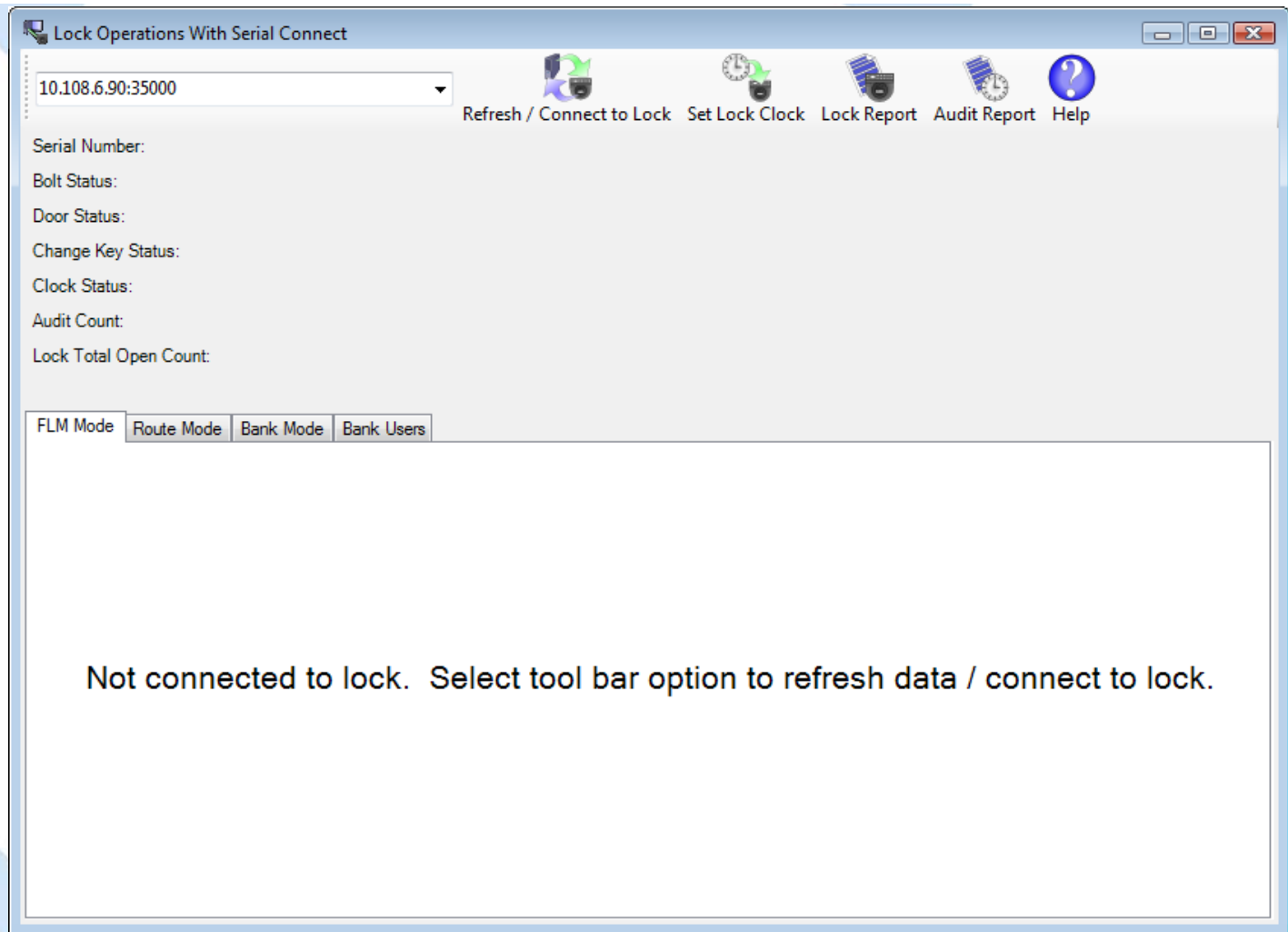
Note

When you connect to a lock using a network connection, the network address and port used to connect up to that lock will automatically be saved to the Cencon database. To connect back up to that lock at a later date, you can select that lock from one of the Cencon reports and select **Remote Serial Operations With Lock (Gen2)**. The Lock Operations With Serial Connect form will be displayed and the previously used network address will be used to connect to the lock. You can also close out a dispatch to the lock in the same manner, by selecting **Close Lock With Remote Serial Operation (Gen2)** from the report's operation menu.

- Press **Refresh/Connect to Lock** to complete the connection.

Toolbar functions:

Refresh/Connect to Lock

Connect to the attached lock and update the status displayed for the connected lock.

Set Lock Clock

Set the time in the lock, based off of the time on your host computer. If one or more modes are active from your software, this will also set the daylight savings time transition table for each mode based off of the selected time zone. A form will be displayed to select the time zone for each authorized active mode.

Lock Report

Display a report similar to the Cencon Individual Lock report but also including additional information which can only be accessed through the direct connection. This report will display the current status of the lock and information for each active mode of the lock.

Audit Report

Display a standard Cencon lock audit report. This report displays all the available audits since it is not subject to the memory limitations of storing the audits on the SA key.

Note

In order to read the status of a lock, set the clock, generate a lock report, or generate an audit report, you must have authorization to access the lock. If the lock is shelved, then anyone can set the clock or get an audit report from the lock. If one or more modes are active on the lock, then you must have control of at least one of the modes of the lock to get information from the lock. Each lock mode may be under the control of a different company, and each mode has it's own security implemented. If you attempt to access a lock that you don't control one of the modes of, you will not be able to read information from the lock. Additionally, you will only be able to access information specific to the lock modes you control and the audit trail of the lock.

Mode Specific Functions

Click on specific function to view details.

- FLM Mode
  - [Activate FLM Mode](#)
  - [Shelve FLM Mode](#)
  - [Resynchronize Dispatching for FLM Mode](#)
  - [Set Access Between Single and Dual User for FLM Mode](#)
  - [Close Dispatch for FLM Mode](#)
- Route Mode
  - [Activate Route Mode](#)
  - [Shelve Route Mode](#)
  - [Resynchronize Dispatching for Route Mode](#)
  - [Set Access Between Single and Dual User for Route Mode](#)
  - [Close Dispatch for Route Mode](#)
- Bank Mode
  - [Activate Bank Mode](#)
  - [Shelve Bank Mode](#)
  - [Resynchronize Users for Bank Mode](#)
  - [Set Access Between Single and Dual User for Bank Mode](#)
  - [Set Time Delay and Open Time Window for Bank Mode](#)
  - [View Bank Mode Users](#)
  - [Add Bank Mode Users](#)
  - [Delete Bank Mode Users](#)

3.1.8.1 Lock Operations with Serial Connect - Activate FLM Mode

FLM Activation

To activate the attached lock in FLM mode:

- Select the **FLM Mode** tab on the Serial Connect form.
- Press the **Activate Lock Mode** button.
- Enter the lock data (required items are in bold type).
- Press **Apply Activation**

> **Note**
>
> When activating a lock mode using the USB connection to the Breakout Box, the virtual change key must be activated by powering up the lock and entering #50 on the keypad. Then you must power up the lock and enter 50-25-50 and open the lock holding the bolt open to enable Remote Administration on the lock. Other functions such as shelving the lock, setting access between single and dual user, and reading the status of the lock do not require the virtual change key to be initiated on the lock. This because the security of the serial communications for the activated mode has already been set up during activation.
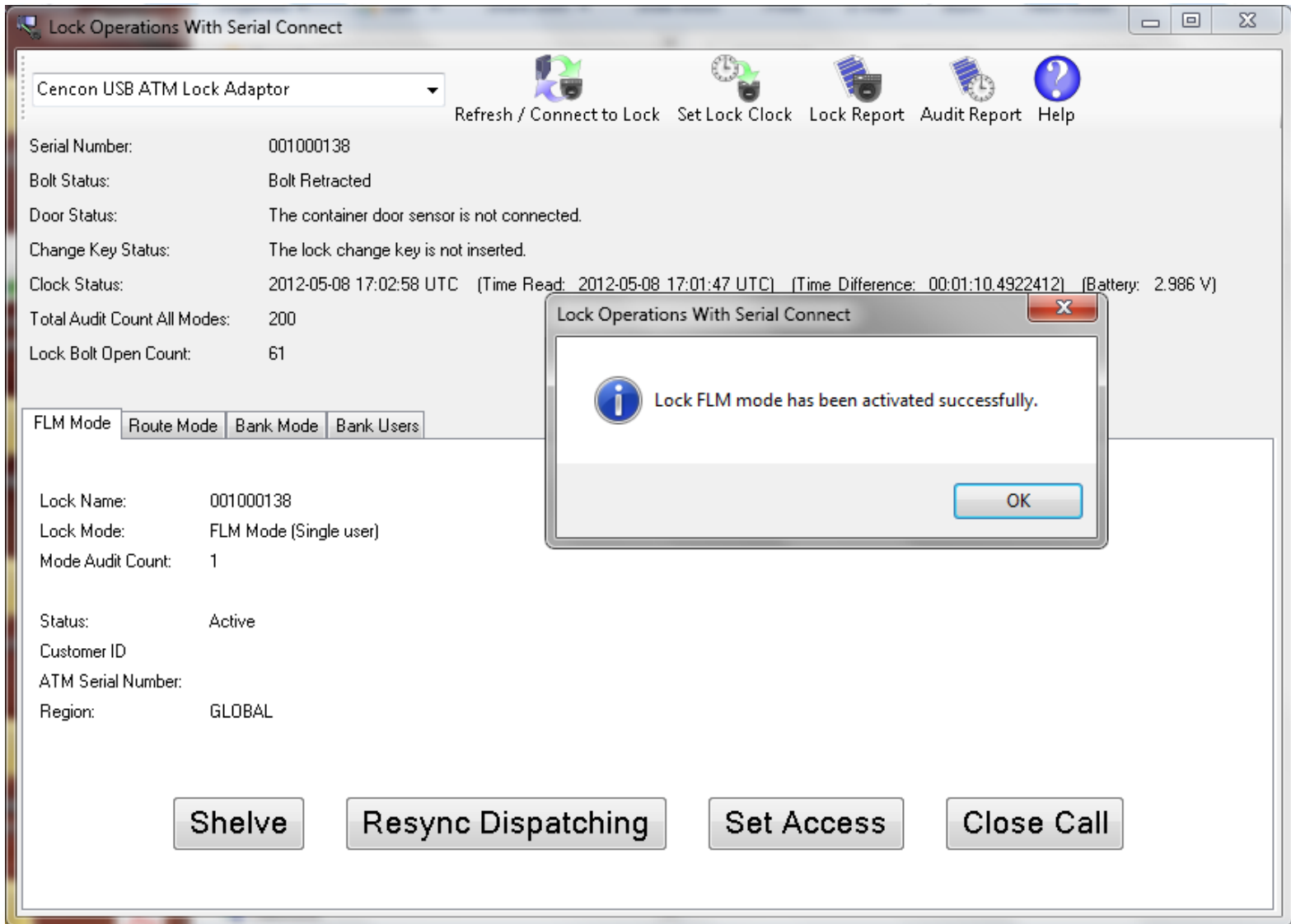
Initial activation form:

Successful activation:

The lock FLM mode is now active, and can have users dispatched to open it.

3.1.8.2 Lock Operations with Serial Connect - Shelve FLM Mode

FLM Shelve

To shelve the attached lock in FLM mode:

- Select the **FLM Mode** tab on the Serial Connect form.
- Press the **Shelve** button.
- Press **OK** when asked if you are sure you want to shelve the lock.

Note

Once you have shelved a lock mode using the USB connection to the lock, you can not reactivate the lock mode without having physical access to the back of the lock to initiate the virtual change key. This is because the security of the serial communications for a mode being activated is set up during activation of the lock mode. When shelving a mode, that security for the mode is already set up. You can shelve a mode remotely, however you must have physical access to the inside of the lock container as well as to initiate the virtual change key into the back of the lock to reactivate the lock.

Note

If the configuration option to require a change key be present in the lock for remote shelve is set, you will not be able to remotely shelve the lock across a remote connection without first having someone present to open the lock and insert a change key. In the case of the Cencon Gen 2 swing bolt lock, you can alternatively open the lock and enter #50 at the lock to allow remote administration of the lock. See Change Configuration Settings to set this configuration option in the Cencon database.

Initial form for active FLM mode:

Prompt for shelving FLM mode:

Successful Shelve:

Lock Operations With Serial Connect

Cencon USB ATM Lock Adaptor ▾

Refresh / Connect to Lock   Set Lock Clock   Lock Report   Audit Report   Help

Serial Number: 001000138

Bolt Status: Bolt Extended

Door Status: The container door sensor is not connected.

Change Key Status: The lock change key is not inserted.

Clock Status: 2012-05-08 17:02:58 UTC   (Time Read: 2012-05-08 17:01:47 UTC)   (Time Difference: 00:01:10.4922412)   (Battery: 2.986 V)

Total Audit Count All Modes: 202

Lock Bolt Open Count: 61

FLM Mode | Route Mode | Bank Mode | Bank Users

Lock Operations With Serial Connect

   ⓘ Lock FLM mode has been shelved successfully.

OK

Lock mode is not currently active.

Activate Lock Mode

The lock FLM mode has been shelved.

Resynchronize Dispatching for FLM Mode

This operation reads the current dispatching status of the lock and updates the Cencon database entry for the lock to match. It will ensure that the Cencon database matches the lock in the case of having to recover from a backup of the database.

To resynchronize dispatching for the the attached lock in FLM mode:

- Select the **FLM Mode** tab on the Serial Connect form.
- Press the **Resync Dispatching** button.

> **Note**
>
> You can not resynchronize the Cencon database dispatching with the Cencon Gen 2 lock while a call is dispatched to the lock. If you have a call open to the lock and the lock is out of synchronization with the Cencon database, you will need to do a Manager Auto-Close w/o Close Seal to close out the call first. You would then resynchronize the Cencon database with the lock. After resynchronizing the Cencon database with the lock you would be able to dispatch to the lock again.

Initial form for active FLM mode:

Successful resynchronization of the Cencon database with the lock:

The lock FLM mode has been resynchronized, and can have users dispatched to open it.

3.1.8.4 Lock Operations with Serial Connect - Set Access Between Single and Dual User for FLM Mode

Set Access Between Single and Dual User for FLM Mode

This operation sets the lock between needing a single user or needing dual users to open the lock, and also updates the Cencon database as needed.

To set access between single and dual users for the the attached lock in FLM mode:

- Select the **FLM Mode** tab on the Serial Connect form.
- Press the **Set Access** button.
- Select the type of access required between single and dual user to open the lock.
- Press the **Set Access** button.

> **Note**
>
> You can not change single or dual user access while a call is dispatched to the lock. You will need to wait until the call has been completed first. After the call has been completed, you will be able to change the access between single user or dual user being required to open the lock.

Initial form for active FLM mode:

Form for selecting single or dual user mode access on the lock:

The lock FLM mode has been set between single and dual user mode.

3.1.8.5 Lock Operations with Serial Connect - Close Dispatch for FLM Mode

Close Dispatch for FLM Mode

This operation reads the status and the audit trail of the lock, determines if a valid dispatch has opened and closed the lock, and closes out the dispatch to the lock in the Cencon system. This is primarily intended for locks connected remotely on a network, to allow dispatches to locks to be closed out in a convenient and secure manner without having to call in a close seal from the lock.

To close a dispatch for the the attached lock in FLM mode:

- Select the **FLM Mode** tab on the Serial Connect form.
- Press the **Close Call** button.
- A report of the results of the close operation will be displayed.

> **Note**
>
> The lock must be completely closed for this operation to work. If the bolt is retracted, the door sensor indicates the container door is open (if connected), or the change key is in the lock, then the dispatch to the lock can't be closed out in this manner.

Initial form for active FLM mode:

Report for the results of closing the dispatch to the lock:

Close Lock FLM Mode Report

Lock Status

Lock Serial Number	001000138
Lock Version	2.01.1002
FLM Mode Status	Single Mode Active
Route Mode Status	Single Mode Shelved
Bank Mode Status	Single Mode Shelved
Bolt Status	Bolt Is Extended
Duress Open Status	Not Opened With Duress Combination
Delayed Open Status	No Delayed Opening In Progress
All Modes Shelved Open Status	Lock Is Not Open With Factory Combination
Lock Out Status	No Lock Out In Progress
Lock Total Number of Opens	62
Audit Trail Event Count	208
Audit Trail Event Total Odometer	208
Is Door Sensor Connected On Open	Door Sensor Not Connected On Open

3.1.8.6 Lock Operations with Serial Connect - Cancel FLM Dispatch and Advance FLM Lock Mode to Next Combination

Cancel FLM Dispatch and Advance FLM Lock Mode to Next Combination

This operation is used to cancel the dispatch of a mode of a Cencon Gen 2 or higher lock that is connected to a network IP address. It does this by checking the status of the lock to determine if the dispatched user has reached the lock and opened it. If the user has opened and closed the lock, this operation closes out the dispatch and returns that the user already opened the lock. If the user has not opened the lock, then the combination for that mode of the lock is advanced to the next combination at the lock, and the dispatch is force closed in the Cencon database.

If this operation is used without a dispatched user, then the combination of the mode of the lock is advanced at the lock and in the Cencon database.

If this operation is used and the lock is currently open, then an error will be returned.

To cancel a dispatch and advance the lock mode to the next combination for the the attached lock in FLM mode:

- Select the **FLM Mode** tab on the Serial Connect form.
- Press the **Cancel Dispatch** button.
- A report of the results of the cancel dispatch operation will be displayed.

Note
The lock must be completely closed for this operation to work. If the bolt is retracted, the door sensor indicates the container door is open (if connected), or the change key is in the lock, then the dispatch to the lock can't be canceled in this manner.

Initial form for active FLM mode:

Lock Operations With Serial Connect

10.108.6.108:35005

Refresh / Connect to Lock   Set Lock Clock   Lock Report   Audit Report   Help

Serial Number:	001037890
Bolt Status:	Bolt Extended
Door Status:	The container door is closed.
Change Key Status:	The lock change key is not inserted.
Enable Remote Admin Status:	Remote administration of the lock is not enabled. (This is #50 at lock followed by opening lock.)
Clock Status:	2013-08-16 18:03:33 UTC (Time Read: 2013-08-16 18:02:47 UTC) (Time Difference: 00:00:45.1246962) (Battery: 3.266 V)
Total Audit Count All Modes:	197
Lock Bolt Open Count:	63

FLM Mode | Route Mode | Bank Mode | Bank Users

Lock Name:	Gen2 Swingbolt 1037890
Lock Mode:	FLM Mode (Single user)
Mode Audit Count:	5
Status:	Active
Customer ID	North Bank
ATM Serial Number:	
Region:	KENTUCKY

Shelve   Resync Dispatching   Set Access   Close Call   Cancel Dispatch

Report for the results of cancelling the dispatch and advancing the lock mode to the next combination:

Save Save As   Page Setup   Print | Exit

Cancel Lock FLM Mode Dispatch and Advance to Next Combination Report

Lock Status

Lock Serial Number	001037890
Lock Version	2.02.1078
FLM Mode Status	Single Mode Active
Route Mode Status	Single Mode Active
Bank Mode Status	Single Mode Active
Bolt Status	Bolt Is Extended
Duress Open Status	Not Opened With Duress Combination
Delayed Open Status	No Delayed Opening In Progress
All Modes Shelved Open Status	Lock Is Not Open With Factory Combination
Lock Out Status	No Lock Out In Progress
Lock Total Number of Opens	63
Audit Trail Event Count	203
Audit Trail Event Total Odometer	203
Is Door Sensor Connected On Open	Door Sensor Not Connected On Open
Is Bolt Works Sensor Connected On Open	Bolt Works Sensor Not Connected On Open
Is Remote Administration Enabled	Remote Administration Is Not Enabled

Note

The history of the lock's error conditions is empty. No lock errors have occurred.

Note

Canceled FLM mode dispatched call of user FLM SHA Key 4. Advanced lock to next combination successfully.

Note

No audits were read from the lock for canceling the FLM mode dispatch.

Lock Open Log Entries

Cencon System Reference Manual

3.1.8.7 Lock Operations with Serial Connect - Activate Route Mode

Route Activation

To activate the attached lock in Route mode:

- Select the **Route Mode** tab on the Serial Connect form.
- Press the **Activate Lock Mode** button.
- Enter the lock data (required items are in bold type).
- Press **Apply Activation**

> **Note**
>
> When activating a lock mode using the USB connection to the Breakout Box, the virtual change key must be activated by powering up the lock and entering #50 on the keypad. Then you must power up the lock and enter 50-25-50 and open the lock holding the bolt open to enable Remote Administration on the lock. Other functions such as shelving the lock, setting access between single and dual user, and reading the status of the lock do not require the virtual change key to be initiated on the lock. This because the security of the serial communications for the activated mode has already been set up during activation.

Initial activation form:

Successful activation:

The lock Route mode is now active, and can have users dispatched to open it.

3.1.8.8 Lock Operations with Serial Connect - Shelve Route Mode

Route Shelve

To shelve the attached lock in Route mode:

- Select the **Route Mode** tab on the Serial Connect form.
- Press the **Shelve** button.
- Press **OK** when asked if you are sure you want to shelve the lock.

> **Note**
>
> Once you have shelved a lock mode using the USB connection to the lock, you can not reactivate the lock mode without having physical access to the back of the lock to initiate the virtual change key. This is because the security of the serial communications for a mode being activated is set up during activation of the lock mode. When shelving a mode, that security for the mode is already set up. You can shelve a mode remotely, however you must have physical access to the inside of the lock container as well as to initiate the virtual change key into the back of the lock to reactivate the lock.

> **Note**
>
> If the configuration option to require a change key be present in the lock for remote shelve is set, you will not be able to remotely shelve the lock across a remote connection without first having someone present to open the lock and insert a change key. In the case of the Cencon Gen 2 swing bolt lock, you can alternatively open the lock and enter #50 at the lock to allow remote administration of the lock. See Change Configuration Settings to set this configuration option in the Cencon database.

Initial form for active Route mode:

Prompt for shelving Route mode:

Successful Shelve:

Lock Operations With Serial Connect

Cencon USB ATM Lock Adaptor

Refresh / Connect to Lock   Set Lock Clock   Lock Report   Audit Report   Help

Serial Number:	001000138
Bolt Status:	Bolt Extended
Door Status:	The container door sensor is not connected.
Change Key Status:	The lock change key is not inserted.
Clock Status:	2012-05-08 17:47:23 UTC (Time Read: 2012-05-08 17:47:24 UTC] (Time Difference: -00:00:01.5767192] (Battery: 2.987 V)
Total Audit Count All Modes:	215
Lock Bolt Open Count:	63

FLM Mode   Route Mode   Bank Mode   Bank Users

Lock Operations With Serial Connect

Lock Route mode has been shelved successfully.

OK

Lock mode is not currently active.

Activate Lock Mode

The lock Route mode has been shelved.

3.1.8.9 Lock Operations with Serial Connect - Resynchronize Dispatching for Route Mode

Resynchronize Dispatching for Route Mode

This operation reads the current dispatching status of the lock and updates the Cencon database entry for the lock to match. It will ensure that the Cencon database matches the lock in the case of having to recover from a backup of the database.

To resynchronize dispatching for the the attached lock in Route mode:

- Select the **Route Mode** tab on the Serial Connect form.
- Press the **Resync Dispatching** button.

> **Note**
>
> You can not resynchronize the Cencon database dispatching with the Cencon Gen 2 lock while a call is dispatched to the lock. If you have a call open to the lock and the lock is out of synchronization with the Cencon database, you will need to do a Manager Auto-Close w/o Close Seal to close out the call first. You would then resynchronize the Cencon database with the lock. After resynchronizing the Cencon database with the lock you would be able to dispatch to the lock again.

Initial form for active Route mode:

Successful resynchronization of the Cencon database with the lock:

The lock Route mode has been resynchronized, and can have users dispatched to open it.

3.1.8.10 Lock Operations with Serial Connect - Set Access Between Single and Dual User for Route Mode

Set Access Between Single and Dual User for Route Mode

This operation sets the lock between needing a single user or needing dual users to open the lock, and also updates the Cencon database as needed.

To set access between single and dual users for the the attached lock in Route mode:

- Select the **Route Mode** tab on the Serial Connect form.
- Press the **Set Access** button.
- Select the type of access required between single and dual user to open the lock.
- Press the **Set Access** button.

> **Note**
>
> You can not change single or dual user access while a call or a route is dispatched to the lock. You will need to wait until the call or route has been completed first. After the call or route has been completed, you will be able to change the access between single user or dual user being required to open the lock.

Initial form for active Route mode:

Form for selecting single or dual user mode access on the lock:

The lock Route mode has been set between single and dual user mode.

3.1.8.11 Lock Operations with Serial Connect - Close Dispatch for Route Mode

Close Dispatch for Route Mode

This operation reads the status and the audit trail of the lock, determines if a valid dispatch has opened and closed the lock, and closes out the dispatch to the lock in the Cencon system. This is primarily intended for locks connected remotely on a network, to allow dispatches to locks to be closed out in a convenient and secure manner without having to call in a close seal from the lock.

If the route mode lock has been dispatched to multiple sequences on a route, then this operation will close out route sequences as well. If a route sequence has been skipped at the lock, then that route sequence will be force closed as needed in the route dispatch.

To close a dispatch for the the attached lock in Route mode:

- Select the **Route Mode** tab on the Serial Connect form.
- Press the **Close** button.
- A report of the results of the close operation will be displayed.

> **Note**
>
> The lock must be completely closed for this operation to work. If the bolt is retracted, the door sensor indicates the container door is open (if connected), or the change key is in the lock, then the dispatch to the lock can't be closed out in this manner.

Initial form for active Route mode:

Report for the results of closing the dispatch to the lock:

Lock Report

Save Save As Page Setup Print Exit

Close Lock Route Mode Report

Lock Status

Lock Serial Number	001000138
Lock Version	2.01.1002
FLM Mode Status	Single Mode Shelved
Route Mode Status	Single Mode Active
Bank Mode Status	Single Mode Shelved
Bolt Status	Bolt Is Extended
Duress Open Status	Not Opened With Duress Combination
Delayed Open Status	No Delayed Opening In Progress
All Modes Shelved Open Status	Lock Is Not Open With Factory Combination
Lock Out Status	No Lock Out In Progress
Lock Total Number of Opens	64
Audit Trail Event Count	221
Audit Trail Event Total Odometer	221
Is Door Sensor Connected On Open	Door Sensor Not Connected On Open

3.1.8.12 Lock Operations with Serial Connect - Cancel Route Dispatch and Advance Route Lock Mode to Next Combination

Cancel Route Dispatch and Advance Route Lock Mode to Next Combination

This operation is used to cancel the dispatch of a mode of a Cencon Gen 2 or higher lock that is connected to a network IP address. It does this by checking the status of the lock to determine if the dispatched user has reached the lock and opened it. If the user has opened and closed the lock, this operation closes out the dispatch and returns that the user already opened the lock. If the user has not opened the lock, then the combination for that mode of the lock is advanced to the next combination at the lock, and the dispatch is force closed in the Cencon database.

If this operation is used and the lock is dispatched on one or more route sequences, each call to this transaction will cancel the dispatch for the next route sequence. If the lock was dispatched on route sequence 1, 2, and 3, then the first call will cancel the dispatch for route sequence 1, the second call will cancel the dispatch for route sequence 2, and the third call will cancel the dispatch for route sequence 3. If a route sequence is skipped, such as sequences 2 and 3 are the only ones dispatched, then sequence 1 will be dispatched and closed to prevent it from being used and the combination for the lock mode will be advanced.

If this operation is used without a dispatched user, then the combination of the mode of the lock is advanced at the lock and in the Cencon database.

If this operation is used and the lock is currently open, then an error will be returned.

To cancel a dispatch and advance the lock mode to the next combination for the the attached lock in FLM mode:

- Select the **Route Mode** tab on the Serial Connect form.
- Press the **Cancel Dispatch** button.
- A report of the results of the cancel dispatch operation will be displayed.

Note
The lock must be completely closed for this operation to work. If the bolt is retracted, the door sensor indicates the container door is open (if connected), or the change key is in the lock, then the dispatch to the lock can't be canceled in this manner.

Initial form for active Route mode:

Lock Operations With Serial Connect

10.108.6.108:35005

Refresh / Connect to Lock   Set Lock Clock   Lock Report   Audit Report   Help

Serial Number:	001037890
Bolt Status:	Bolt Extended
Door Status:	The container door is closed.
Change Key Status:	The lock change key is not inserted.
Enable Remote Admin Status:	Remote administration of the lock is not enabled. (This is #50 at lock followed by opening lock.)
Clock Status:	2013-08-16 18:03:33 UTC (Time Read: 2013-08-16 18:02:47 UTC) (Time Difference: 00:00:45.1246962) (Battery: 3.266 V)
Total Audit Count All Modes:	197
Lock Bolt Open Count:	63

FLM Mode | Route Mode | Bank Mode | Bank Users

Lock Name:	Gen2 Swingbolt 1037890
Lock Mode:	Route Mode (Single user)
Mode Audit Count:	78
Status:	Active
Customer ID	North Bank
ATM Serial Number:	
Region:	KENTUCKY

Shelve   Resync Dispatching   Set Access   Close Call   Cancel Dispatch

Report for the results of cancelling the dispatch and advancing the lock mode to the next combination:

Save Save As Page Setup Print Exit

Cancel Lock Route Mode Dispatch and Advance to Next Combination Report

Lock Status

Lock Serial Number	001037890
Lock Version	2.02.1078
FLM Mode Status	Single Mode Active
Route Mode Status	Single Mode Active
Bank Mode Status	Single Mode Active
Bolt Status	Bolt Is Extended
Duress Open Status	Not Opened With Duress Combination
Delayed Open Status	No Delayed Opening In Progress
All Modes Shelved Open Status	Lock Is Not Open With Factory Combination
Lock Out Status	No Lock Out In Progress
Lock Total Number of Opens	65
Audit Trail Event Count	209
Audit Trail Event Total Odometer	209
Is Door Sensor Connected On Open	Door Sensor Not Connected On Open
Is Bolt Works Sensor Connected On Open	Bolt Works Sensor Not Connected On Open
Is Remote Administration Enabled	Remote Administration Is Not Enabled

Note

The history of the lock's error conditions is empty. No lock errors have occurred.

Note

Canceled Route mode sequence 1 dispatched call of user Route SHA Key 4. Advanced lock to next combination successfully.

Note

No audits were read from the lock for canceling the Route mode dispatch.

Lock Open Log Entries

Dispatch Type	Route Sequence Dispatch	Route Sequence Dispatch	Route Sequence Dispatch
Route Name	TestRoute5	TestRoute5	TestRoute5
Route Sequence	1	2	3

3.1.8.13 Lock Operations with Serial Connect - Activate Bank Mode

Bank Mode Activation

To activate the attached lock in Bank mode using Serial Connect:

- Select the **Bank Mode** tab on the Serial Connect form.
- Press the **Activate Lock Mode** button.
- Enter the lock data (required items are in bold type).
- Select the **Bank Users** tab and add the users who need access to the lock.
- Press **Apply Activation** from either the **Bank Mode** or the **Bank Users** tab.

> **Note**
>
> You will need to first select a bank branch to assign the Bank mode lock to before selecting users to add to the lock. The list of users available to add to the lock is determined by the bank branch that the lock is assigned to. If you change what bank branch the lock is assigned to, any prior user selections will be cleared.

Initial activation form:

Select Bank Users:

Lock Operations With Serial Connect

Cencon USB ATM Lock Adaptor ▾

Refresh / Connect to Lock   Set Lock Clock   Lock Report   Audit Report   Help

Serial Number: 001000138

Bolt Status: Bolt Extended

Door Status: The container door sensor is not connected.

Change Key Status: The lock change key is not inserted.

Clock Status: 2012-05-08 17:47:23 UTC   (Time Read: 2012-05-08 17:47:24 UTC)   (Time Difference: -00:00:01.5767192)   (Battery: 2.987 V)

Total Audit Count All Modes: 222

Lock Bolt Open Count: 64

| FLM Mode | Route Mode | Bank Mode | Bank Users |

Users Available To Add To Lock

Name	Bank User ID
User 1	1
User 2	22
03	54

`>>`

`<<`

Users Being Added To Lock

Name	Bank User ID

Bank Branch: Bankorama

Cancel   Apply Activation

Successful activation

The lock Bank mode is now active, and users assigned to the Bank mode lock can change their combinations and open it.

3.1.8.14 Lock Operations with Serial Connect - Shelve Bank Mode

Bank Shelve

To shelve the attached lock in Bank mode:

- Select the **Bank Mode** tab on the Serial Connect form.
- Press the **Shelve** button.
- Press **OK** when asked if you are sure you want to shelve the lock.

Note
Once you have shelved a lock mode using the USB connection to the lock, you can not reactivate the lock mode without having physical access to the back of the lock to initiate the virtual change key. This is because the security of the serial communications for a mode being activated is set up during activation of the lock mode. When shelving a mode, that security for the mode is already set up. You can shelve a mode remotely, however you must have physical access to the inside of the lock container to initiate the virtual change key into the back of the lock to reactivate the lock.

Note
If the configuration option to require a change key be present in the lock for remote shelve is set, you will not be able to remotely shelve the lock across a remote connection without first having someone present to open the lock and insert a change key. In the case of the Cencon Gen 2 swing bolt lock, you can alternatively open the lock and enter #50 at the lock to allow remote administration of the lock. See Change Configuration Settings to set this configuration option in the Cencon database.

Initial form for active Bank mode:

Prompt for shelving Bank mode:

Successful Shelve:

Lock Operations With Serial Connect

Cencon USB ATM Lock Adaptor

Refresh / Connect to Lock   Set Lock Clock   Lock Report   Audit Report   Help

Serial Number: 001000138

Bolt Status: Bolt Extended

Door Status: The container door sensor is not connected.

Change Key Status: The lock change key is not inserted.

Clock Status: 2012-05-08 17:47:23 UTC   (Time Read: 2012-05-08 17:47:24 UTC)   (Time Difference: -00:00:01.5767192)   (Battery: 2.987 V)

Total Audit Count All Modes: 229

Lock Bolt Open Count: 65

FLM Mode | **Route Mode** | **Bank Mode** | **Bank Users**

Lock Operations With Serial Connect

ℹ️ Lock Bank mode has been shelved successfully.

OK

Lock mode is not currently active.

Activate Lock Mode

The lock Bank mode has been shelved.

3.1.8.15 Lock Operations with Serial Connect - Resynchronize Users for Bank Mode

Resynchronize Users for Bank Mode

This operation reads the current user table of the lock and updates the Cencon database entry for the lock to match. It will ensure that the Cencon database matches the lock in the case of having to recover from a backup of the database.

To resynchronize dispatching for the the attached lock in Bank mode:

- Select the **Bank Mode** tab on the Serial Connect form.
- Press the **Resync Users** button.

> **Note**
>
> If a user that is assigned access to the bank mode lock is not in the Cencon database, that user can not be resynchronized as having access in the Cencon database. This might occur if the database had to be recovered from a backup that did not have the users set up yet. It could also occur if the users were removed from the lock by key, the users deleted from the Cencon database, and the remove user key was never used at the lock. If this occurs, you will need to add the users back to the Cencon database and then resynchronize the bank mode lock user table with the Cencon database again.

Initial form for active Bank mode:

Successful resynchronization of the Cencon database with the lock:

Bank Mode Users Read From Lock

Bank Users

User Name	Bank User ID	Key Type	Key ID	Default Combination	Must Change Combo Flag
User 1	1	DS1963 - Cencon Lock/Logon Key	00000054C0DB	222222	Doesn't Have To Change Combo
User 2	22	DS1963 - Cencon Lock/Logon Key	000000548982	222222	Doesn't Have To Change Combo

Note

No users had to be added to the Cencon lock database entry to resynchronize the user table for lock Bank mode.

Note

The lock Bank mode user table has been resynchronized.

3.1.8.16 Lock Operations with Serial Connect - Set Access Between Single and Dual User for Bank Mode

Set Access Between Single and Dual User for Bank Mode

This operation sets the lock between needing a single user or needing dual users to open the lock, and also updates the Cencon database as needed.

To set access between single and dual users for the the attached lock in Bank mode:

- Select the **Bank Mode** tab on the Serial Connect form.
- Press the **Set Access** button.
- Select the type of access required between single and dual user to open the lock.
- Press the **Set Access** button.

> **Note**
>
> You can not change single or dual user access while a call is dispatched to the lock. You will need to wait until the call has been completed first. After the call has been completed, you will be able to change the access between single and dual user required.

Initial form for active Bank mode:

Form for selecting single or dual user mode access on the lock:

The lock Bank mode has been set between single and dual user mode.

3.1.8.17 Lock Operations with Serial Connect - Set Time Delay and Open Time Window for Bank Mode

Set Time Delay and Open Time Window for Bank Mode

This operation sets the time delay period after a bank mode user enters their combination and presents their key to the lock for the user to be able to actually open the lock. This operation also sets the time window that the user can open the lock once the time delay period has elapsed. The option to set a time delay before opening and a time window to open is available only to Bank mode.

To set the time delay and open time window for the the attached lock in Bank mode:

- Select the **Bank Mode** tab on the Serial Connect form.
- Press the **Set Delay** button.
- Enter the desired time delay and open time window. If a time delay value of 0 is entered, then the lock is allowed to open immediately.
- Press the **Set Open Delay** button.

Initial form for active Bank mode:

Form for entering the time delay and open time window for the lock:

Lock Operations With Serial Connect

Cencon USB ATM Lock Adaptor ▼

Refresh / Connect to Lock   Set Lock Clock   Lock Report   Audit Report   Help

Serial Number: 001000138

Bolt Status: Bolt Retracted

Door Status: The container door sensor is not connected.

Change Key Status: The lock change key is not inserted.

Clock Status: 2012-05-08 17:47:23 UTC   (Time Read: 2012-05-08 17:47:24 UTC)   (Time Difference: -00:00:01.5767192)   (Battery: 2.987 V)

Total Audit Count All Modes: 234

Lock Bolt Open Count: 66

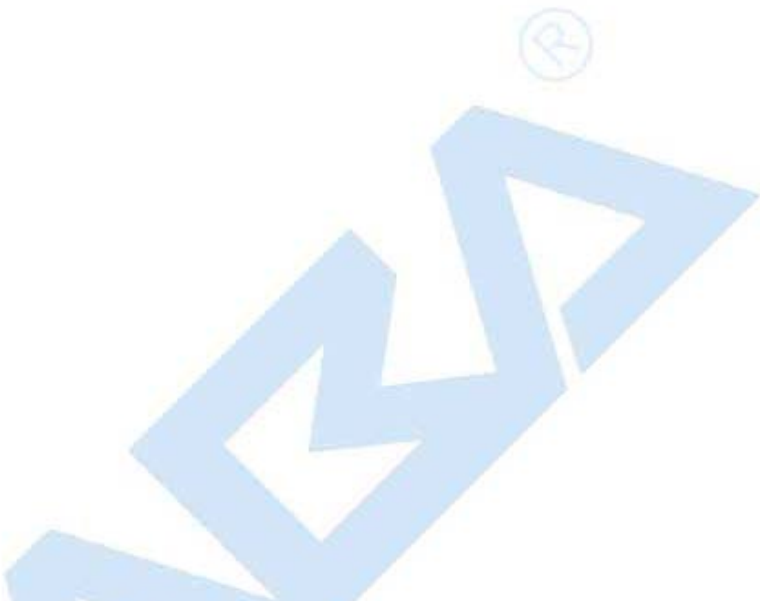| FLM Mode | Route Mode | **Bank Mode** | Bank Users |

Lock Open Delay and Time Window Duration

Name	001000138
Bank Branch Name	Bankorama
Region	GLOBAL
Customer ID	
Bank Mode Time Delay	00
Bank Mode Time Window	00

Cancel   Set Open Delay

The lock Bank mode time delay and open time window has been set.

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3.1.8.18 Lock Operations with Serial Connect - View Bank Mode Users

View Bank Mode Users

To view the bank users assigned to the attached lock:

- Select the **Bank Users** tab on the Serial Connect form. The display shows the users currently assigned to the lock.

> **Note**
>
> This tab displays the users currently assigned to the Bank mode lock based off of the Cencon database. If the Cencon database is not up to date with the lock, then you can resynchronize the Cencon database with the lock using the Resynchronize Users for Bank Mode operation.

Form displaying the current users for the Bank mode lock:

Add Bank Mode Users

To add bank users to the attached lock:

- Select the **Bank Users** tab on the Serial Connect form. The display shows the users currently assigned to the lock.
- Select the **Add Users** button on the Bank Users tab. The display shows the form for adding users to the lock.
- Select which users you want to add to the lock from the list of available users.
- Select the **Apply Adding Users To Lock** button on the Bank Users tab. The selected users will be added to the lock.

> **Note**
>
> This tab displays the users currently assigned to the Bank mode lock based off of the Cencon database. If the Cencon database is not up to date with the lock, then you can resynchronize the Cencon database with the lock using the Resynchronize Users for Bank Mode operation.

Form displaying the current users for the Bank mode lock:

Form used to select users to add to the Bank mode lock:

Lock Operations With Serial Connect

Cencon USB ATM Lock Adaptor ▼

Refresh / Connect to Lock   Set Lock Clock   Lock Report   Audit Report   Help

Serial Number:	001000138
Bolt Status:	Bolt Retracted
Door Status:	The container door sensor is not connected.
Change Key Status:	The lock change key is not inserted.
Clock Status:	2012-05-08 17:47:23 UTC (Time Read: 2012-05-08 17:47:24 UTC) (Time Difference: -00:00:01.5767192) (Battery: 2.987 V)
Total Audit Count All Modes:	234
Lock Bolt Open Count:	66

FLM Mode | Route Mode | Bank Mode | **Bank Users**

Users Available To Add To Lock

Name	Bank User ID	

>>

<<

Users Being Added To Lock

Name	Bank User ID	
03	54	

Bank Branch: Bankorama

Cancel   Apply Adding Users To Lock

3.1.8.20 Lock Operations with Serial Connect - Delete Bank Mode Users

Delete Bank Mode Users

To delete bank users from the attached lock:

- Select the **Bank Users** tab on the Serial Connect form. The display shows the users currently assigned to the lock.
- Select the **Delete Users** button on the Bank Users tab. The display shows the form for deleting users from the lock.
- Select which users you want to delete from the lock from the list of users assigned access to the lock.
- Select the **Apply Deleting Users From Lock** button on the Bank Users tab. The selected users will be deleted from the lock.

> **Note**
>
> This tab displays the users currently assigned to the Bank mode lock based off of the Cencon database. If the Cencon database is not up to date with the lock, then you can resynchronize the Cencon database with the lock using the Resynchronize Users for Bank Mode operation.

Form displaying the current users for the Bank mode lock:

Form used to select users to delete from the Bank mode lock:

Lock Operations With Serial Connect

Cencon USB ATM Lock Adaptor ▾

Refresh / Connect to Lock   Set Lock Clock   Lock Report   Audit Report   Help

Serial Number:	001000138
Bolt Status:	Bolt Retracted
Door Status:	The container door sensor is not connected.
Change Key Status:	The lock change key is not inserted.
Clock Status:	2012-05-08 17:47:23 UTC (Time Read: 2012-05-08 17:47:24 UTC) (Time Difference: -00:00:01.5767192) (Battery: 2.987 V)
Total Audit Count All Modes:	234
Lock Bolt Open Count:	66

FLM Mode | Route Mode | Bank Mode | **Bank Users**

Users Being Deleted From Lock

Name	Bank User ID	
03	54	

Users With Access To Lock

Name	Bank User ID	
User 1	1	
User 2	22	

`>>`

`<<`

Bank Branch: Bankorama

Cancel   Apply Deleting Users From Lock

3.1.8.21 Lock Operations with Serial Connect - Set Lock Clock and Time Zone Daylight Savings Time Table

Set Lock Clock and Time Zone Daylight Savings Time Table

This operation sets the time in the lock, based off of the time on your host computer.

> **Note**
>
> Only the active modes you are authorized to set the time zone daylight savings time tables on will be updated. If you do not have authorization to update the appropriate active modes on the lock, or the modes on the lock are controlled by another company, you will not be able to update those modes.

To set the clock and time zone daylight savings time tables for the lock modes:

- Select the **Set Clock** button on the Lock Operations with Serial Connect toolbar.

  Initial form for active FLM mode:

- If the lock has modes active, the clock will be set and any modes you have authorization to set will have their daylight savings time table updated. The **Set Clock** form will be displayed to select the time zone for each authorized active mode. Select the time zones for the different modes as needed, and then press the **Set Clock And Daylight Savings Time Tables** button. This will set the clock on the lock and also set the daylight savings time transition table for each mode based off of the selected time zone.

  Dialog for selecting the time zones to use to update the lock clock and time zone daylight savings time tables:

- If no modes are active, this will only set the clock on the lock. The clock on the lock will be set based off of the system time on your host system. If no modes are active, then daylight savings time data will not be saved at the lock. The only dialog displayed will be to indicate success or failure to set the clock on the lock.

  If no modes are active, only the clock will be set. You will see only the following message stating that the clock was set:

3.1.8.22 Lock Operations with Serial Connect - Create Lock Report

Create Lock Report

This operation reads the status of the lock as well as the status of each mode of the lock. It also reads the database information for each mode of the lock from the Cencon database. It then displays a report similar to the Cencon Individual Lock report but also including additional information which can only be accessed through the direct connection. This report will display the current status of the lock and information for each active mode of the lock. This report can be long, depending on the number of authorized active modes on the lock.

To create a lock report:

- Select the **Lock Report** button on the Lock Operations with Serial Connect toolbar.
- A report of the status of the lock will be displayed.

> **Note**
>
> Only information for the lock modes that your company controls will be displayed. If your company does not control any of the active lock modes on the lock, then you will not be able to display any of the mode information for that lock.

Initial form for active FLM mode:

Lock Report:

Lock Report

Save   Save As | Page Setup   Print | Exit

Lock Serial Communications Report

Lock Status

Lock Serial Number	001000138
Lock Version	2.01.1002
FLM Mode Status	Single Mode Active
Route Mode Status	Single Mode Shelved
Bank Mode Status	Single Mode Shelved
Bolt Status	Bolt Is Extended
Duress Open Status	Not Opened With Duress Combination
Delayed Open Status	No Delayed Opening In Progress
All Modes Shelved Open Status	Lock Is Not Open With Factory Combination
Lock Out Status	No Lock Out In Progress
Lock Total Number of Opens	67
Audit Trail Event Count	244
Audit Trail Event Total Odometer	244
Is Door Sensor Connected On Open	Door Sensor Not Connected On Open
Is Bolt Works Sensor Connected On Open	Bolt Works Sensor Not Connected On Open
Is Remote Administration Enabled	Remote Administration Is Enabled

Create Lock Audit Report

This operation reads the status of the lock as well as the audit trail of the lock. It then displays a report similar to the report from a supervisor audit key, however there is no size restriction on the number of audits. This report can be long, depending on the number of audits on the lock.

To create a lock audit report:

- Select the **Audit Report** button on the Lock Operations with Serial Connect toolbar.
- A report of the audit trail from the lock will be displayed.

Note
If the lock has one or more modes active and your company does not control any of the active lock modes on the lock, then you will not be able to download audit information from the lock.

Note
If the lock is opened in Factory/Shelved mode and then activated using the lock serial connection, the audit of the following bolt close will indicate it is a Factory/Shelved mode close. This is because the bolt close is associated with the open that occurred while the lock was in Factory/Shelved mode.

Initial form for active FLM mode:

Lock Audit Report:

Save   Save As | Page Setup   Print | Exit

Lock Audit Information

Transaction	Mode	Key ID	User ID	Open Time	Close Time	Close Seal	Seal Count
FLM Mode Time Zone DST Table Write	Serial Communications FLM Operation			2012-05-08 14:16:45 (DST)			
Clock Write	Serial Communications FLM Operation			2012-05-08 14:16:44 (DST)	2012-05-08 14:16:45 (DST)		
Bolt extended in Factory/Shelved mode	Lock			2012-05-08 14:15:06 (DST)			
FLM Mode Time Zone DST Table Write	Serial Communications FLM Operation			2012-05-08 14:15:03 (DST)			
Clock Write	Serial Communications FLM Operation			2012-05-08 14:15:03 (DST)	2012-05-08 14:15:03 (DST)		
Activate FLM Mode	Serial Communications Operation			2012-05-08 14:15:02 (DST)			
Lock opened with Factory/Shelved Mode combo	Lock			2012-05-08 14:14:52 (DST)			
Shelve Bank Mode	Serial Communications Bank Operation			2012-05-08 14:14:22 (DST)			

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3.2 User Report

For information on common usage of the reports, refer to the following section: 3.0 Using Cencon Reports

This function displays a report containing functions for maintaining the users on your Cencon system.

Under **Users**, click on **User Operations**. The following search dialog is displayed:

The Ranges tab:

The Keys tab:

The tabs in the search screen will be highlighted if they contain search settings that are not immediately visible.

Enter optional values to search for particular users and press **Search** to display the User Report. Note that the search process automatically swaps date start and end values if you accidentally enter an end date which is earlier than the start date.

Sample User Report:

User Operations

User ID	Nickname	Region	Key Serial Number	Type	Combos	Window 1	Window 2	Window 3	Creation
GrenzeRoute000020		Grenze	F83D77581F9B	RSP	0				2013-10-18 .
GrenzeBank000012		Grenze	F71A9583BC74	Bank	0				2013-10-18 .
GrenzeBank000016		Grenze	F638C14A3A89	Bank	0				2013-10-18 .
GrenzeFLM000013		Grenze	F46B141D72BA	FLM	0				2013-10-18 .
GrenzeFLM000016		Grenze	F358FE140AC0	FLM	0				2013-10-18 .
GrenzeBank000014		Grenze	F0E0AB624F3B	Bank	0				2013-10-18 .
GrenzeRoute000001		Grenze	EE60FDFE2ADF	RSP	0				2013-10-18 .
GrenzeFLM000005		Grenze	E99AD4BF0F75	FLM	0				2013-10-18 .
GrenzeRoute000007		Grenze	E59C1FDF6C72	RSP	0				2013-10-18 .
GrenzeBank000010		Grenze	E0F391183EB8	Bank	0				2013-10-18 .
GrenzeRoute000018		Grenze	DDE744D9D274	RSP	0				2013-10-18 .
GrenzeBank000020		Grenze	DD804BD54D45	Bank	0				2013-10-18 .
GrenzeRoute000004		Grenze	DCD4F5C2A71A	RSP	0				2013-10-18 .
GrenzeBank000009		Grenze	D5E315785666	Bank	0				2013-10-18 .
GrenzeFLM000002		Grenze	CBA815271F6F	FLM	0				2013-10-18 .
GrenzeFLM000017		Grenze	C8B21C2D58C0	FLM	0				2013-10-18 .
GrenzeFLM000015		Grenze	C3AC1F925F3F	FLM	0				2013-10-18 .
GrenzeBank000008		Grenze	BE06805D041A	Bank	0				2013-10-18 .
GrenzeBank000013		Grenze	BBA9E04861DA	Bank	0				2013-10-18 .
GrenzeFLM000003		Grenze	AF297790A469	FLM	0				2013-10-18 .
GrenzeFLM000006		Grenze	A6FDB8FA326C	FLM	0				2013-10-18 .
GrenzeRoute000002		Grenze	A36A4D5D2747	RSP	0				2013-10-18 .
GrenzeRoute000009		Grenze	A1B2941A1A70	RSP	0				2013-10-18 .

60 user IDs found. (60 records currently in memory.) (1 - 25 displayed.)   DONE

Color Coding in the Report

Users who are currently dispatched to locks are displayed in the User Report with a green background.

In addition, users assigned to a DS1963 key have their User ID highlighted with a blue background.

Lock Users who are disabled from being dispatched due to access control dispatch limits are highlighted in light red. This can be due to either a time limitation placed on the user, or a limit on the total number of dispatches allowed to that user. These dispatch limits are configured under the access control tab when adding a user or editing the key for a user. See section 3.2.1 Add a User for details on setting these values.

Logon Users who may not perform any Cencon operations because they are assigned to a role that has been disabled are also highlighted in light red. See section 3.6.1 Authorization Roles for details on disabling and enabling roles.

A variety of common operations can be done with the report, to include printing, saving in various formats, and sorting the contents of the report. You can refer to these common report operations in section 3.0 Reports.

The following operations are available from the User Operations Menu:

[Add a User](#)

[Add a Windows Logon User](#)

[Edit the data for the key in the reader](#)

[Display a key report for the key in the reader](#)

[Change User Information](#)

[Change Information for Multiple Users](#)

[Rename a User](#)

[Delete a User](#)

[Display Open / Assigned Locks for the Selected User](#)

[Display the Bank Locks for the Selected User Mini-Report](#)

[Remove the Selected User From All Bank Locks](#)

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3.2.1 Add a User

This operation allows you to add new users to your Cencon installation.

Before Creating Users...

Depending on how you are using Cencon, certain information must be predefined so that it is available for selection during the process of creating users. This data includes:

- **Bank Branches**: If you are going to create any Bank users you must first define the Bank Branches to which they will be assigned using the Bank Branch Report.

- **User Types**: If want to assign a customized authorization role to any new users, you need to create the new user roles before creating the users. See User Authorization for more information.

- **Region Definitions**: If you are going to use Region control, you should first define your regions using the Region Report.

- **Customer ID**: If you are going to assign a Customer ID to your users you should first define the Customers using the Customer Report.

To add a New User, complete the following steps from the User Report:

1. Select Operations and click on Add a New User. The Add a New User window is displayed:

The second tab of the dialog allows you to set up time restrictions and frequency of use limitations:

2. Enter a name for the User (maximum of 64 characters).

> **Caution**
>
> User names are very critical in the Cencon System. They are case sensitive and can be up to sixty-four (64) characters in length. However, if you are using CenTran 2 in conjunction with your Cencon system, you need to consider that the CenTran User name field is limited to 20 characters.

> **Suggested User IDs**
>
> Using "Bill" as a name is valid, however, you may have more than one "Bill" in your organization. Using "98709003" as a user ID is also valid but may get confusing especially when one or more numbers gets out of order when we do not read them correctly. Additionally, in dispatching a person we know as "Bill" using the number "98709003" as the user ID can also be confusing. It is suggested that user IDs be alpha or alphanumeric. It is also suggested that you use "Nicknames". For example, a user can be identified as "FLM1" and use "Bill N" in the Nickname field. Another example could be a user identified as "Tom1" and use "Fleming" (last name) in the Nickname field. Spaces are allowed in ID fields so "Bill Jones" is valid. However you choose to identify users, some thought should be given to it before you begin.

3. Use of the Nickname field is optional. Enter a Nickname for the User if desired.

> **Caution**
>
> Nickname can be up to sixty-four (64) characters in length. However, if you are using CenTran in conjunction with your Cencon system, you need to consider that the CenTran Nickname field is limited to 10 characters.

4. For User Type, select the appropriate type from the drop-down list box. If you select Bank as the user type, additional bank specific fields are displayed:

Add a New User

User Information | Access Control

User ID: [ ]

User Nickname: [ ]

User Type: [Bank ▼]

Password: [ ]

Confirm Password: [ ]

Region: [KENTUCKY ▼] ⟲

Service Branch: [ ]

Customer ID: [▼] ⟲

Name

First: [ ]

Middle: [ ]

Last: [ ]

Bank Branch: [▼ 🔍] ⟲

Bank User ID: [ ]

Note: The Bank User ID for DS1427 keys must be in the range of 01 to 79.

Gen2 Locks Only

☑ Combination must be changed at the lock

Bank Combination: [038377] [Random]

Insert the key to be assigned to the user into the key reader. Be sure to use the appropriate type of key.

[Process] [Display Key Report] [Exit] [Help]

Note

Cencon bank mode limitations differ between Cencon Gen 1 locks and Cencon Gen 2 locks. The following table summarizes the differences between the lock versions:

Feature	Cencon Gen 1	Cencon Gen 2
Number of Users On Lock	1-32	1-100
Bank Mode User ID Limit Per Bank Branch	1-79	0-2147483647
Bank Branch ID Limit	1-9999	1-2147483647
Initial Combinations	Bank mode user keys always have an initial default combination of **50-25-50**.	Bank mode user keys have an initial combination as set by the Cencon software.
Combination Valid To Open Lock	Must change bank mode user key initial combination before opening the lock.	Requirement to change the bank mode user key initial combination before opening the lock is set per bank mode user by the Cencon software.

Feature	DS1427 Bank Key	DS1963S Bank Key
Cencon Gen 1	Supported	Not Supported
Cencon Gen 2	Supported	Supported
Security	Legacy Cencon Security	Enhanced Security and Hardware Authentication
Bank Mode User ID Limit Per Bank Branch	1-79	0-2147483647

Bank Branch ID Limit	1-9999	1-2147483647

Bank Branch
> Select the branch to which the user should be assigned.

Bank User ID
> Enter a numeric value for the user's Bank User ID. This value must be unique within the Bank Branch.

Bank Combination
> The default bank user combination is "50 25 50". If you want to change the default for this user, enter the six digits of a new combination.

Combination must be changed at the lock
> Select this check box if you want to require that the user change their combination the first time the key is used at the lock.

Random
> Select this button to generate a random bank user combination. A new random combination will be generated each time the button is selected.

> **Note**
>
> If a user type has been disabled, it will not appear in the User Type drop-down list box for user addition operations. You will also see a error message appear if there are no enabled user types that you are authorized to create users with.

5. For User Password, enter a password for the User. For a logon user, this password will be used for logon to Cencon in conjunction with the user key. The software logon keys (i.e. Dispatcher, Supervisor, Special Supervisor) require a password to be set for logon. For lock user keys (i.e. FLM, Route, or Bank), the password is optional.

> **Note**
>
> For FLM/RSP Users, the password is stored in the User ID table without encryption, for use by third-party systems working with Cencon or CenTran. Cencon Logon users (i.e. Dispatchers, Supervisors, Special Supervisors) passwords are encrypted in the User ID table and are not accessible by third-party systems.

6. **Access Control** - The group of fields on the Access Control tab are used to define a time slot, or a series of time slots, during which the user is authorized to operate Cencon locks. If this group of fields is left blank, the user will have unrestricted time access to the locks. Otherwise, users can be assigned time windows in which they have authorized access to the locks. There can be different times for different days of the week or multiple windows on particular days. Up to three sequences of days and times can be entered for each user. You may also specify that the user is only authorized for limited number of dispatches or within a specified date range.

> **Warning**
>
> If you define time access windows for your system users, be sure to take into consideration time orientation changes if applicable (i.e., Standard Time to Daylight Savings and vice versa). Your PC system will automatically adapt for these time changes, but the time windows carried in the keys will be off by an hour when your PC system goes to a different time orientation. To alleviate this problem, you can have a +1 hour and -1 hour allowance in your time window. If security measures will not tolerate this type of allowance in the window, each user's key must be brought back to the system for updating when the time changes. The function in the PC Software that is used to update the time windows in the keys is Change A User ID and is found on the User ID/Key Maintenance Menu under the Special Supervisor's functions. For more detail see the following section on Change A User ID.

> **Caution**
>
> If you are using the time window capabilities of the system and you have a centralized dispatch center, keep in mind that accommodations will have to be made when adding FLM and Route Personnel to the system whose keys will be distributed to different time zones. The Window Opening Information will have to be adjusted by the difference (+/-) between the dispatch center and the time zone where the key will be sent.

There are three fields used to define the user's access windows.

Days Window in Effect

This defines which days of the week the user is authorized to open locks. It can be from one to all seven days. Place the cursor on each box you want to select and press the spacebar to select that day or just click on the box with the mouse pointer.

Start Time

This is the time the authorization time slot starts.

Duration

This field is the length of the time period (in hours and minutes) that the user is authorized to access the locks. **This is not the "end time" for the authorized access period.**

Dispatches Allowed

This field limits the number of times the user may be dispatched to a lock. The user is disabled from further dispatches when this limit is reached. Set to "0" to allow unlimited dispatches (the default). The user's current dispatch count is compared to the entered value. Thus, it is possible for the user to be immediately disabled if their current dispatch count (viewable on the Key Report) is greater than or equal to the entered value. This value may be changed to control future user access.

Access Limit Start and End Dates

This field specifies a date range during which the user is enabled for dispatches. If the boxes are not checked, the user is always enabled based on the time windows settings. The user is authorized beginning on the Start Date and is not authorized on or after the End Date.

> **Note**
>
> If the user access windows fields are left blank, the user will have unrestricted access to the lock or PC System.

7. If region control is active, and the current dispatcher is not restricted to a local region, then the region ID can be selected from a drop-down list of regions. This determines what region the new user is assigned to. If the current dispatcher is assigned to a local region, then any users created by that dispatcher are automatically assigned to the same region.

> **Regions Usage**
>
> Region control is a method of controlling what locks and FLM/RSP IDs can be viewed or accessed by different Cencon logon users.
>
> Regions also control which locks that FLM/RSP IDs can be dispatched to. FLM/RSP IDs can not be dispatched to locks assigned to a different region.
>
> This is done by assigning a region ID to locks and users. A region ID is a name up to 64 characters long. There is a table of region IDs that is maintained to keep track of what regions have been defined.
>
> There are two types of regions: Global and Local. A Cencon logon assigned to a global region can view and administer any lock and FLM/RSP ID in the system. A Cencon logon assigned to a local region can only view and administer locks and FLM/RSP IDs with the same assigned region. The type of region only affects what Cencon logon users can view. It make no difference as to how regions are used for lock operations.
>
> Assume you have two regions: Lexington which is a global region, and Richmond which is a local region.
>
> The following are assigned to the Lexington global region:
>
> Locks: LockLex1, LockLex2

| FLM IDs: | FLMUserLex1, FLMUserLex2 |
| Dispatcher: | DispatcherLex |

The following are assigned to the Richmond local region:

Locks:	LockRich1, LockRich2
FLM IDs:	FLMUserRich1, FLMUserRich2
Dispatcher:	DispatcherRich

DispatcherLex can see and dispatch all of the locks - LockLex1, LockLex2, LockRich1, LockRich2. DispatcherLex can also see and dispatch all of the FLM/RSP IDs - FLMUserLex1, FLMUserLex2, FLMUserRich1, FLMUserRich2.

DispatcherRich can only see and dispatch the locks assigned to region Richmond - LockRich1, LockRich2. DispatcherRich can also only see and dispatch the users assigned to region Richmond - FLMUserRich1, FLMUserRich2.

The FLM IDs FLMUserLex1 and FLMUserLex2 can only be dispatched to the locks assigned to the same Lexington region - LockLex1, LockLex2.

The FLM IDs FLMUserRich1 and FLMUserRich2 can only be dispatched to the locks assigned to the same Richmond region - LockRich1, LockRich2.

8. Enter Service Branch and user full name information as desired.

9. Insert the key to be assigned to the User into the Key Reader.

10. Click on **Process** to process the entered information. The following window is displayed to confirm the user creation and to allow creation of another user.
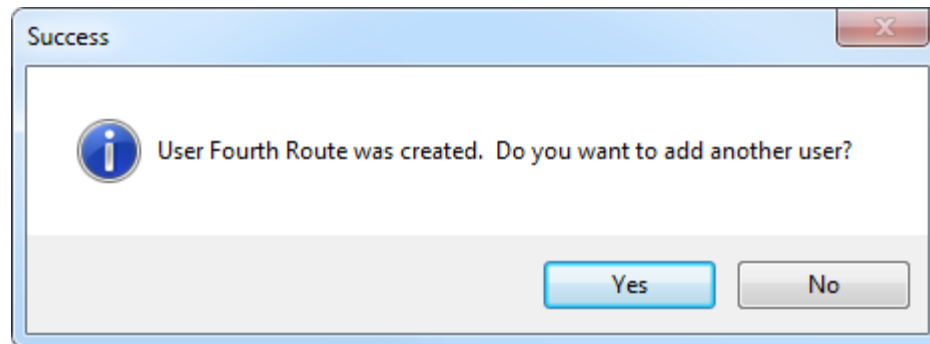
Click on **Yes** to return to the **Add User** window. To enter additional Users, repeat the above steps until all desired Users are added.
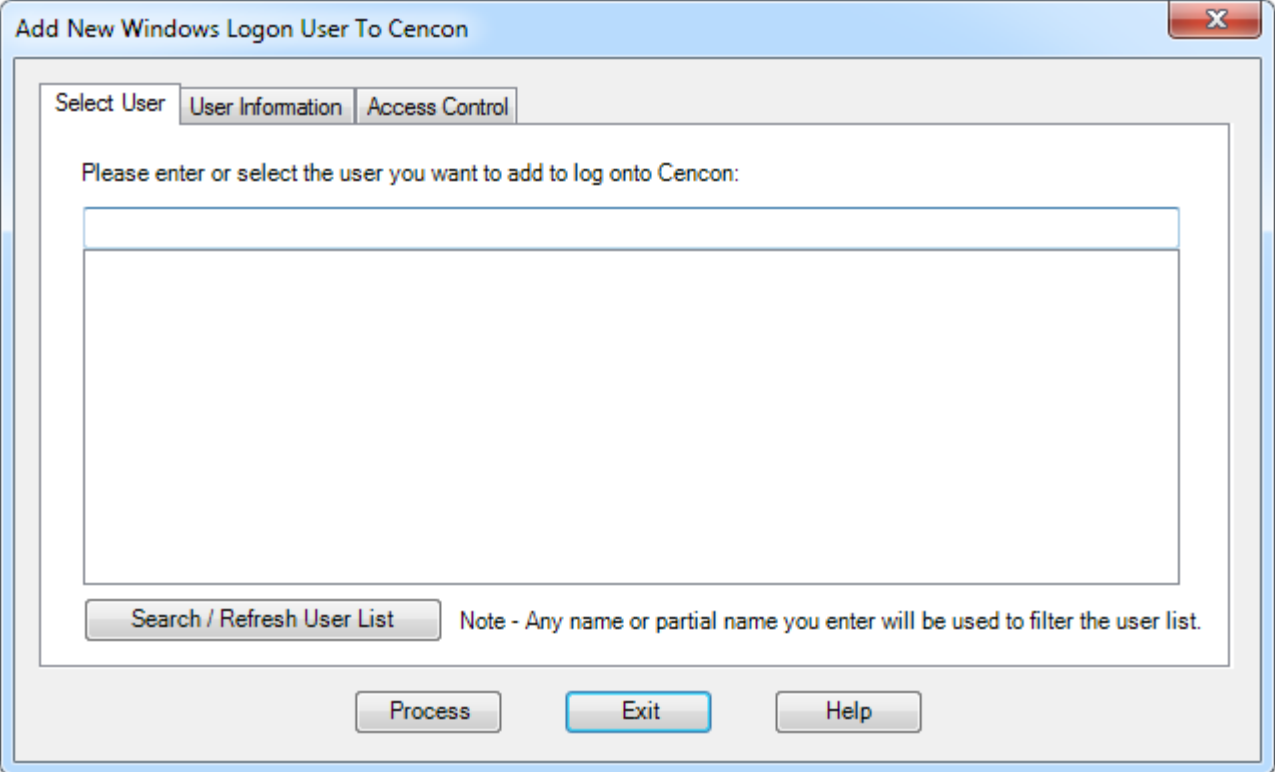
11. Click on **No** to return to the User Report.

3.2.2 Add a Windows Logon User

This option allows you to add a new Windows User to your Cencon system. To add a Windows User, complete the following steps from the User Report's Operations menu:

1. Click on **Add a Windows Logon User**. The following window is displayed:

You can search for existing users registered on your network with your current Windows logon domain. To do this, click the Search/Refresh User List button.
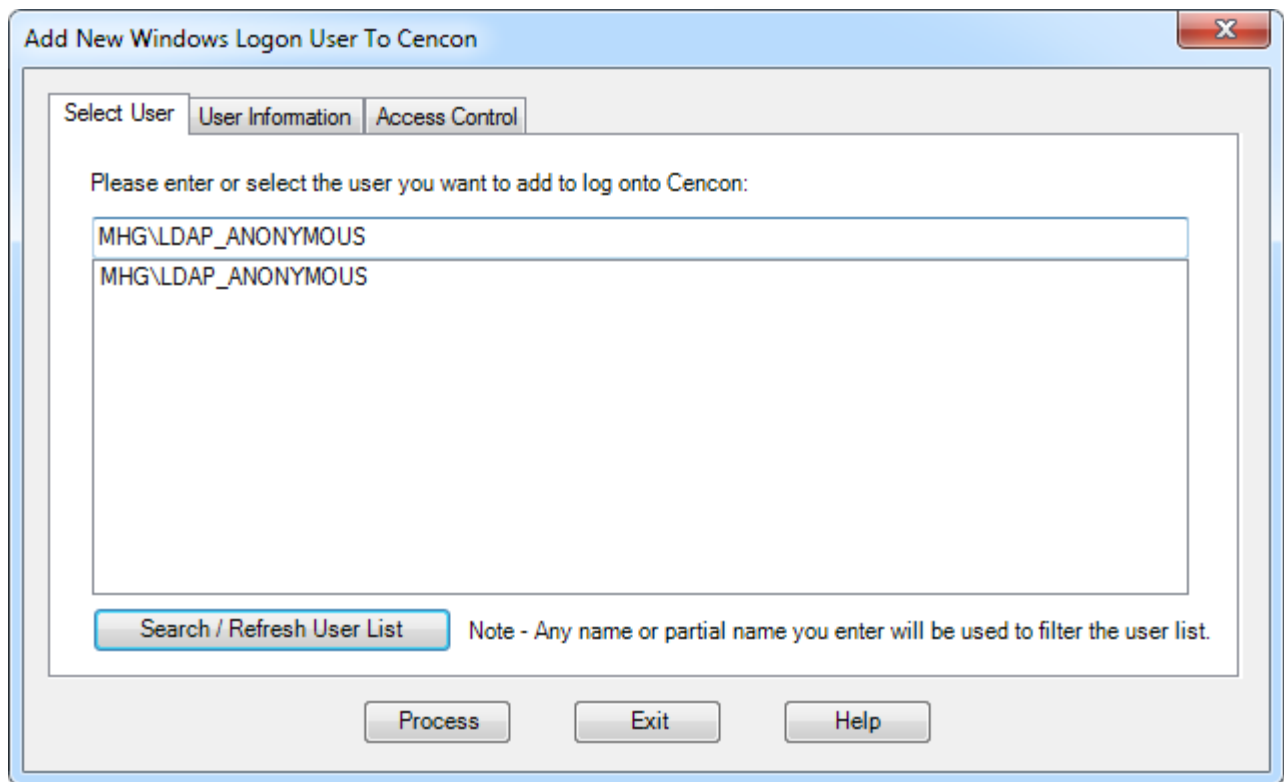
The data field is populated with users registered on your network. There may be a noticeable time delay while this data is being displayed depending on the network access speed and the number of users. You can enter a name or partial name and then select to search for entries matching that name. Only the name will be used in the search. The domain searched for is always your current Windows logon domain. If you leave the entered name blank, you will get all users for the current domain.

> **Note**
>
> Depending on the number of users on your network and the number you wish to add as Cencon users, it may be more efficient to export all active users to a spreadsheet and create a SQL script to import them to Cencon. Contact Kaba Mas technical support for assistance.

The following is an example of searching for a name or partial name from the current Windows logon domain:
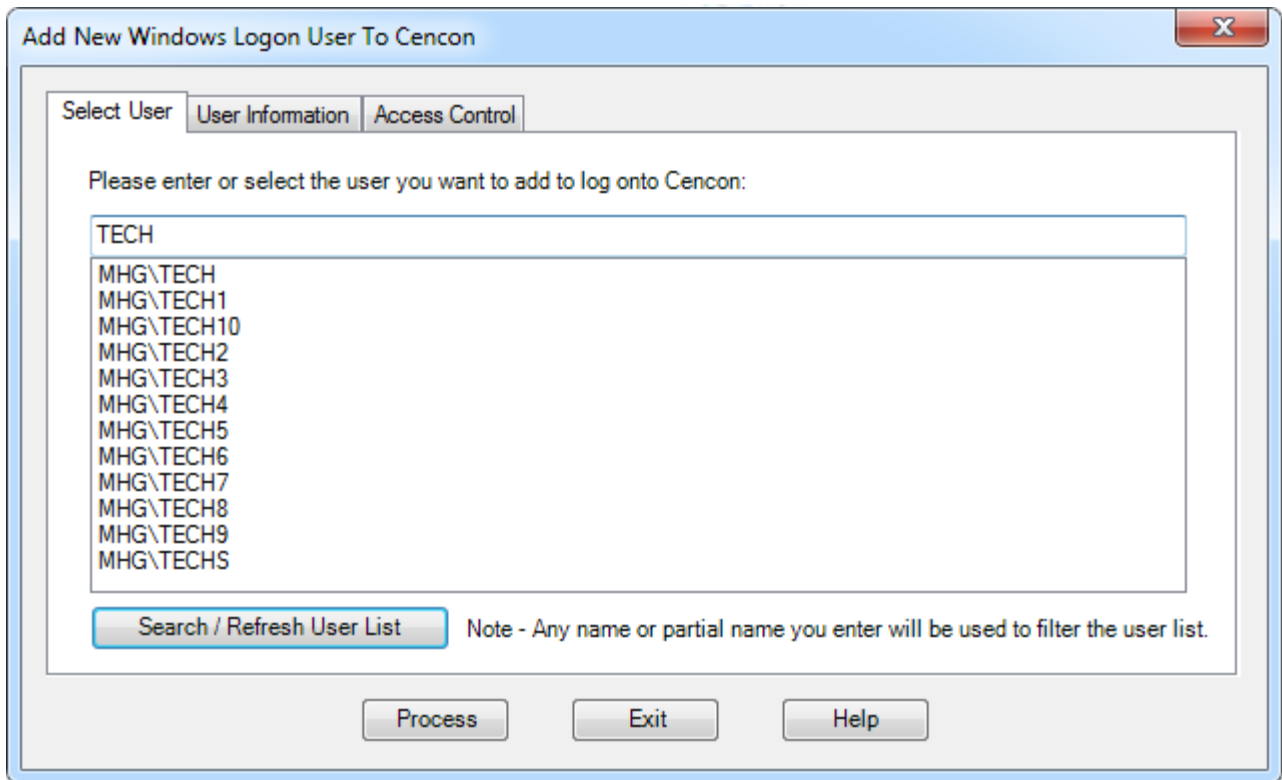
2. Select a user name from the list.

3. The **User Information** and **Access Control** data is created in the same manner as the Add a User procedure.

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3.2.3 Change User Information

This option allows you to change the information for an existing User.

To change information on a user, complete the following steps from the User Report:

Select a user by clicking on the row for that user.

Right-click on the highlighted row, and select **Change User Information**. The "Edit User" window is displayed for the selected user ID.

The **User Information** and **Access Control** data is modified in the same manner as for the Add a User procedure.

To change the default combination used when adding a bank mode user to a bank mode lock, click the **Change Bank Mode Default Combination** check box. You can then change the default bank mode combination and the flag indicating if the default combination has to be changed to open the lock.

If you change the default combination for a bank mode user, the new value will not be applied until next time the bank mode user is added to a lock.

Lock reports that display the bank mode user default combination will show the appropriate combination that was set when the user was added to the lock. This may not be the same as the default combination currently set for the user.

3.2.4 Change information for Multiple Users

This option allows you to select multiple users in the User Report and change a subset of the user data for all the selected users.

To change information on a group of users, complete the following steps from User Report menu:

1. Highlight users by holding down the Control key and clicking the rows of the selected users.
2. Right-click on the selected group, and choose **Change Information for Multiple Users** as in the following example:

User ID		Nickname	Key Serial Number	Type	Combos	Window 1	Window 2	Window 3	Creation	Deletion
33	▲		0000000EE053	Bank	0				2010-03-17 ...	
Auth test user			000000C80A6A	Authorizati...	0				2011-06-09 ...	
BadBank08			0000000B949C	Bank	0				2010-08-11 ...	
BadBank17			0000000C0275	Bank	0				2010-08-11 ...	
Bank SHA Key 10001			0000006A3AF8	Bank	0				2013-03-18 ...	
Bank SHA Key 10002			0000006A7AB0						2013-03-18 ...	
Bank SHA Key 10003			0000006AB1B5						2013-03-18 ...	
Bank SHA Key 10004			0000006AA8FF						2013-03-18 ...	
Brit			000000483F09						2010-03-29 ...	
BU01			000000146512						2008-08-19 ...	
BU02			0000000C5C95						2008-08-18 ...	
BU03			0000000DE164						2008-08-19 ...	
BU04			0000000DD196	Bank	0				2008-08-19 ...	
BU05			0000000B39D8	Bank	0				2008-08-19 ...	
BU06			0000001466FC	Bank	0				2008-09-04 ...	
BU07			000000138B7D	Bank	0	08:00 (08:00) MON, T...			2008-09-04 ...	
BU072			0000000EF469	Bank	0				2013-04-17 ...	
BU1000			0000003D6C33	Bank	0	05:06 (03:06) MON, T...	05:06 (04:06) SUN, SAT	06:06 (05:06) WED, T...	2010-04-22 ...	
BU999999			0000003D710C	Bank	0				2010-03-24 ...	
CDD		Cen Dem D	000000ADB073	Dispatcher	0					
CDS		Cen Dem S	000000AD8358	Supervisor	0				2011-08-24 ...	
CENTRAN			6132CE3D999D	Special S...	0				2010-05-06 ...	
Customer Bad Key 08			000000651C7C	FLM	0				2010-09-20 ...	
F12		Dave	0000006D5632	RSP	10					
F13		JJJ	00000045F7B2	FLM	0	08:00 (12:00) MON, T...			2012-08-28 ...	
F3			00000046107A	FLM	1				2007-09-19 ...	
F4		some F4 n...	00000046111F	FLM	0				2012-03-01 ...	
fbob		Bob Edw	000000419428	RSP	0				2013-04-17 ...	
fdave		Dave	00000044F40D	FLM	0					
fjoel renamed		joel_CC	0000002A49F8	FLM	0				2007-10-15 ...	
FLM SHA Key 3			0000003D64BA	FLM	0				2009-03-04 ...	
FLM SHA Key 4			0000006A71AC	FLM	0				2013-03-18 ...	

Context menu overlay:

Add a User	Ctrl+A
Add a Windows Logon User	Ctrl+W
Edit the Data for the Key in the Reader	
Display a Key Report for the Key in the Reader	
Change Information for Multiple Users	Ctrl+N
Delete Users	Ctrl+D

108 user IDs found. (108 records currently in memory.) (1 - 34 displayed.)   DONE

The following dialog opens:

3. Edit the data. For more information on these fields, refer to 3.2.1 Add a User. Note that the new data will replace the existing data for all the selected users.

4. Click on **Update All Selected Users** to process the entered information. In this example, Cencon will update the Service Branch and Customer ID for all the selected users. A confirmation message similar to the following is displayed:
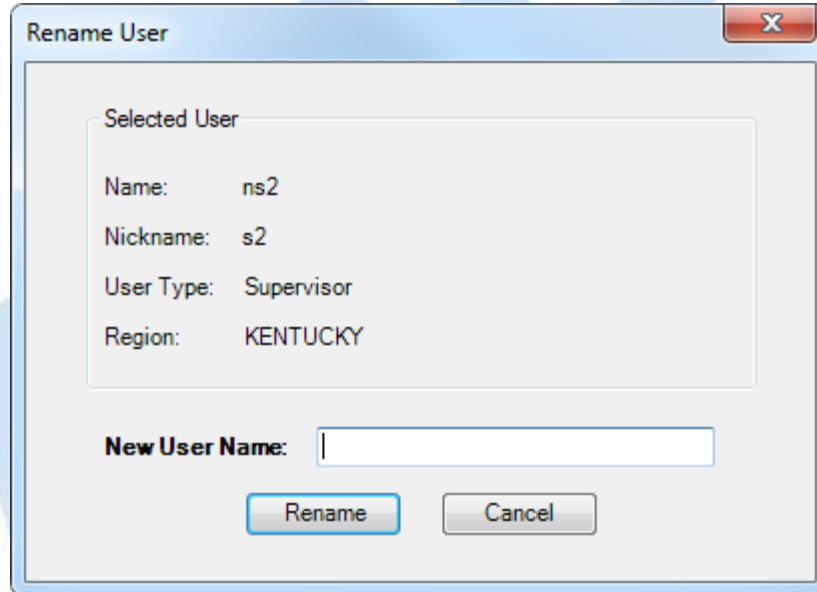
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3.2.5 Rename a User

This option allows you to change a user's name.

To rename a user, select a user in the User Report and then press **Rename a User** in the Operations menu. The following dialog displays some of the data for the selected user and allows you to enter a new name:

Click on **Rename** to update the user.

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3.2.6 Delete A User

This option allows you to delete a User from the system.

Note
You cannot delete a user if there are open locks assigned to that user.

Select a user in the User Report and then click on **Delete a User**. The "Delete a User" window displays the user's name and asks for verification of the deletion:
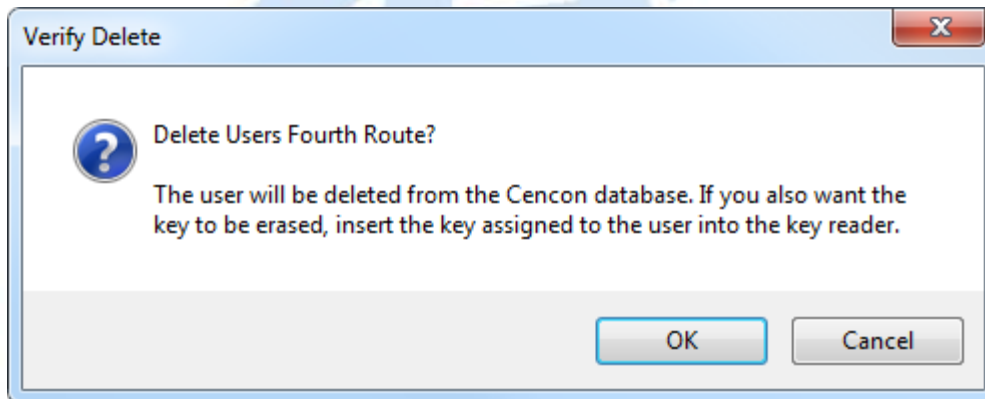
Note
If the user's key is in the reader, it is erased as part of this operation. If you later perform a Restore User operation from the User History Report and do not have the key inserted at that time, the key may be unusable because the necessary security information and the time widows are not restored.

Insert the user's key and press **OK**. If you do not insert the user's key, the user is deleted from Cencon but the information on the key is not reset, as in the following:
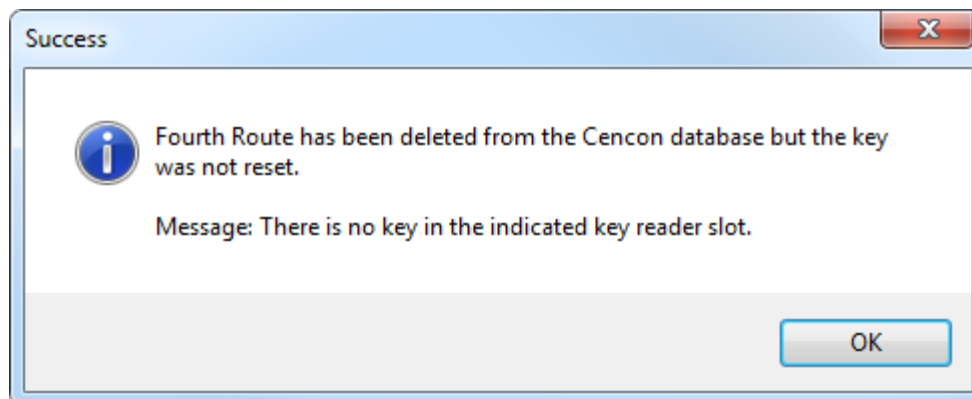
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3.2.7 Display Open / Assigned Locks for the Selected User

For FLM or Route Mode users, this function is used to display a report of the locks dispatched to the selected user. For Bank Mode users, this function is used to display a report of the locks to which the selected user is assigned.

Select a user in the User Report and then select **Display Open / Assigned Locks for the Selected User** from the Operations menu. This automatically opens the Lock Operations Report to display only those locks open for the selected user or to which the selected user is assigned. See Lock Operations Report for details on that report.

3.2.8 Select Users for an Operation

This dialog is displayed when browsing to select a user for an operation. It is displayed using the 'Browse' button to browse for user from the following operations:

- 3.1.1.1 Activate Lock
- 3.1.1.9 Dispatch a Lock
- 3.1.1.17 Reassign
- 3.1.1.21 Replace
- 3.1.1.23 Shelve Lock
- 3.1.1.26 Update Activation of Gen2 Locks Activated in Compatibility Mode
- 3.1.3.1 Route Lock Listing

The Select Users dialog is initially displayed with the list of users matching the criteria required for the operation the user is being selected for. For example, if dispatching an FLM lock assigned to a region, and region control is active, the list of users displayed will match that lock mode and region. The Select Users dialog is resizable to assist with displaying the list of users. An example of the Select Users dialog is displayed below:
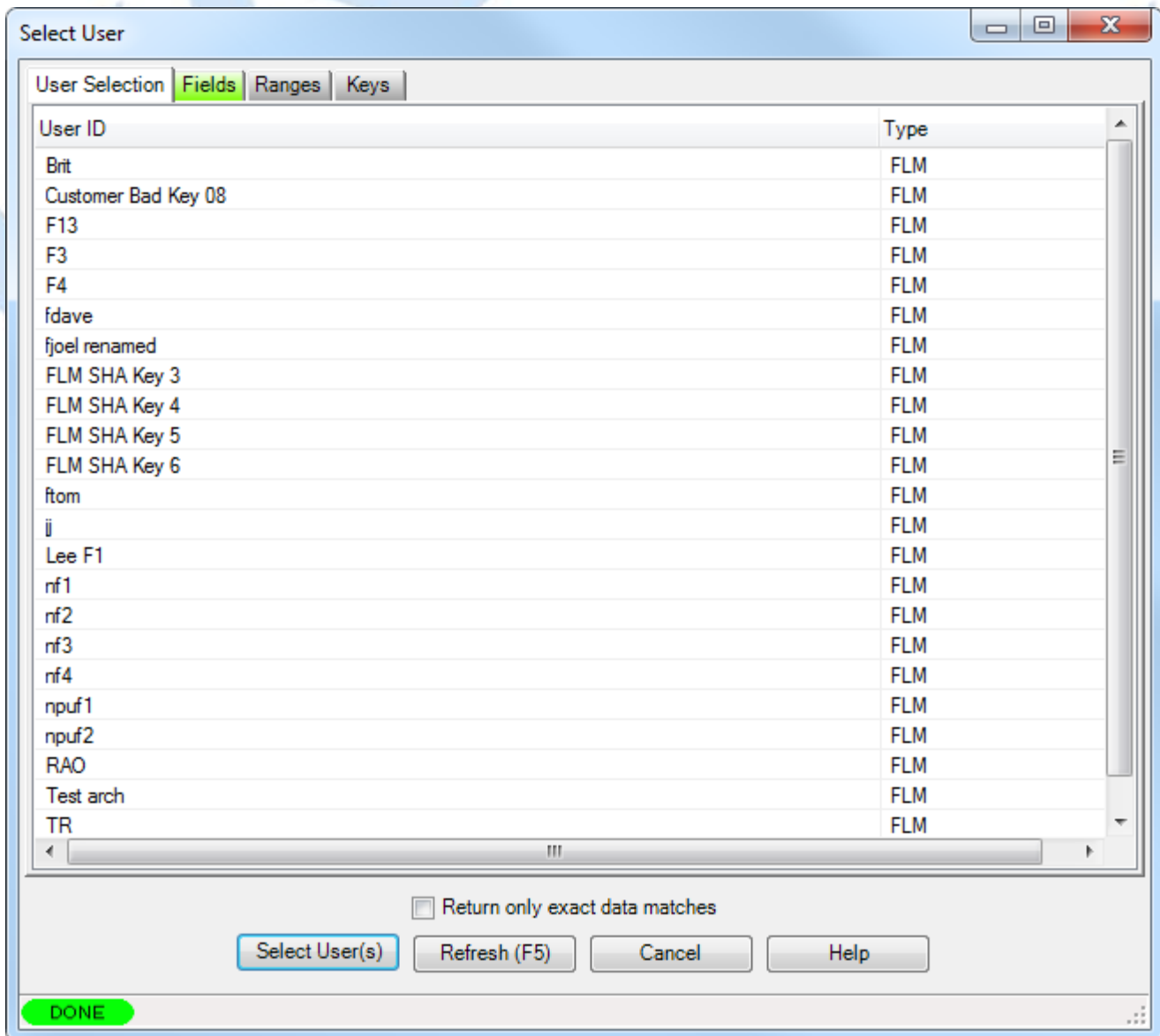
The users matching the given search parameters will be read in from the database. Depending on the speed of your connection,

the performance of your database server, and the number of matching users, it may take several seconds for the users to be read into memory. You can select users or change search parameters even while users are still being loaded into memory.

To select a user or users, click on the displayed row for that user, and click on 'Select User(s)'. The dialog will close and the selected user or users will be filled into the form for your current operation. You can also double-click on your desired user, and that will automatically select that user and close the Select Users dialog.

If you need to narrow the list of displayed users down further, you can modify or add to the search parameters for selecting the user. You can any additional search parameters under the 'Fields', 'Ranges', or 'Keys' tabs. These tabs for search parameters will be highlighted if they contain search settings that are not immediately visible. Once you have entered in your additional search parameters, click on the 'Refresh' button. The 'User Selection' tab will be selected if it is not already. The users from the Cencon database matching your search parameters will be read into memory and displayed. Examples of the available search parameters are shown below:

The Fields tab:

The Ranges tab:

The Keys tab:

Select User

Tabs: User Selection | Fields | Ranges | **Keys**

Key Model
- ☐ DS1427 (Gen 1 / 2 Bank User Key)
- ☐ DS1991 (Cencon Logon Key)
- ☐ DS1994 (Gen 1 / 2 FLM/Route User Key)
- ☐ DS1963 (Gen 2 Bank/FLM/Route User Key, Cencon Logon Key)
- ☐ Pseudo Key Model for Windows Logon Users

User Enabled Starting Date
- ☐ Check User Enabled Starting Date

Start Date: 2013-03-17

End Date: 2013-04-17

User Enabled Ending Date
- ☐ Check User Enabled Ending Date

Start Date: 2013-03-17

End Date: 2013-04-17

- ☐ Search for Users Who Have a Time Window Set
- ☐ Search for Users Who Have Exceeded Their Total Number of Lock Dispatches

Is Legacy Import
- ⦿ Any
- ○ Is Legacy Import
- ○ Not Legacy Import

☐ Return only exact data matches

[Select User(s)] [Refresh (F5)] [Cancel] [Help]

DONE

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3.2.9 Display Bank Locks for the Selected User Mini-Report

This function is used to display an abridged report of the Bank Mode locks to which the selected user is assigned.

Select a user in the User Report and then select **Display Bank Locks for the Selected User Mini-Report** from the Operations menu. This automatically opens a Lock List for User mini-report to display only those locks to which the selected user is assigned. See Bank Users Mini-Reports for details on that report.

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3.2.10 Remove the Selected User From All Bank Locks

This function is used to remove the selected user from all the Bank Mode locks to which the user has been assigned.

Select a user in the User Report and then select **Remove the Selected User From All Bank Locks** from the Operations menu. This automatically opens a Lock List for User Bank users mini-report to display only those locks to which the selected user is assigned. On the mini-report, select **Delete User From All Bank Locks** to remove the user from all the Bank Mode locks to which the user has been assigned.

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3.3 Customers

For information on common usage of the reports, refer to the following section: 3.0 Using Cencon Reports

This function allows you to add new customer data records, update existing records, delete a record, or find a record.
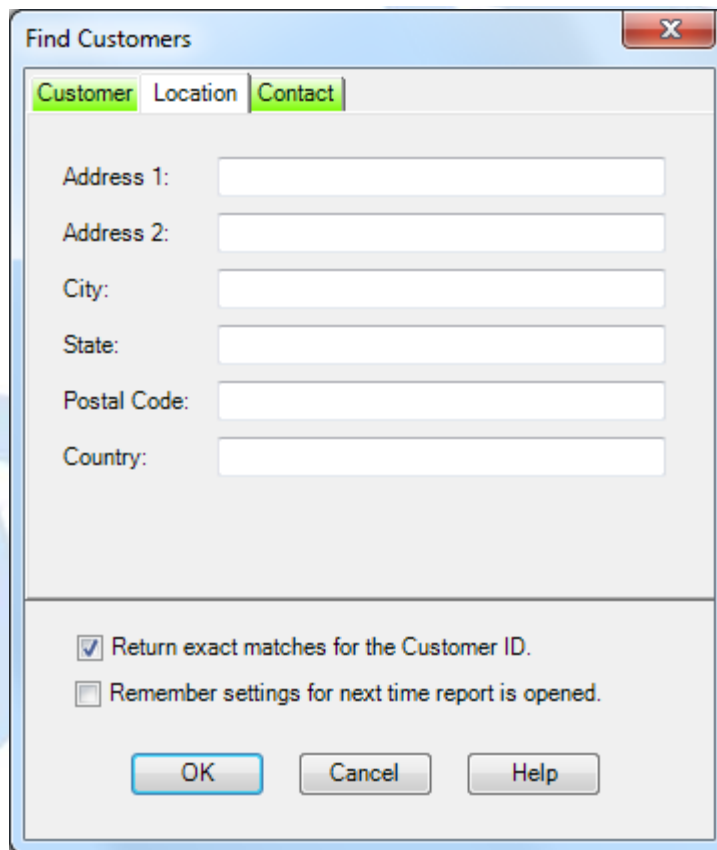
Cencon provides no processing functions for the Customer Data other than to maintain the data table and to display the data stored there. The data items have labels that imply the type of data stored but Cencon does not impose any limitations or validity checks to the data.

To create or maintain Customer Data, select **Customer Report** from the main Cencon Window. The **Find Customers** window allows you to specify information for searching for particular customers:

The tabs in the search screen will be highlighted if they contain search settings that are not immediately visible.

The Customer ID field may be searched either for an exact match or for a value containing the entered text, depending on the "Return exact matches for the Customer ID." checkbox. The Customer Number is only searched for an exact match. All other fields are searched for values which contain the entered search text.

Sample Customer Report:

A variety of common operations can be done with the report, to include printing, saving in various formats, and sorting the contents of the report. You can refer to these common report operations in section 3.0 Reports.

The following operations are available from the Customer Report Operations Menu:

Add a Customer

Select this operation to open the **Add a Customer** window:
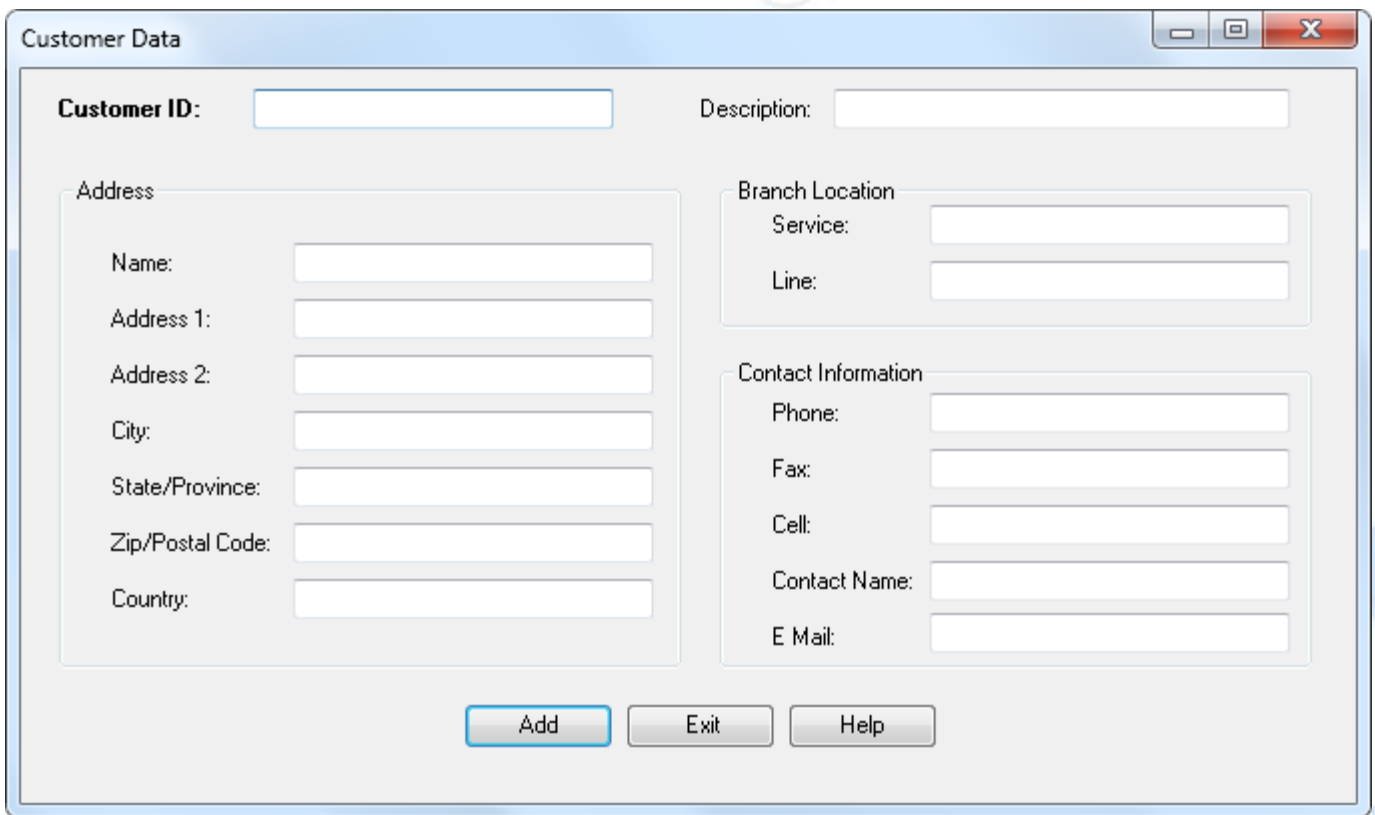
Change Customer Information

Select a user and then the **Modify a Customer** operation to open the edit window:

Delete a Customer

    This function deletes the selected customer.

Display Open Locks for a Customer

    This function is used to display a report of the locks dispatched to the selected customer. Select a customer in the Customer Report and then select Display locks for the selected customer from the Operations menu. This opens the Lock Operations Report, automatically filtered to display the open locks for the selected user. See Lock Operations Report for details on that report.

Map the Selected Customer Locations

    Cencon provides the ability to send customer address information to external mapping software. Cencon supports the following free internet mapping services (an active internet connection is required):

- MapQuest
- Google Maps
- Bing Maps

Use the Preferences dialog (on the main Cencon window) to select the desired mapping software.

> **Mapping Considerations...**
>
> Mapping applications require accurate location information.

To display customer locations on a map, select one or more customers from the Customer Report and then choose **Map the selected Customer Locations**.

If the address information appears to be sufficient to locate the customer, Cencon passes the data to the mapping program for display. Refer to the mapping software's documentation for information on using the specific mapping product.

3.4.1 Activity Log Report

This report lists the information in the Cencon activity log. The following Search screen is displayed prior to generating the report to allow filtering for specific activity records:

Sample Activity Log report:

Date	Lock Name	Lock Serial Number	Lock Mode	Route	Description	Customer ID	ATM Serial	Region
2013-03-28 15:37:45 (DST)			Route	TestRoute8	Route SHA Key 3 dispatched to route			KENTUCKY
2013-03-28 15:36:07 (DST)				TestRoute8	Route added			KENTUCKY
2013-03-28 15:33:32 (DST)	Gen2Swin...	001000116	Route		Centran transaction to evaluate a lock event at IP address: 10.108.6.108:35005	North Bank		KENTUCKY
2013-03-28 15:31:45 (DST)	Gen2Swin...	001000116	FLM		Gen2Swingbolt 1000116 Lock Event: Activate FLM Mode	North Bank		KENTUCKY
2013-03-28 15:31:37 (DST)	Gen2Swin...	001000116	FLM		Lock shelved by serial connection	North Bank		KENTUCKY
2013-03-28 15:31:37 (DST)	Gen2Swin...	001000116	FLM		Gen2Swingbolt 1000116 Lock Event: Shelve FLM Mode	North Bank		KENTUCKY
2013-03-28 15:31:34 (DST)	Gen2Swin...	001000116	FLM		Gen2Swingbolt 1000116 Lock Event: Shelve FLM Mode	North Bank		KENTUCKY
2013-03-28 15:31:32 (DST)	Gen2Swin...	001000116	FLM		Lock time set from 03/28/13 19:31:45 to 03/28/13 19:31:32. Time zone / daylight savings time transition table set by ...	North Bank		KENTUCKY
2013-03-28 15:31:32 (DST)	Gen2Swin...	001000116	FLM		Gen2Swingbolt 1000116 Lock Event: FLM Mode Time Zone DST Table Write	North Bank		KENTUCKY
2013-03-28 15:31:32 (DST)	Gen2Swin...	001000116	FLM		Gen2Swingbolt 1000116 Lock Event: Clock Write	North Bank		KENTUCKY
2013-03-28 15:31:31 (DST)	Gen2Swin...	001000116	FLM		Lock activated by serial connection	North Bank		KENTUCKY
2013-03-28 15:31:20 (DST)	Gen2Swin...	001000116	FLM		Lock shelved by serial connection	North Bank		KENTUCKY
2013-03-28 15:30:51 (DST)					Configuration changed - lock remote shelve change key control turned on			
2013-03-28 15:30:26 (DST)					Logon system			
2013-03-28 13:21:54 (DST)	Gen2Swin...	001000116	FLM		Lock shelved by serial connection (failed) >>> The lock cannot be shelved. The lock is open or already pending shelve.	North Bank		KENTUCKY
2013-03-28 13:19:08 (DST)	Gen2Swin...	001000116	FLM		Lock shelved by serial connection (failed) >>> The lock cannot be shelved. The lock is open or already pending shelve.	North Bank		KENTUCKY
2013-03-28 13:18:44 (DST)	Gen2Swin...	001000116	FLM		Gen2Swingbolt 1000116 Lock Event: Open Lock (User: FLM SHA Key 5)	North Bank		KENTUCKY
2013-03-28 13:18:41 (DST)	Gen2Swin...	001000116	FLM		Centran transaction to evaluate a lock event at IP address: 10.108.6.108:35005	North Bank		KENTUCKY
2013-03-28 13:18:03 (DST)	Gen2Swin...	001000116	FLM		FLM SHA Key 5 dispatched to lock	North Bank		KENTUCKY
2013-03-28 13:10:25 (DST)	Gen2Swin...	001000116	FLM		Gen2Swingbolt 1000116 Lock Event: Confirm FLM Mode Dispatched Call Closed	North Bank		KENTUCKY
2013-03-28 13:10:12 (DST)	Gen2Swin...	001000116	FLM		Closed dispatch of FLM SHA Key 5 to lock by reading the status of the lock across a serial connection.	North Bank		KENTUCKY
2013-03-28 13:10:03 (DST)	Gen2Swin...	001000116	FLM		Centran transaction to evaluate a lock event at IP address: 10.108.6.108:35005	North Bank		KENTUCKY
2013-03-28 13:08:57 (DST)	Gen2Swin...	001000116	FLM		Centran transaction to evaluate a lock event at IP address: 10.108.6.108:35005	North Bank		KENTUCKY
2013-03-28 13:08:40 (DST)	Gen2Swin...	001000116	FLM		Gen2Swingbolt 1000116 Lock Event: Open Lock (User: FLM SHA Key 5)	North Bank		KENTUCKY
2013-03-28 12:48:39 (DST)	Gen2Swin...	001000116	FLM		FLM SHA Key 5 dispatched to lock	North Bank		KENTUCKY
2013-03-28 12:47:34 (DST)					Logon system			
2013-03-28 12:40:24 (DST)					Logon system			
2013-03-28 12:37:53 (DST)					Logon system			
2013-03-28 12:02:00 (DST)	Gen2Swin...	001000116	FLM		Gen2Swingbolt 1000116 Lock Event: Confirm FLM Mode Dispatched Call Closed	North Bank		KENTUCKY
2013-03-28 12:01:48 (DST)	Gen2Swin...	001000116	FLM		Closed dispatch of FLM SHA Key 5 to lock by reading the status of the lock across a serial connection.	North Bank		KENTUCKY

166644 Activity log audits found. (166644 records currently in memory.) (373 - 404 displayed.)   DONE

Note that lines in the report associated with failures are highlighted in light red. For instance, attempts to dispatch a lock that is already open, attempting to enter the wrong close seal to close out a lock, trying to dispatch a key that does not exist in the Cencon System database, etc, would be highlighted as failed events in the activity log. Such audit events will be highlighted in light red and the reason for the error will be appended to the description of the audit event.

Also note that some lines are highlighted in light blue. These are audit events downloaded from Cencon Gen 2 locks that have been stored in the Cencon database audit table. You can see how these audit events specify a lock name followed by 'Lock Event:' and then followed by a description of the lock event.

The only Operations for this report are **Archive** and **Statistics**.

Selecting **Archive** opens the following window:

Enter the number of days for the archive and press **OK**. The records are copied to the Activity Log Archive and removed from the Activity Log.

Selecting **Statistics** opens the **Reporting** form, which allows the user to gather statistics on the Activity Log and the Archived Activity Log data.

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3.4.2 Archived Activity Log Report

This report lists the archived activity data. It has the same initial search screen and data presentation as the List Activity Log report.

There are no Operations for this report.

Sample report:

Date	Lock Name	Lock Serial Number	Lock Mode	Route	Description	Customer ID	ATM Serial	R
2012-08-28 13:33:11 (DST)					Change User F13 End Date from 2/1/2014 to 4/12/2013	North Bank		KE
2012-08-28 13:33:11 (DST)					Change User F13 Time Window 1 from 8:00 (4:00) Mon,Tue,Wed,Thu,Fri ...	North Bank		KE
2012-08-28 13:33:11 (DST)					Change User F13 Time Window 2 from 12:00 (4:00) Sun,Sat to 0:00 (0:00)	North Bank		KE
2012-08-28 13:33:11 (DST)					Change User F13 Start Date from 4/12/2012 to 4/12/2010	North Bank		KE
2012-08-28 11:54:26 (DST)					ANewRouteUser added to system (failed) >>> Failed to add user. The key...			
2012-08-28 11:48:53 (DST)					F13 added to system	North Bank		KE
2012-08-28 11:28:44 (DST)					User data read from Cencon database. (failed) >>> User not found in user ...			
2012-08-28 10:42:44 (DST)					Change User F12 First Name	ACustomer		KE
2012-08-28 10:42:44 (DST)					Change User F12 Branch from to North Bank Branch 22	ACustomer		KE
2012-08-28 10:42:44 (DST)					Change User F12 Last Name	ACustomer		KE
2012-08-28 10:42:44 (DST)					Change User F12 Nickname from CSC to Dave	ACustomer		KE
2012-08-28 10:42:44 (DST)					Change User F12 Customer ID from to ACustomer	ACustomer		KE
2012-08-28 10:42:44 (DST)					Change User F12 Middle Name	ACustomer		KE
2012-08-28 10:42:44 (DST)					Change User F12 Start Date from to 4/12/2009	ACustomer		KE
2012-08-28 10:42:44 (DST)					Change User F12 End Date from to 1/1/2013	ACustomer		KE
2012-08-28 10:42:44 (DST)					Change User F12 Region from LOOMIS to KENTUCKY	ACustomer		KE
2012-08-28 10:37:46 (DST)					I.D. information changed (failed) >>> User not found in user database.			
2012-08-28 10:34:07 (DST)					I.D. information changed (failed) >>> Region being changed doesn't exist.			
2012-08-28 10:29:15 (DST)	Gen2Lock...	001000107	FLM		Gen2Lock 1000107 Lock Event: Confirm FLM Mode Dispatched Call Clos...	North Bank	Kaba Mas...	KE
2012-08-28 10:29:15 (DST)	Gen2Lock...	001000107	FLM		Gen2Lock 1000107 Lock Event: Confirm FLM Mode Dispatched Call Clos...	North Bank	Kaba Mas...	KE
2012-08-28 10:28:58 (DST)	Gen2Lock...	001000107	FLM		Closed dispatch of F3 to lock by reading the status of the lock across a se...	North Bank	Kaba Mas...	KE
2012-08-28 10:28:56 (DST)	Gen2Lock...	001000107	FLM		Centran transaction to evaluate a lock event at IP address: 10.108.6.121:...	North Bank	Kaba Mas...	KE
2012-08-28 10:23:19 (DST)	Gen2Lock...	001000107	FLM		Centran transaction to evaluate a lock event at IP address: 10.108.6.121:...	North Bank	Kaba Mas...	KE
2012-08-28 10:14:38 (DST)	Gen2Lock...	001000107	FLM		Gen2Lock 1000107 Lock Event: Open Lock (User: F3)	North Bank	Kaba Mas...	KE
2012-08-28 10:14:38 (DST)	Gen2Lock...	001000107	FLM		Gen2Lock 1000107 Lock Event: Open Lock (User: F3)	North Bank	Kaba Mas...	KE
2012-08-28 10:13:50 (DST)	Gen2Lock...	001000107	FLM		F3 dispatched to lock	North Bank	Kaba Mas...	KE
2012-08-28 10:08:05 (DST)	Gen2Lock...	001000107	FLM		Centran transaction to download audits from lock at IP address: 10.108.6....	North Bank	Kaba Mas...	KE
2012-08-28 09:56:33 (DST)					Centran transaction to download status from lock at IP address: 10.108.6....			
2012-08-27 16:45:25 (DST)					User data read from Cencon database. (failed) >>> User not found in user ...			
2012-08-27 13:15:37 (DST)					User data read from Cencon database. (failed) >>> Failed to find the dispat...			
2012-08-27 12:35:44 (DST)					F12 added to system (failed) >>> Failed to add user. The specified new U...			
2012-08-27 12:21:06 (DST)					FLM/RSP/Bank user key for listed (failed) >>> There is no key in the indi...			

9445954 Activity log audits found. (482625 records currently in memory.) (52 - 85 displayed.)   PARTIAL

3.4.3 Lock Log History Report

A variety of common operations can be done with reports, to include printing, saving in various formats, and sorting the contents of the report. You can refer to these common report operations in section 3.0 Reports.

This report lists a history of the lock closing data. Each time a lock is closed, the record from the Open Locks data table is moved to the Lock Log History data table. Thus, the two reports have the same initial search screen and report format. See the List Open Locks report for more information.

To view the Lock Log History report, select **Lock Log History Report** from the main Cencon Window. The following Search screen is displayed prior to generating the report to allow filtering for specific lock records:

The tabs in the search screen will be highlighted if they contain search settings that are not immediately visible.

Upon selecting 'OK', the locks matching the given search parameters will be displayed. Depending on the number of matching locks and the speed of your database connection, it may take several seconds for the locks to be displayed. You can still do operations with the report even while locks are still being loaded into memory. If your computer does not have enough memory to keep all of the locks in memory, then the report will fetch locks as needed depending on the portion of the report you are looking at. If this occurs, then the word 'Partial' will be displayed on the report status bar.

Sample Lock Log History report:

Lock	Mode	Dispatcher	FLM1/RSP1	FLM2/RSP2	Open Date Time	Close Date Time	Route	Seq	Disp Route	SLM Call	
VLK1111123	R	MHG\LST...	nr1		2013-04-10 14:39:07 (DST)	2013-04-10 15:07:30 (DST)	TestRoute2	1	Y	N	N
VLK1100100	R	MHG\LST...	nr1		2013-04-10 14:39:07 (DST)	2013-04-10 14:40:15 (DST)	TestRoute2	1	Y	N	N
VLK1000123	R	MHG\LST...	nr1		2013-04-10 14:39:07 (DST)	2013-04-10 14:40:15 (DST)	TestRoute2	1	Y	N	N
VLK080	R	MHG\LST...	nr1		2013-04-10 14:39:07 (DST)	2013-04-10 15:07:30 (DST)	TestRoute2	1	Y	N	N
VLK051	R	MHG\LST...	nr1		2013-04-10 14:39:07 (DST)	2013-04-10 15:07:30 (DST)	TestRoute2	1	Y	N	N
VLK021	R	MHG\LST...	nr1		2013-04-10 14:39:07 (DST)	2013-04-10 14:40:15 (DST)	TestRoute2	1	Y	N	N
VLK020	R	MHG\LST...	nr1		2013-04-10 14:39:07 (DST)	2013-04-10 15:07:30 (DST)	TestRoute2	1	Y	N	N
VLK018	R	MHG\LST...	nr1		2013-04-10 14:39:07 (DST)	2013-04-10 15:07:30 (DST)	TestRoute2	1	Y	N	N
VLK017	R	MHG\LST...	nr1		2013-04-10 14:39:07 (DST)	2013-04-10 14:40:15 (DST)	TestRoute2	1	Y	N	N
VLK001	R	MHG\LST...	nr1		2013-04-10 14:39:06 (DST)	2013-04-10 15:07:29 (DST)	TestRoute2	1	Y	N	N
PartialGen2Lock01	R	MHG\LST...	nr1		2013-04-10 14:39:06 (DST)	2013-04-10 15:07:29 (DST)	TestRoute2	1	Y	N	N
NPLock1	R	MHG\LST...	nr1		2013-04-10 14:39:06 (DST)	2013-04-10 15:07:29 (DST)	TestRoute2	3	Y	N	N
NPLock1	R	MHG\LST...	nr1		2013-04-10 14:39:06 (DST)	2013-04-10 15:07:29 (DST)	TestRoute2	2	Y	N	N
NPLock1	R	MHG\LST...	nr1		2013-04-10 14:39:06 (DST)	2013-04-10 15:07:29 (DST)	TestRoute2	1	Y	N	N
VLK1111123	R	MHG\LST...	nr4		2013-04-10 13:34:52 (DST)	2013-04-10 14:38:48 (DST)	TestRoute2	1	Y	N	N
VLK1100100	R	MHG\LST...	nr4		2013-04-10 13:34:51 (DST)	2013-04-10 14:38:02 (DST)	TestRoute2	1	Y	N	N
VLK1000123	R	MHG\LST...	nr4		2013-04-10 13:34:51 (DST)	2013-04-10 14:37:20 (DST)	TestRoute2	1	Y	N	N
PartialGen2Lock01	R	MHG\LST...	nr4		2013-04-10 13:34:51 (DST)	2013-04-10 13:38:47 (DST)	TestRoute2	1	Y	N	N
VLK051	R	MHG\LST...	nr4		2013-04-10 13:34:51 (DST)	2013-04-10 13:37:58 (DST)	TestRoute2	1	Y	N	N
VLK021	R	MHG\LST...	nr4		2013-04-10 13:34:51 (DST)	2013-04-10 13:37:58 (DST)	TestRoute2	1	Y	N	N
VLK020	R	MHG\LST...	nr4		2013-04-10 13:34:51 (DST)	2013-04-10 13:36:29 (DST)	TestRoute2	1	Y	N	N
VLK018	R	MHG\LST...	nr4		2013-04-10 13:34:51 (DST)	2013-04-10 13:36:29 (DST)	TestRoute2	1	Y	N	N
VLK017	R	MHG\LST...	nr4		2013-04-10 13:34:51 (DST)	2013-04-10 13:36:29 (DST)	TestRoute2	1	Y	N	N
VLK001	R	MHG\LST...	nr4		2013-04-10 13:34:51 (DST)	2013-04-10 13:36:29 (DST)	TestRoute2	1	Y	N	N

131 lock log entries found. (131 records currently in memory.) (1 - 26 displayed.)   DONE

The only Operation for this report is **Archive**. Selecting **Archive** opens the following window:

Lock Log History Archive

Archive Lock Log History records older than 180 days.

OK   Cancel

Enter the number of days for the archive and press **OK**. The records are copied to the Lock Log History Archive and removed from the Lock Log History.

3.4.4 Lock Log History Archive Report

This report lists the archived Lock Log History data. It has the same initial search screen and data presentation as the [List Open Locks](#) report and the [Lock Log History](#) report.

There are no Operations for this report.

3.4.6 User History Report

The User History Report is used to display sets of user records from the Cencon System User ID History database table. It does this based on the search criteria that you specify, for which records you want displayed.

Explanation For The User ID History Table

The User History table maintains a record of who was previously using a key, and the time period that they were assigned to the key.

This allows audit dumps from locks to correctly show the user name according to who was using a key at the time the event occurred.

If you rename what user has a certain key, then there needs to be a way to look up whether it was the old user or the new user that did an activity at a lock. This is based off of the time of the event. If the event occurred prior to the starting date for the current user of the key, then the key and date is compared against the User History Log table. The user from the key's history is displayed if that person was assigned to the key when the event occurred.

Additionally, if the key is no longer in the User table because the user was deleted from the system, then there needs to be a way to look up the key for displaying lock audit events that occurred prior to that person being deleted. In this instance also, where the key can't be found in the User table, the key is looked up in the User History Log table.

The following search dialog appears for the User History Report, if the User History Report is not already open. If the User History Report is already open, then it remains with it's previous contents.

This search dialog allows you to specify search criteria for which users you want to have displayed by the report. The "Fields" tab is shown above.

The search dialog also has a check box to allow you to select if you want the search settings you enter to be saved for next time you open the report. This also specifies that you want the sort settings to be saved for the report. If this checkbox is not selected, then your previous search settings will not be restored next time you open the report.

There are additional search settings on the "Ranges" tab of the search dialog. This is displayed by clicking on the "Ranges" tab.

This tab allows you to select to search by certain ranges of values. This includes being able to specify a range of combinations currently issued to the user, and ranges of dates for the creation, deletion, and last used date of the user.

Once you are satisfied with the search criteria that you want for the User IDs, click on **Search** to display the result of the search. The report is displayed as follows:

User I.D.	Nickname	Key I.D.	Type	Comb	Window 1	Window 2	Window 3	Creation	Deletion	Last Used
testpi	x	000000606832	Dispatcher	0				2011-07-01 ...	2012-11-26 ...	2012-11-26 ...
testp31		000000261616	Dispatcher	0				2007-06-21 ...	2012-08-28 ...	2007-06-21 ...
Test First Logon 110313		0000008D60E9	Special S...	0				2013-03-11 ...	2013-04-16 ...	2013-03-11 ...
stalky		000000D997BA	Special S...	0				2013-02-04 ...	2013-04-09 ...	2013-02-04 ...
Route 3 User		00000046293E	RSP	0				2013-04-17 ...	2013-04-17 ...	2013-04-17 ...
r2 changed		000000419555	RSP	4				2011-06-06 ...	2012-08-15 ...	2011-06-06 ...
npuf3		000000308EEB	FLM	0				2012-07-09 ...	2012-07-09 ...	2012-07-09 ...
npuf3		000000308EEB	FLM	0				2012-07-09 ...	2012-07-09 ...	2012-07-09 ...
npuf3		000000308EEB	FLM	0				2012-07-09 ...	2012-07-09 ...	2012-07-09 ...
npuf3		000000308EEB	FLM	0				2012-07-09 ...	2012-07-09 ...	2012-07-09 ...
npuf3		000000308EEB	FLM	0				2012-07-09 ...	2012-07-09 ...	2012-07-09 ...
npuf3		000000308EEB	FLM	0				2012-07-09 ...	2012-07-09 ...	2012-07-09 ...
npuf3		000000308EEB	FLM	0				2012-07-09 ...	2012-07-09 ...	2012-07-09 ...
npuf3		000000308EEB	FLM	0				2012-07-09 ...	2012-07-09 ...	2012-07-09 ...
npuf3		000000308EEB	FLM	0				2012-07-09 ...	2012-07-09 ...	2012-07-09 ...
npuf3		000000308EEB	FLM	0				2012-07-09	2012-07-09	2012-07-09

90 user IDs found. (90 records currently in memory.) (1 - 18 displayed.)

DONE

Note

The User ID History report has the deletion date field set for the users. This is different from the User ID report, where this field will always be blank.

Depending on the number of records resulting from the search, the report may take some time to finish loading records. You can still conduct operations, close the report, etc, while the report is still loading records. While the report is loading records, a status indicator at the bottom of the report will display **Loading** in red. Once the report finishes loading records, this indicator will change to green and show **Done**.

If the number of records resulting from the search are too big to fit safely into local memory, then the report status indicator will display in yellow **Partial**. If this occurs, you can still look at the entire results of the report, but not all of it can be stored locally at the same time. The report will fetch and unload records as needed to display the section of the report you scroll to. The status bar at the bottom of the report will indicate your position in the report and the number of records currently in memory.

A variety of common operations can be done with the report, to include printing, saving in various formats, and sorting the contents of the report. You can refer to these common report operations in section 3.0 Reports.

The operations menu provides access to a set of operations unique to the User History Report.

Archive Report

Selecting **Archive** opens the following window:
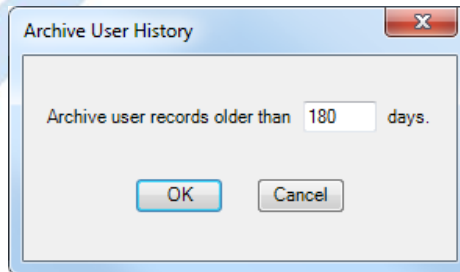
Enter the number of days for the archive and press **OK**. The records are copied to the User History Archive and removed from the User History.

Reactivate User

Selecting **Reactivate User** restores the selected user (or users) to Cencon. If the user's key is on the reader and the user has time windows defined, the time windows are written to the key. The following message indicates successful restoration of a deleted user:
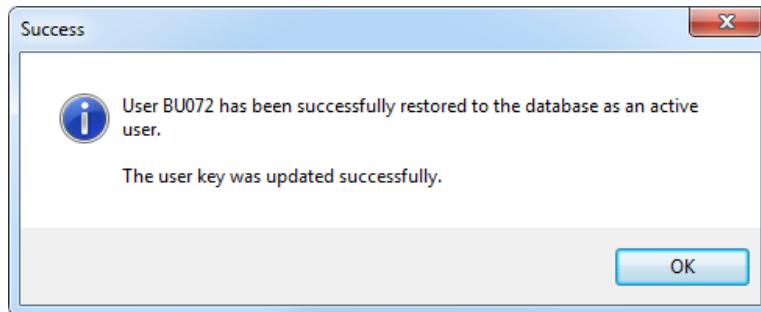
3.4.7 Archived User History Report

The Archived User History Report is used to display sets of user records from the Archived User History database table. It does this based on the search criteria that you specify, for which records you want displayed.

The following search dialog appears for the Archived User History Report, if it is not already open. If the Archived User History Report is already open, then it remains with it's previous contents.

This search dialog allows you to specify selection criteria for the users you want to have displayed in the report. The "Fields" tab is shown above.

The search dialog also has a check box to allow you to select if you want the search settings you enter to be saved for next time you open the report. This also specifies that you want the sort settings to be saved for the report. If this checkbox is not selected, then your previous search settings will not be restored next time you open the report.

There are additional search settings on the "Ranges" tab of the search dialog.

This tab allows you to select to search by certain ranges of values. This includes being able to specify a range of combinations currently issued to the user, and ranges of dates for the creation, deletion, and last used date of the user.

Once you are satisfied with the search criteria that you want for the Users, click on **Search** to display the result of the search. The report is displayed as follows:

User I.D.	Nickname	Key I.D.	Type	Combo	Window 1	Window 2	Window 3	Creation	Deletion	Last Used
FLMGamma		0000007E...	FLM	0	00:00 (23:00) FRI			2009-04-02 ...	2009-06-26 ...	2009
FLMMajor		0000007E...	FLM	0				2009-03-18 ...	2009-06-26 ...	2009
testuser		000000D9...	test	0				2009-06-24 ...	2009-06-24 ...	2009
Super		000000D9...	Supervisor	0				2009-06-18 ...	2009-06-24 ...	2009
Gen2BU7		0000003D...	Bank	0				2009-05-01 ...	2009-06-19 ...	2009
Richie	Rich	000000D9...	Special S...	0	01:00 (02:00) SUN, W...	01:00 (02:00) MON, T...	01:00 (02:00) TUE, FRI	2008-04-28 ...	2009-06-18 ...	2009
EFLMTestPCI		0000007E...	FLM	0				2009-06-16 ...	2009-06-16 ...	2009
FLMTestPCI		0000007E...	FLM	0				2009-05-20 ...	2009-06-16 ...	2009
LocalTestingUser		000000D9...	Supervisor	0				2009-03-13 ...	2009-06-09 ...	2009
1963RouteKey		0000003E...	RSP	0				2009-06-05 ...	2009-06-08 ...	2009
1963FLMKey		0000003E...	FLM	0				2009-06-05 ...	2009-06-05 ...	2009
MHG\jbetancourt		00000000...	Special S...	0				2009-06-05 ...	2009-06-05 ...	2009

445 user IDs found. (445 records currently in memory.) (58 - 71 displayed.)   DONE

Note

The Archived User History report has the deletion date field set for the users. This is different from the User ID report, where this field will always be blank.

Depending on the number of records resulting from the search, the report may take some time to finish loading records. You can still conduct operations, close the report, etc, while the report is still loading records. While the report is loading records, a status indicator at the bottom of the report will display **Loading** in red. Once the report finishes loading records, this indicator will change to green and show **Done**.

If the number of records resulting from the search are too big to fit safely into local memory, then the report status indicator will display in yellow **Partial**. If this occurs, you can still look at the entire results of the report, but not all of it can be stored locally at the same time. The report will fetch and unload records as needed to display the section of the report you scroll to. The status bar at the bottom of the report will indicate your position in the report and the number of records currently in memory.

A variety of common operations can be done with the report, to include printing, saving in various formats, and sorting the contents of the report. You can refer to these common report operations in section 3.0 Reports.

There are no operations for this report.

3.4.8 Archived Route Report

This report lists the archived routes.

The only Operation supported by this report provides the ability to restore an archived route. The Restore function fails with an error if any of the archived route locks are not in the Cencon database.

To list the archived routes, select **Archived Route Report** from the main Cencon window. The **Find Archived Routes** window allows you to specify information to be used to search for particular archived routes:

When 'OK' is selected, the archived routes matching the given search parameters will be displayed in the report.

Sample Archived Route report:

Archived Route Report

Name	Creation Date	Customer ID	Region	Archived Date
Test2	2013-02-11 14:49:01		KENTUCKY	2013-02-26 10:59:58
B242985	2011-07-18 11:45:04 (DST)		KENTUCKY	2013-02-26 10:54:55
Vic1kC	2013-02-15 11:02:33		LOOMIS	2013-02-15 13:23:09
Vic1000LocksA	2013-02-15 10:56:48		LOOMIS	2013-02-15 13:23:09
Vic1000Locks	2013-02-15 10:38:12		LOOMIS	2013-02-15 10:56:28
Vic1000LocksB	2013-02-15 10:53:34		LOOMIS	2013-02-15 10:56:24
Vic1000Locks	2013-02-15 09:13:00		LOOMIS	2013-02-15 10:37:45
Vic1000LocksB	2013-02-15 09:25:16		LOOMIS	2013-02-15 10:37:29
VicRoute1	2013-02-14 10:28:48		LOOMIS	2013-02-15 09:12:35
LexingtonRoute01	2013-02-13 15:33:02		LOOMIS	2013-02-14 10:29:00
Test2	2013-02-11 14:45:26		KENTUCKY	2013-02-11 14:48:55
Test2	2013-02-11 13:15:28		KENTUCKY	2013-02-11 14:45:20
Test2	2013-02-11 13:07:37		KENTUCKY	2013-02-11 13:11:30
Test2	2011-07-18 10:51:01 (DST)		KENTUCKY	2013-02-11 13:07:17
Route Listing Report 03	2012-08-31 09:55:21 (DST)		LOOMIS	2013-02-07 13:31:06
TestRoute3	2012-07-09 11:47:25 (DST)	North Bank	TEST1	2012-07-09 11:47:26 (DST)
TestRoute3	2012-07-09 11:33:48 (DST)	North Bank	TEST1	2012-07-09 11:33:48 (DST)
TestRoute3	2012-07-09 11:29:11 (DST)	North Bank	TEST1	2012-07-09 11:29:11 (DST)
TestRoute3	2012-07-09 11:12:19 (DST)	North Bank	TEST1	2012-07-09 11:12:20 (DST)
TestRoute3	2012-07-09 10:21:12 (DST)	North Bank	TEST1	2012-07-09 10:21:13 (DST)
TestRoute3	2012-07-09 10:16:30 (DST)	North Bank	TEST1	2012-07-09 10:16:31 (DST)
TestRoute3	2012-07-09 10:16:25 (DST)	North Bank	TEST1	2012-07-09 10:16:25 (DST)
TestRoute3	2012-07-09 10:15:29 (DST)	North Bank	TEST1	2012-07-09 10:15:30 (DST)
TestRoute3	2012-07-09 10:14:55 (DST)	North Bank	TEST1	2012-07-09 10:14:56 (DST)
TestRoute3	2012-07-09 10:13:00 (DST)	North Bank	TEST1	2012-07-09 10:13:01 (DST)
TestRoute3	2012-07-09 10:12:40 (DST)	North Bank	TEST1	2012-07-09 10:12:41 (DST)
TestRoute3	2012-07-09 10:11:24 (DST)	North Bank	TEST1	2012-07-09 10:11:25 (DST)

7293 routes found. (7293 records currently in memory.) (1 - 30 displayed.)   DONE

3.4.9 Reporting

This form allows the user to gather statistics on the Activity Log and the Archived Activity Log data. The data can be displayed and saved in both a tabular form and as a graphical chart. When Process is clicked, the selected event type is searched for in the Activity Log and the Archived Activity Log data. The results are returned based off of the selected category, such as by year, month, region, dispatcher, etc.

You can generate statistics on the following events:

Dispatches
> This is dispatches of either FLM or Route mode locks.

Force Delete of Unshelved Lock
> This is force deletes of unshelved FLM, Route, or Bank mode locks.

Manager Force Close w/o Seal
> This is the action of a manager doing a force close without a close seal of an FLM or Route mode lock. This is not the same as a lock route sequence being skipped.

Lock Activations
> This the activation of an FLM, Route, or Bank mode lock.

Lock Shelves
> This is the shelve of an FLM, Route, or Bank mode lock.

Depending on the event type and category selected, the event type can be reported on for any lock mode. The results that are evaluated as zero values can be excluded, using the Ignore The results for the different lock modes can optionally be combined into a single value, using the Combine Lock Mode Results To Single Column check box.

The results from the search of the Activity Log and the Archived Activity Log data is returned based on the selected category:

Year

This separates out the events into the year that the event occurred.

Month

This separates out the events into the month that the event occurred, i.e. January through December.

Week of Year

This separates out the events into the week of the year that the event occurred. There are 52 weeks in a year.

Day of Week

This separates out the events into the day of the week that the event occurred, i.e. Sunday through Saturday.

Hour of Day

This separates out the events into the hour of the day that the event occurred, i.e. 00 to 23.

Region

This separates out the events based on the assigned regions of the affected locks.

Customer ID

This separates out the events based on the assigned customer ID of the affected locks.

ATM Serial Number

This separates out the events based on the assigned ATM serial number of the affected locks.

Dispatcher

This separates out the events based on the dispatcher who did the operation causing the event on the Cencon/CenTran software.

Lock User

This separates out the events based on the lock user assigned to the operation causing the event.

Route

This separates out the events based on the route the lock was assigned to.

The results returned by the search for the event can be sorted by the name of the category, lock mode, or by the totaled values. The results can be sorted either ascending or decending.

The scope of the results can be filtered by search fields. These search fields are found on the Filter tab of the Reporting form.

Filter Tab:
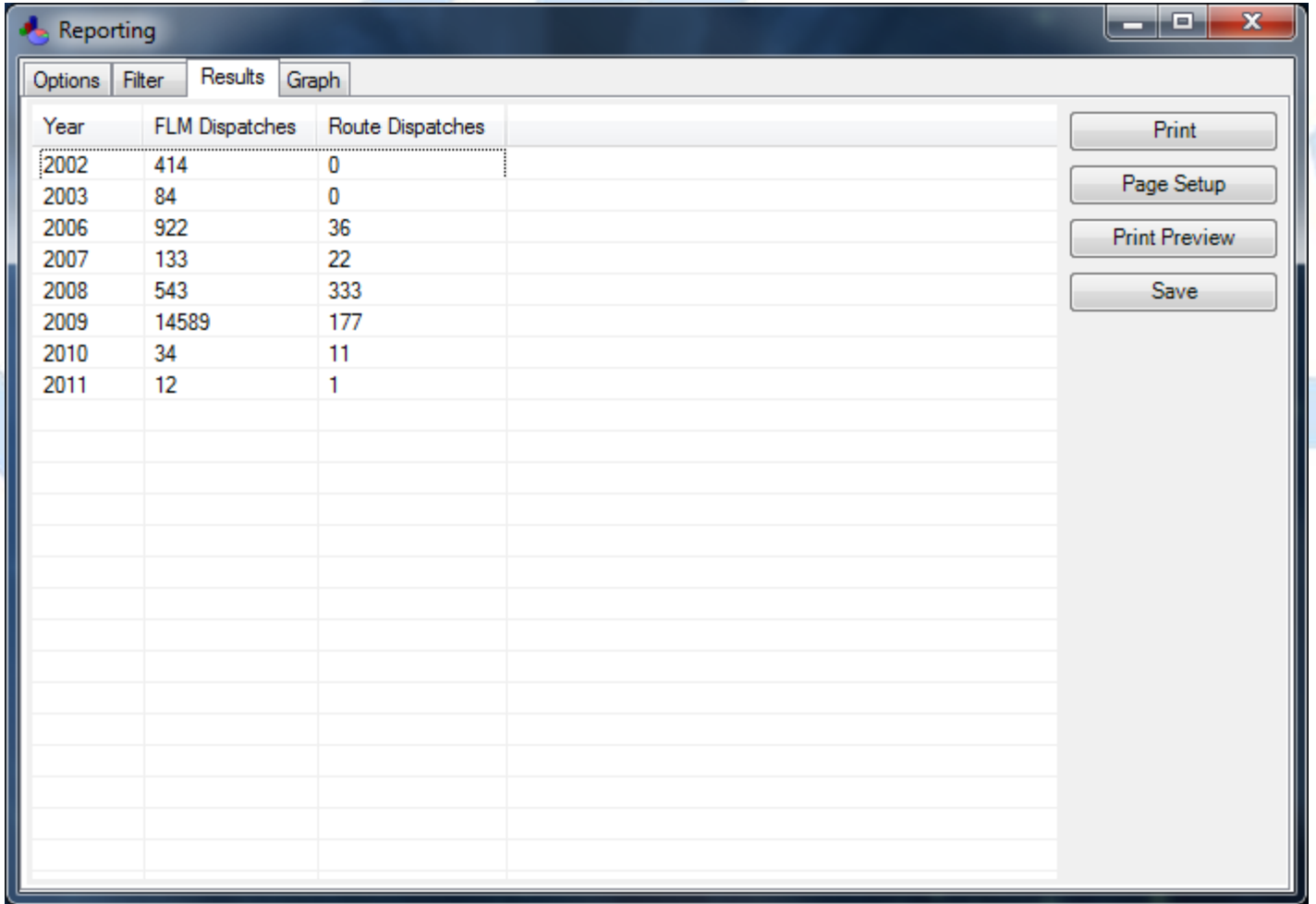
The table of results from the search are displayed on the Results tab of the Reporting form. These results can be printed or saved in multiple formats.

Results Tab:

The chart of results from the search are displayed on the Graph tab of the Reporting form. This chart can be printed or saved in multiple formats.

You can also modify the format and color of the chart, using the options to the right side of the chart.

Graph Tab:
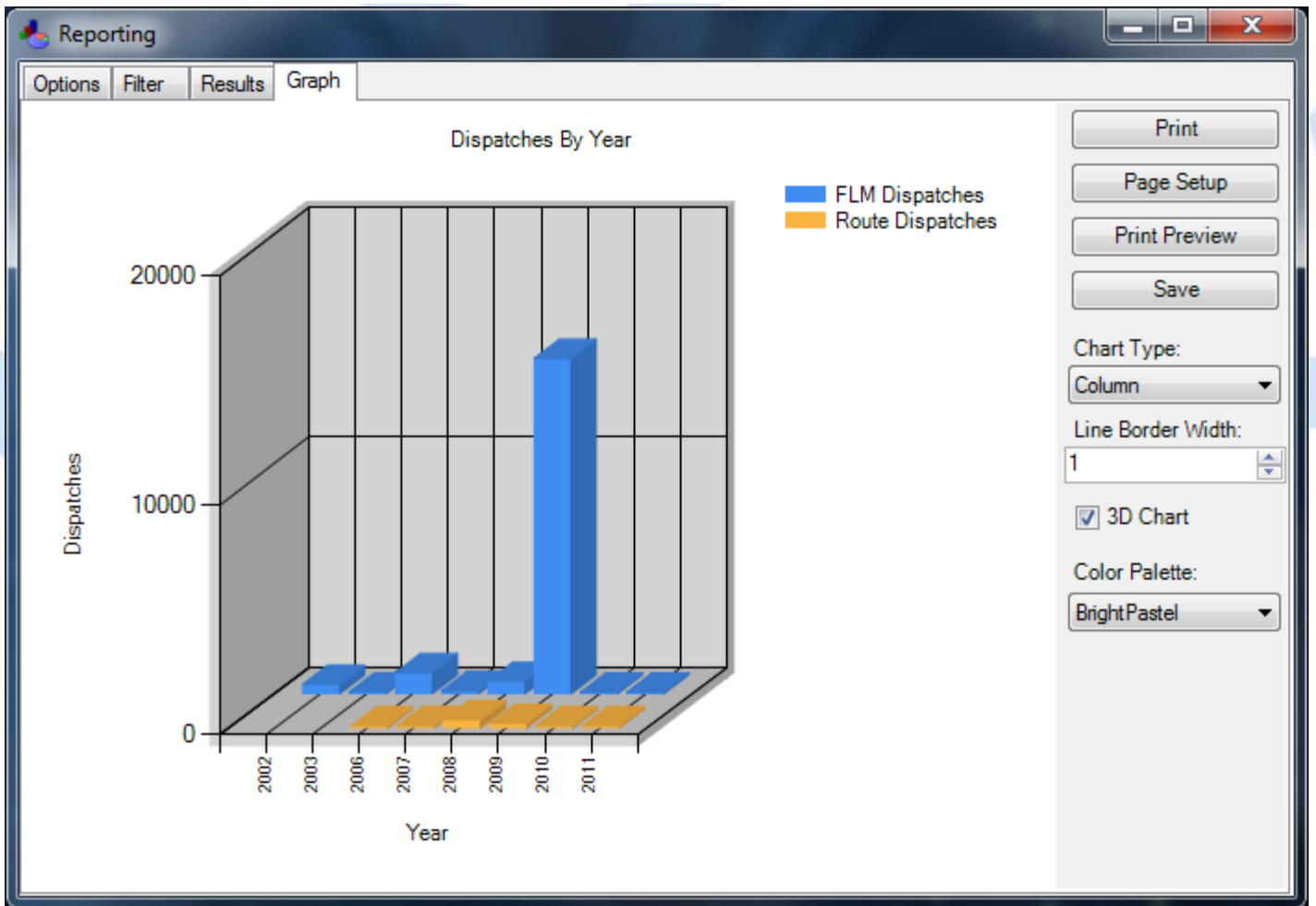
3.5.1 Initialize Audit Download Key

This option allows you to prepare a Supervisor Audit Key for use in auditing a Lock. To initialize an SA Key, insert an SA Key into the key reader and click on **Initialize Audit Download Key** in the main Cencon window. The following is displayed:

If the key will be used to access the audit data from a Bank Mode lock, click on the check box and select the lock's Bank Branch name as in the following:

Click on **Initialize Key** to perform the initialization.

Caution
To retrieve an audit from a Lock, **you must always initialize the SA key first**. Failure to do so could cause unpredictable results in your audit.

The **Display Key Report** button opens the Key Report for the key in the reader.

See 4.2.9 Retrieve Audit Download From Lock for details on using the key at the lock.

See 4.3.9 Retrieve Audit Download From Lock for details on using the key at a Gen 2 Swing Bolt lock.

3.5.2 Initialize Lock User Key Clock

The historic (current) FLM, Route, and Bank mode Lock User keys (utilizing iButton types DS1994 and DS1427) have an internal clock that is used by the lock to time stamp lock operations (Gen1). The clock in the key is set to GMT by using the time in your PC and the GMT offset. If you request a key report on a Lock Key and notice the time is not correct, you should use this menu to reset the clock in the key.

> **Note**
>
> This process does not need to be performed to update the time in the keys for a change to Daylight Savings Time or back to Standard Time. The Cencon PC System will automatically accommodate for that type of time change when reading the audit times for a user key.

To initialize the clock in a Lock Key, insert a lock Key into the key reader and click on **Initialize Lock User Key Clock** in the main Cencon window. The following is displayed:
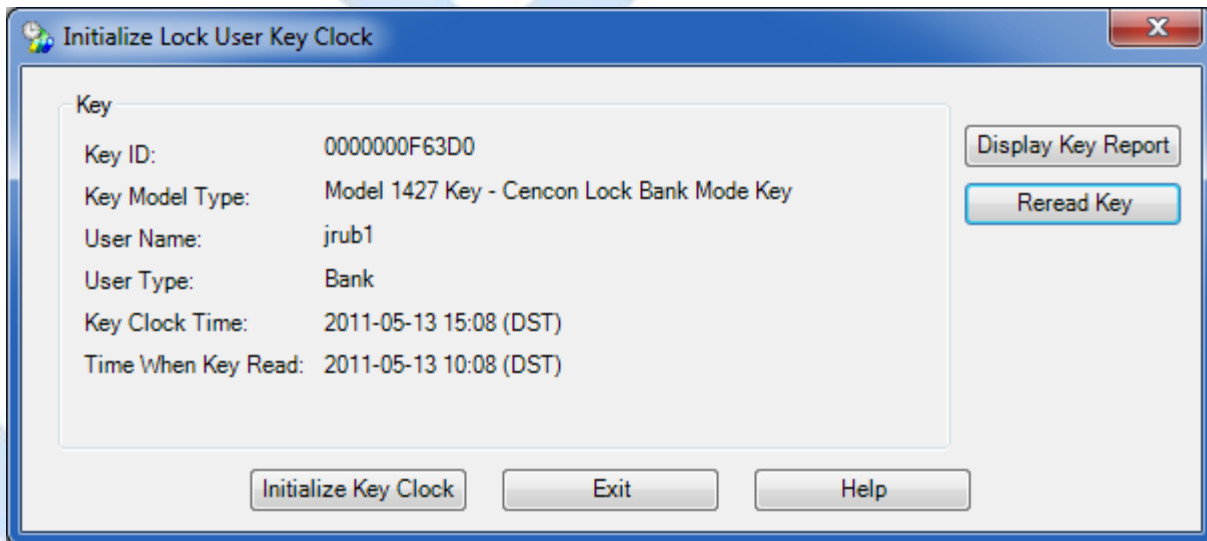
Click on **Initialize Key Clock**. A confirmation message is displayed:
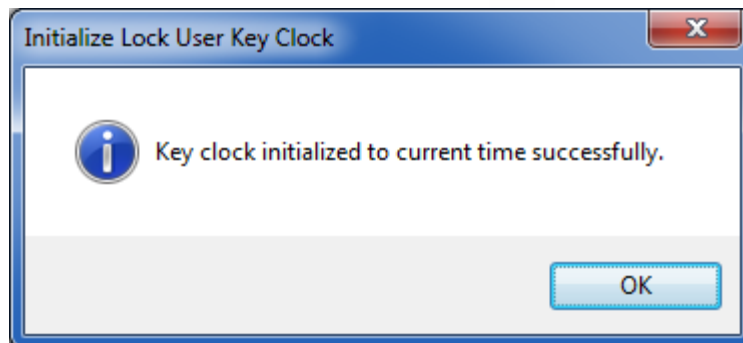
The **Display Key Report** button opens the Key Report for the key in the reader. The **Read Key** button is used to reread the key in the reader if you change keys.

> **Note**
>
> An alternative method of updating the time in keys is by using the Key Maintenance Utility (KMU). For more information on the KMU see the Kaba Mas web site at: www.kabamas.com

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3.5.3 Reinitialize a User Key

This function can be used to reinitialize a key that did not initialize properly or to reinitialize a key that has been used in another system.

Caution
This operation deletes the key's audit data.

To reinitialize a user key, insert the key into the key reader and click on **Re-initialize User Key** in the main Cencon window. The following is displayed:
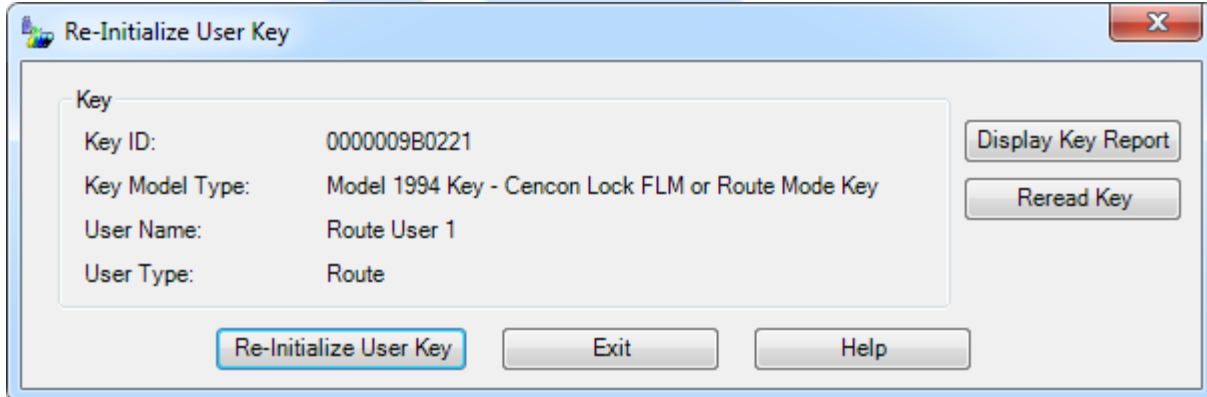
Click on **Re-Initialize User Key**. A confirmation message is displayed:
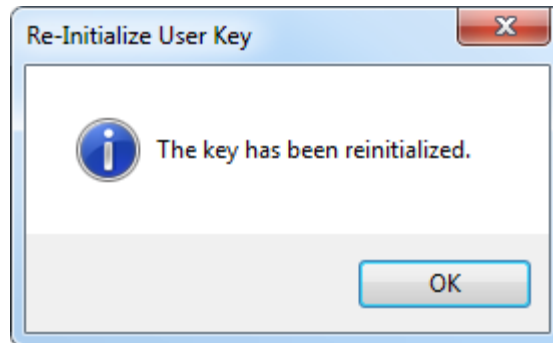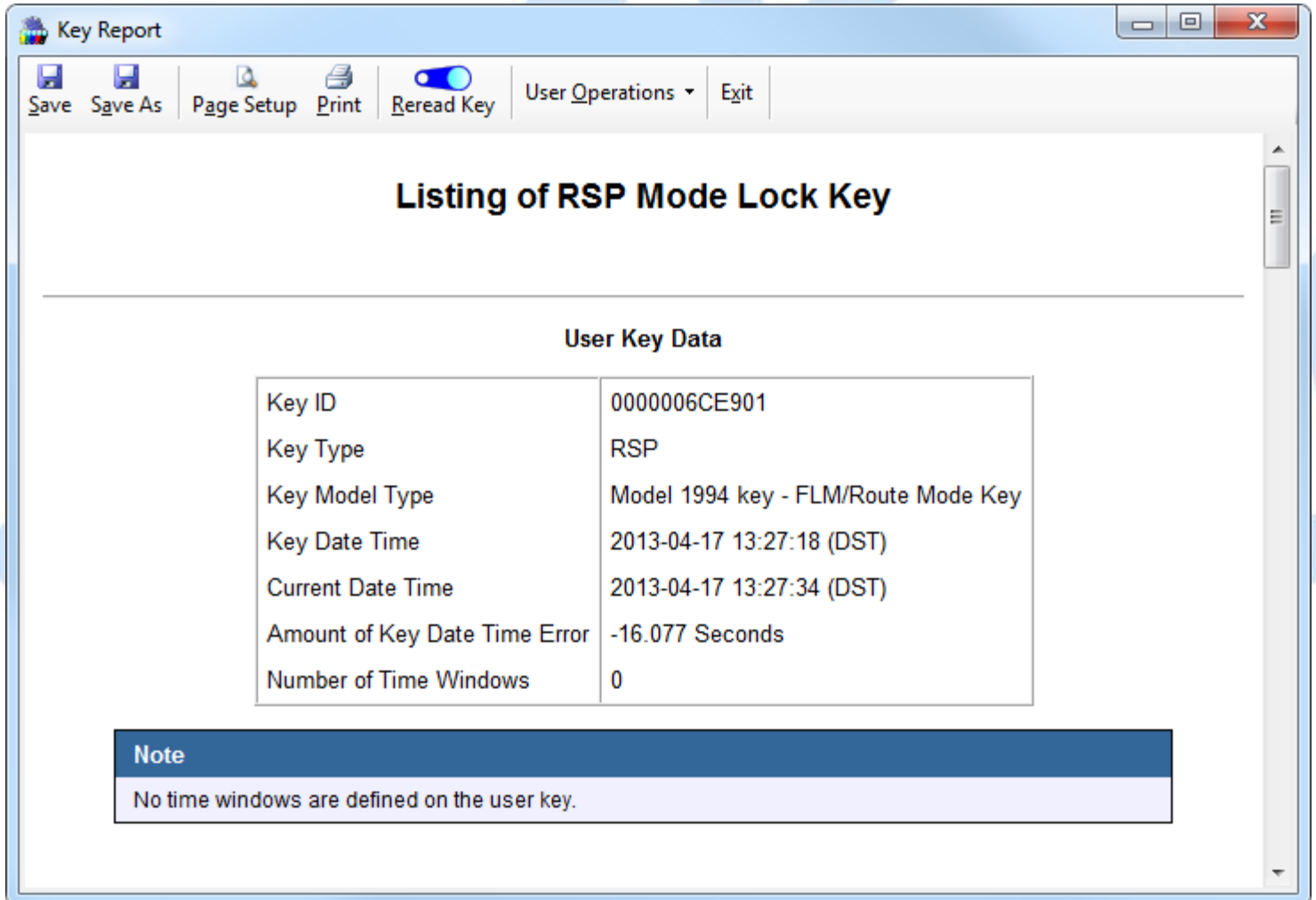
The **Display Key Report** button opens the Key Report for the key in the reader. The **Read Key** button is used to reread the key in the reader if you change keys.

3.5.4 Key Report

This function displays a report on the data in a key. To report on the data in a key, insert the key into the key reader and click on **Key Report** in the main Cencon window. Cencon determines the key type and displays a report which is customized for that type. The following is a sample report for a Route type user key:

The top of the Key Report displays basic information about the key:

When the key being reported on is a user key, the menu strip across the top of the report includes a User Operations selection. The operations available in this drop-down menu, which behave just as their counterparts in the User Report Operations menu do, are the following:

- Edit Key User
- Rename Key User
- Delete Key User
- Display Open / Assigned Locks for Key User
- Display Bank Locks Mini-Report for Key User
- Remove Key User from All Bank Locks

The center of the Key Report displays information on the key's user from the Cencon database:

Key Report

Save Save As Page Setup Print Reread Key User Operations ▼ Exit

User Database Information

User ID	rjrb7
Key ID	0000006CE901
Key Model Type	Model 1994 key - FLM/Route Mode Key
Key Type	RSP
Nickname	a nickname
Nickname Expiration	
Combinations Currently Dispatched	7
Creation Date	2007-07-02 15:29:33 (DST)
Deletion Date	
Region	KENTUCKY
Service Branch	yet another service branch
First Name	rjrb7's first name
Middle Name	rjrb7's middle name
Last Name	rjrb7's last name
Last Used Date	2013-04-16 15:49:16 (DST)
Total Number of Combinations Issued	162
Maximum Number of Allowed Combinations	User has no limit for the number of combinations dispatched
User Enabled Starting Date	
Total Number of Combinations Issued	162
Maximum Number of Allowed Combinations	User has no limit for the number of combinations dispatched
User Enabled Ending Date	
Customer ID	North Bank
Is Import From Legacy Cencon/CenBank	No

The bottom of the Key Report displays audit data from the key:

Key Report

Save | **Save As** | **Page Setup** | **Print** | **Reread Key** | **User Operations** ▾ | **Exit**

User Key Audit Information

Event	Mode	Serial Number	Lock Name	Open Time	Close Time	Seal Count	Close Seal
Open/Close Lock	Route	001000107	1000107	2013-04-16 15:42:11 (DST)	2013-04-16 15:43:47 (DST)	2	7111
Open/Close Lock	Route	941085	941085	2012-09-13 15:15:12 (DST)	2012-09-13 15:15:12 (DST)	3	8935
Open/Close Lock	Route	501107	RLK 501107	2012-09-13 14:51:55 (DST)	2012-09-13 14:52:27 (DST)	3	70
Open/Close Lock	Route	001000116	Gen2Swingbolt 1000116	2011-11-03 13:05:57 (DST)	2011-11-08 14:23:33	4	3309
Open Lock	Route	001000116	Gen2Swingbolt 1000116	2011-11-03 13:03:15 (DST)		3	
Open Lock	Route	001000116	Gen2Swingbolt 1000116	2011-11-03 13:02:04 (DST)		2	
Open Lock	Route	001000107	1000107	2011-10-24 13:58:53 (DST)		1	
Open Lock	Route	001000107	1000107	2011-10-18 14:56:30 (DST)		14	
Open Lock	Route	001000107	1000107	2011-10-13 14:25:44 (DST)		13	
Open Lock	Route	001000107	1000107	2011-10-10 15:59:51 (DST)		12	
Open/Close Lock	Route	001000107	1000107	2011-10-10 15:54:57 (DST)	2011-10-10 15:56:33 (DST)	11	5197
Open/Close Lock	Route	001000107	1000107	2011-10-10 15:24:09 (DST)	2011-10-10 15:24:09 (DST)	10	3048
Open Lock	Route	001000107	1000107	2011-09-21 14:08:00 (DST)		5	
Open Lock	Route	001000107	1000107	2011-09-21 08:56:14 (DST)		4	

User Key Times

The Close times from lock user keys are only accurate within plus or minus 32 seconds. If more exact times are desired, use the times from a lock audit.

For example, the open and close times for the second event in the above screen image are both 2009-07-06 13:35:47. This is the result of an open and close occurring less than 32 seconds apart.

Lock Audit Report Details

The following section of the lock audit report provides details as the current activation status of the lock:

Audit Information From the Lock

Supervisor Audit Key Lock Mode Activation Information

Mode	Status	SA Key ID	User Key 1 ID	User 1 ID	User Key 2 ID	User 2 ID	Activate/Shelve Date Time
FLM	Activated	000000019E09	Not set.		Not set.		2009-11-16 10:30:23
Bank	Activated	000000019E09	00000030D922	f	Not set.		2009-11-20 11:54:33

Note the "User" items which indicate the key(s) used to open the lock to perform the activation:

- The first line has "Not Set" for both User Key 1 ID and User Key 2 ID. Since FLM mode was the first mode activated on the lock, the Factory Combination was used for the initial opening and no key was required.
- The second line indicates that Bank mode was activated at a later time. The key "00000030D922", user ID "f" was used to open the lock to start the Bank activation procedure. If the FLM mode had been "dual", two FLM keys would have been required and there would be an entry under User Key 2 ID also.

The following table provides descriptive information for the lock audit.

Transactor	Audit Transaction	Description
Lock	Consecutive Failed Attempts Limit (NOTE: in previous software versions, audit was shown as "3/5 Attempts")	Beginning of a lock out (LCO) due to 5 repeated incorrect factory combos, incorrect FLM, Route, or Bank user combos, or incorrect bank user combos presented when changing combo. See "Troubleshooting Single Lighting Bolt."
Lock	Silent Alarm Reset	Duress alarm is found on from a previous operation. Last opening added 1 to the 5th digit of the combination.
Lock	Clock Set Key Used	A white Clock Set key was used at the lock
Lock	Clock Reset	Indicates clock reset to 1/1/2000 12:00:00 AM due to loss of or surge of battery power due to an external event.
Lock	Factory/Shelved Mode Open	The lock was opened with the factory/shelved mode combination
Lock	Factory/Shelved Mode Closed	The bolt was extended after an opening with the factory/shelved mode combination. This audit may appear 1 time if the lock was opened in Factory/Shelved mode and then activated into another mode (indicates that the last opening was a Factory/Shelved mode opening).
Lock	Factory/Shelved Mode Combo Changed	The lock factory/shelved mode combination was changed
FLM*/Route*/Bank*	Open Only	Lock opening by user key in the listed mode (or 1 of the 2 users in dual mode)
FLM*/Route*/Bank*	Close Only	initial close seal retrieval by a user key if the last audit record written was not an opening by this same user key
FLM*/Route*/Bank*	Open/Close	A consecutive open and a close record by the same user key
FLM*/Route*	Close seal retrieval	Subsequent close seal retrieval by FLM or Route user key (#4)

FLM/Route	Resync Combo State	A resync key was used to resynchronize the listed mode's combo state with the PC software
FLM/Route/Bank	Time Zone And DST Transition Table Updated	A clock set key was used to update the time zone information and DST transition table for the mode
Bank	Change Combo	Bank user key changed combination
* These records also show up as audits on the F, R, or B user key.		
SA Key	Audit Download	Valid SA audit download key presented ("Aud")
SA Key	Initialize FLM (or Route or Bank)	Mode listed was activated; added to main audit trail in Gen2 ("Inl")
SA Key	Shelve FLM (or Route or Bank)	Mode listed was shelved (deactivated); added to main audit trail in Gen2 ("ShL")
SA Key	Add User	Add Bank mode users to the user table ("Add")
SA Key	Delete User	Delete Bank mode users from the user table ("dEL")
SA Key	Bank User Table Download	Bank user table downloaded to SA key ("udP")
SA Key	FLM (or Route or Bank) Update Activation	The activation was updated from Compatibility mode to full Gen2 mode for the listed mode ("UPA")
External Sensor	Door Open	Door found open when checking for closed door (after bolt gets extended and lock powered up.)
External Sensor	Remote Disable Asserted	Remote disable signal found asserted when lock was powered up.
Serial (Shelved Mode)	Clock Write	The lock clock was anonymously updated via serial communications (if no modes active)
Serial (Shelved Mode)	Activate FLM (or Route or Bank) Mode	Listed mode was activated via serial communications while the lock was in Factory/Shelved mode
Serial (Kaba Mas)	Clock Write	Kaba Mas updated the lock clock via serial communications
Serial (Kaba Mas)	Factory Reset FLM (or Route or Bank) Mode	Mode was shelved via serial communications by Kaba Mas
Serial (FLM, Route or Bank)	Clock Write	Listed mode updated the lock clock via serial communications
Serial (FLM, Route or Bank)	Time Zone And DST Transition Table Updated	Listed mode's time zone info and DST transition table were updated via serial communications
Serial (FLM, Route or Bank)	Access Configuration (Single/Dual) Written	Listed mode's access configuration (single user access / dual user access) was changed via serial communications
Serial (FLM, Route or Bank)	Confirm Close	The mode's close seal (or close confirmation) was retrieved via serial communications that had not yet been obtained by a key in that mode.
Serial (FLM, Route or Bank)	Shelve Mode	Listed mode was shelved via serial communications
Serial (Bank)	Users Added	Bank mode users added via serial communications
Serial (Bank)	Users Deleted	Bank mode users deleted via serial communications

Serial (Bank)	Time Delay Configuration Written	Bank mode time delay configuration was changed via serial communications

You can use the following guidelines to interpret the contents of the Supervisor Audit Key Report.

- The header information will include the lock serial number which does not change.
- For Gen2 locks the time of the audit stored in the lock and the user key is standardized to the lock time, no matter what the time in the key is programmed to.

  For Gen1 locks, even if the time in the keys have been programmed incorrectly, the audits will still be stored in the order of when the keys were physically presented to the key reader. The most recent events will always be at the top, and the oldest events will be at the bottom.

- If the same key opens and closes the call in single mode, the 2 events will be shown on the same line.
- If the lock is opened in dual mode, one line will show an open without a close by the first user key, and the second line will show an open and a close by second user key.
- In single mode, if one key opens the call and another key gets the close seal, this will show on two separate lines.
- If a line shows a close time without an open time, first look at the close seal. If the close seal is the same as the previous line, the user had simply entered the #4 command at the lock to retrieve the last close seal.
- Each lock audit identifies users by their key serial number. When an audit is read by your system, any user keys that are currently enrolled in your system will display the User ID for that key rather than the key serial number.
-
  - Keys that have been deleted from your system should still display the User ID based off of your User ID History, beginning with Cencon version 2. Keys deleted out from previous versions of Cencon will not have the User ID maintained in this fashion.
  - If a deleted key is reused, then the time of the event from the lock audit will be used to determine if the previous name or the current name should be displayed.
  - If a key was enrolled by a different Cencon or CenBank system for use with the lock, and the key is not in your Cencon System database, then it will show only as the key serial number.
- Audits may appear slightly different depending on the code level of your Cencon lock and which version of the Cencon software the SA key was prepared vs. the version the SA key was read in.
- For Gen2 locks, for a complete audit history of the maximum records stored in the lock, use the Interface Kit, and refer to the "Lock Operations with Serial Connect" section of the Reference Manual.

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3.5.5 Initialize Lock Time Set Key

Cencon Gen 2 locks have an internal clock that is used by the lock to control entry and to create time stamps for lock operations. The time in the lock is set to GMT using the white DS1922 key which has been initialized by Cencon to the time in your PC.

Note
To insure accurate time in your locks: • Check that the time on your PC is correct when initializing the DS1922 key. • Since the clock in the DS1922 key has a known drift of about 2 minutes a month, you should plan to reinitialize time set keys regularly.

Note
This process does not need to be performed to update the time in the lock for a change to Daylight Savings Time or back to Standard Time. The lock automatically accommodates for that type of time change.

To initialize a time set key, insert the white DS1922 Key into the key reader and click on **Initialize Key to Set Lock Time** in the main Cencon window. The following is displayed:

The **Display Key Report** button opens the Key Report for the key in the reader. The **Read Key** button is used to reread the key in the reader if you change keys.

The Key information box displays the current time zone and time from the key. The **Set Time Zone To** selection defaults to the time zone set on the PC.

To initialize a key, select the desired time zone and press the **Initialize Key** button. A confirmation message is displayed:

Initialize Key To Set Lock Time (Gen2)

The Time Set key has been successfully created.

Time Zone: (UTC-05:00) Eastern Time (US & Canada)

OK
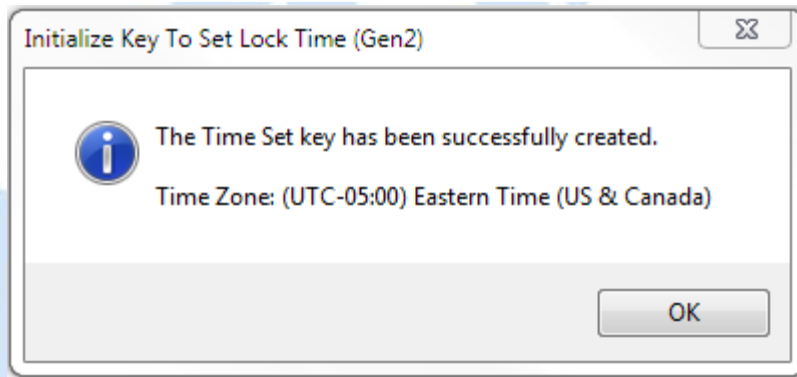
See Set the Lock Time for details on using the time set key at a lock.

See Set the Lock Time for details on using the time set key at a Gen 2 Swing Bolt lock.

3.5.6 Create a Retrieve Bank Users Key (Gen2)

To retrieve the list of bank users assigned to a Gen 2 lock, insert a red SA Key into the key reader and click on **Create a Retrieve Bank Users Key (Gen2)** in the main Cencon window. The following is displayed:
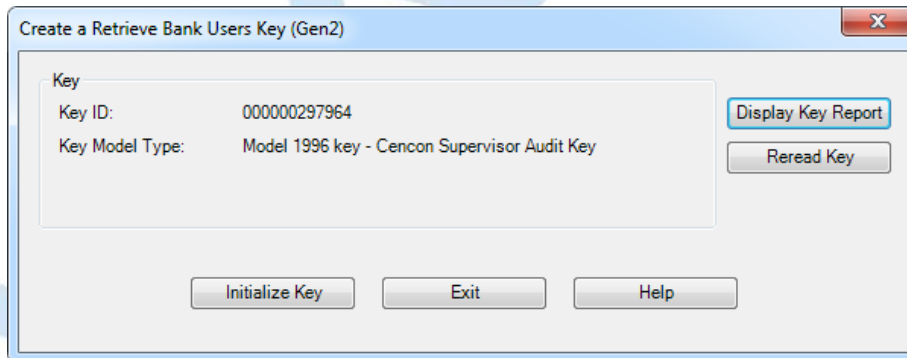
Click on **Initialize Key**. A confirmation message is displayed. To use this key at a lock, see Retrieve Bank Users From Lock. To use this key at a Gen 2 Swing Bolt lock, see Retrieve Bank Users From Lock.

The **Display Key Report** button opens the Key Report for the key in the reader. The **Read Key** button is used to reread the key in the reader if you change keys.

Sample Key Report:

Save   Save As   Page Setup   Print   Reread Key   Exit

Listing of Key Initialized to Retrieve Bank Users From Lock

Supervisor Audit Key Data

Key ID	000000297964
Key Type	Listing of Key Initialized to Retrieve Bank Users From Lock
Key Model Type	Model 1996 key - Supervisor Audit Key
Lock Serial Number	941085
Branch ID	1
Retrieval Date	2013-04-02 12:24:04 (DST)
Number of Bank Users Retrieved from Lock	2

Bank Users

User Name	Bank User ID	Key Type	Key ID
Bank User 1	1	DS1963 - Cencon Lock/Logon Key	00000054C0F5
Bank User 2	2	DS1963 - Cencon Lock/Logon Key	000000542CE4

Bank Users in the Database for this Lock

User Name	Bank User ID	Key Type	Key ID	Default Combination	Must Change Combo Flag	User Retrieved from Lock
Bank User 1	1	DS1963 - Cencon Lock/Logon Key	00000054C0F5	123456	Doesn't Have To Change Combo	Yes
Bank User 2	2	DS1963 - Cencon Lock/Logon Key	000000542CE4	123456	Doesn't Have To Change Combo	Yes

Note

The timestamps in this report that are not marked as UTC are Eastern Standard Time unless they are marked as Eastern Daylight Time with the string (DST).

Key Report Created On: 2013-04-02 12:24:00 (DST)
Cencon Version 4.1.5.3061
Kaba Mas LLC

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3.6 User Authorization

User authorization tables in the Cencon database allow for dynamic configuration of the user interface and control access to program operations.

Unified Authorization Concept

The unified authorization concept places all authorization information for the Cencon family of applications in the Cencon database. These authorizations are then used in a standardized manner by all Cencon applications for all operations.

The addition of user authorization tables in the database allows for the configuration of the program interface and permitted functionality to be specified uniquely for each user regardless of where they are physically logged on. The authorizations for a particular user are established by assigning a Role when the user is created. The specific tasks the user may perform are the Role Definitions which are associated with that Role. Cencon provides a default set of Roles and associated Role Definitions. Custom Roles may be created and deleted using the menus on the Authorization Role Report.

The following sections on Roles and Role Definitions contain examples on using the authorization functions to create and change user roles.

Roles

The authorization tables define a set of authorization roles by name, such as Supervisor, Dispatcher, Key Maintenance User, Activate Only, etc. A maintenance dialog is provided for customer modifications to these standard definitions.

Role Definitions

Each authorization role has matching entries in a table defining what functions that authorization will have displayed in the user interface and which Cencon functions the assigned user may perform.
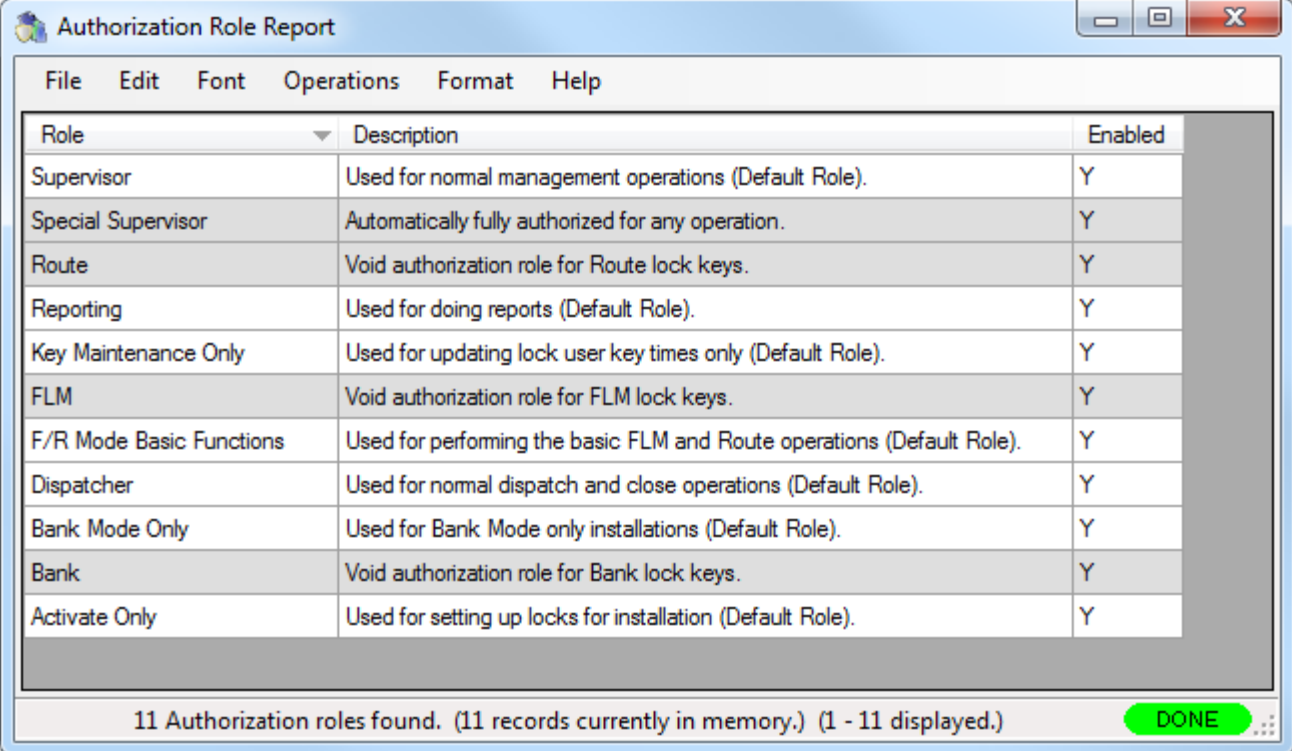
Special Supervisors

Special Supervisors always have access to all system operations independent of authorizations. This user role is needed to maintain Cencon if no authorizations are defined and to change authorizations. At least one special supervisor key must always be defined and no role operations are permitted.

3.6.1 Authorization Roles

The Role Authorization table defines a set of authorization roles by name, such as Supervisor, Dispatcher, Key Maintenance User, Activate Only, etc. Click on **Authorization Role Report** in the main Cencon window to open the Role Maintenance dialog. The following is a sample which shows the default roles defined by Cencon:

Role	Description	Enabled
Supervisor	Used for normal management operations (Default Role).	Y
Special Supervisor	Automatically fully authorized for any operation.	Y
Route	Void authorization role for Route lock keys.	Y
Reporting	Used for doing reports (Default Role).	Y
Key Maintenance Only	Used for updating lock user key times only (Default Role).	Y
FLM	Void authorization role for FLM lock keys.	Y
F/R Mode Basic Functions	Used for performing the basic FLM and Route operations (Default Role).	Y
Dispatcher	Used for normal dispatch and close operations (Default Role).	Y
Bank Mode Only	Used for Bank Mode only installations (Default Role).	Y
Bank	Void authorization role for Bank lock keys.	Y
Activate Only	Used for setting up locks for installation (Default Role).	Y

11 Authorization roles found. (11 records currently in memory.) (1 - 11 displayed.)   DONE

The default roles may not be modified or deleted. They may, however, be copied and the copy can be modified. The following is an overview of the significant activities authorized for each of the default user roles. To see the full list of authorizations, double-click on the role name in this report.

Supervisor Highlights:

- Activate, Shelve, dispatch, reassign, map, rename, replace, resync, set clock, update data, delete, and close locks
- Create, modify, and delete user information and users (except for special supervisor and supervisor)
- Import and Export lock information
- Create, edit, and delete customers, bank branches, regions, collections, and routes
- Key reports
- View and archive all Cencon reports (users, locks, lock log, regions, customers, activity log, etc.).

Dispatcher Highlights:

- Dispatch, reassign, map, rename, replace, resync, set clock, update data and close locks
- Add customers, bank branches, regions, collections, and routes
- Change limited user data
- Key reports
- View and archive all Cencon reports (users, locks, lock log, regions, customers, activity log, etc.).

Reporting Highlights:

- View and archive all Cencon reports (users, locks, lock log, regions, customers, activity log, etc.).

Key Maintenance Highlights:

- Initialize audit download key
- Initialize FLM, Route, and Bank key clocks
- Initialize key to retrieve bank users
- Display a key report for lock audit, Bank, FLM, and Route keys

Bank Mode Only Highlights:

- Activate, Shelve, map, rename, replace, and update data for bank locks
- Add customers, bank branches, regions, and collections (bank related only)
- Create, modify, and delete bank user information and bank users
- View and archive all Cencon reports (users, locks, lock log, regions, customers, activity log, etc.).

Activate Only Highlights:

- Activate, Shelve, dispatch, reassign, map, rename, replace, set clock, update data, delete, and close locks
- Create, modify, and delete user information and users (FLM, Route, and Bank only)
- Import and Export lock information
- Create, edit, and delete customers, bank branches, regions, collections, and routes
- Key reports
- View and archive all Cencon reports (users, locks, lock log, regions, customers, activity log, etc.).

The **Operations** menu provides access to the maintenance functions for this data:
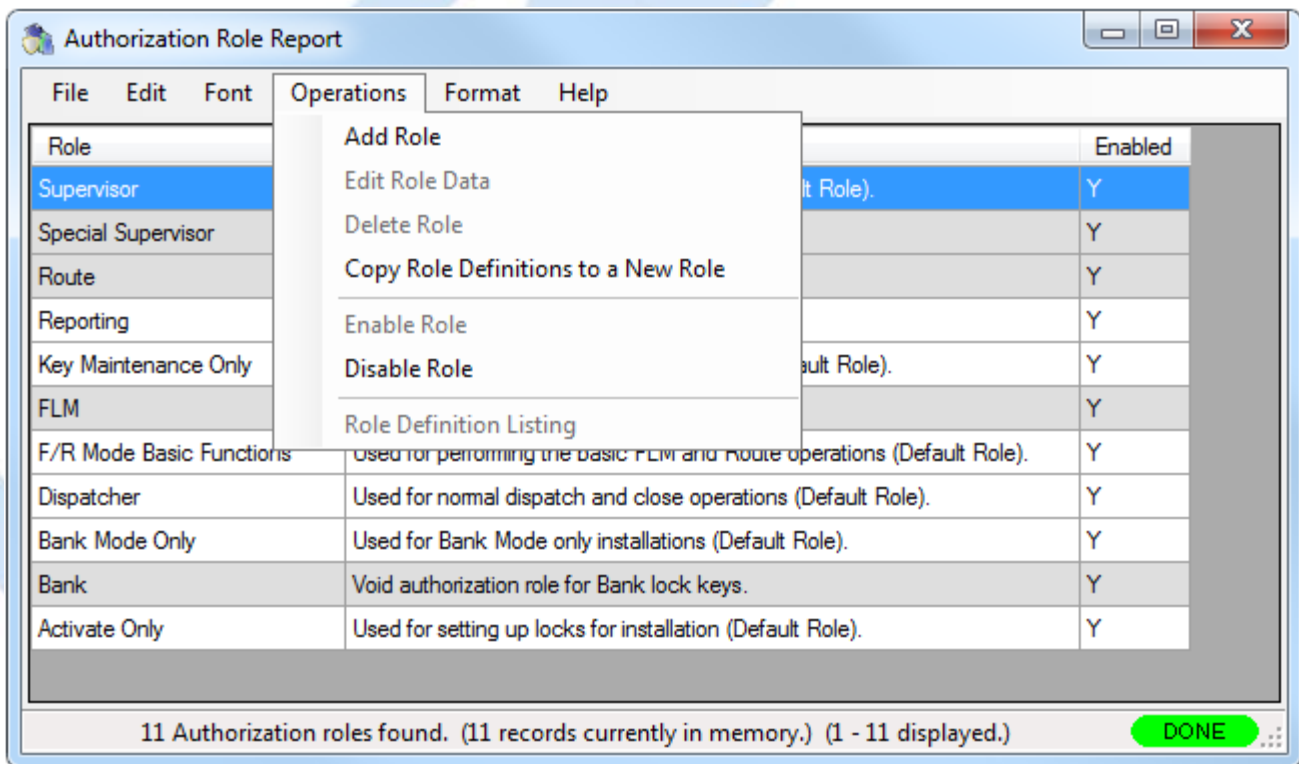
As an example, assume you want to create a new role which only allows the user to dispatch, reassign and close FLM locks. From the Authorization Role Report, select **Add Role**. The Add Role dialog is displayed. Enter a descriptive Role Name ("FLM Dispatcher" for this example) and some optional descriptive text:

Create an Authorization Role

Role Name: FLM Dispatcher

Description: Can only dispatch and reassign

◉ Enabled

◯ Disabled

[Create]   [Exit]   [Help]

Press Create to add the custom role to Cencon. The new role is now displayed in the Authorization Role Report:

Authorization Role Report

File   Edit   Font   Operations   Format   Help

Role	Description	Enabled
Supervisor	Used for normal management operations (Default Role).	Y
Special Supervisor	Automatically fully authorized for any operation.	Y
Route	Void authorization role for Route lock keys.	Y
Reporting	Used for doing reports (Default Role).	Y
Key Maintenance Only	Used for updating lock user key times only (Default Role).	Y
FLM Dispatcher	User can only dispatch, reassign, and close FLM locks.	Y
FLM	Void authorization role for FLM lock keys.	Y
F/R Mode Basic Functions	Used for performing the basic FLM and Route operations (Default Role).	Y
Dispatcher	Used for normal dispatch and close operations (Default Role).	Y
Bank Mode Only	Used for Bank Mode only installations (Default Role).	Y
Bank	Void authorization role for Bank lock keys.	Y
Activate Only	Used for setting up locks for installation (Default Role).	Y

12 Authorization roles found. (12 records currently in memory.) (1 - 12 displayed.)   DONE

The next step is to assign the specific tasks users assigned to this role may perform. This is done using the Role Definition Report which opens automatically as the new role is created. To access the Role Definition Report for other roles, double-click on the Role name or click on the Role and select Role Definition Listing from the Operations menu. The Role Definition Report initially contains only the Logon role (and the only available operation is Add) since the new role has not been assigned any other permitted tasks:
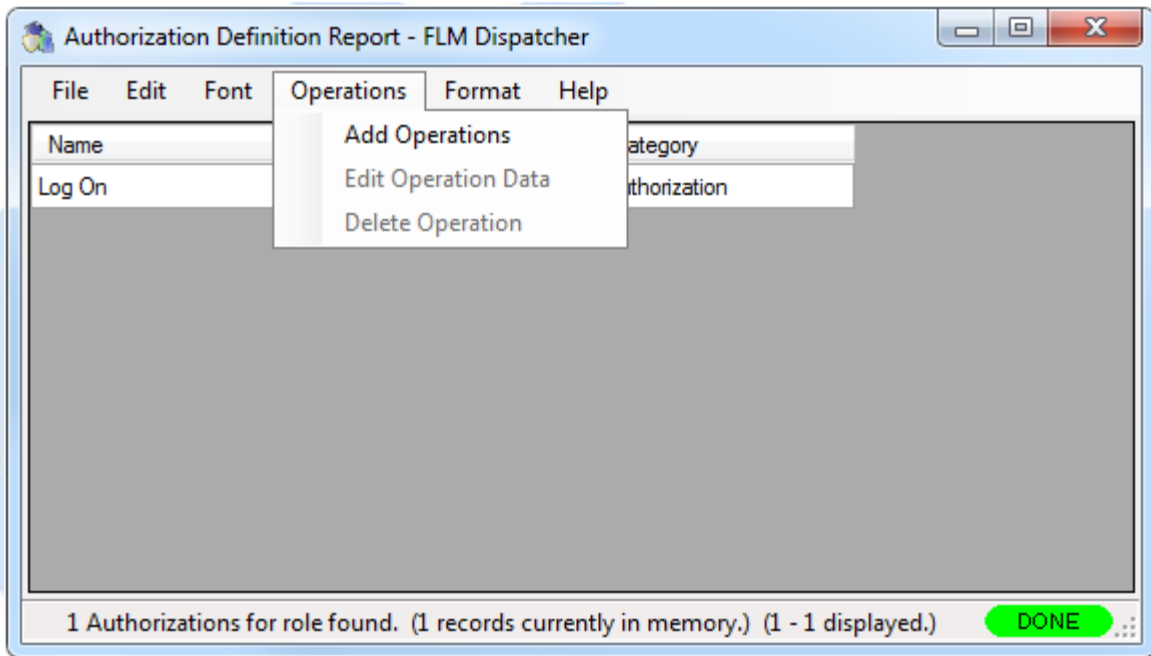
Select add to open the task selector:
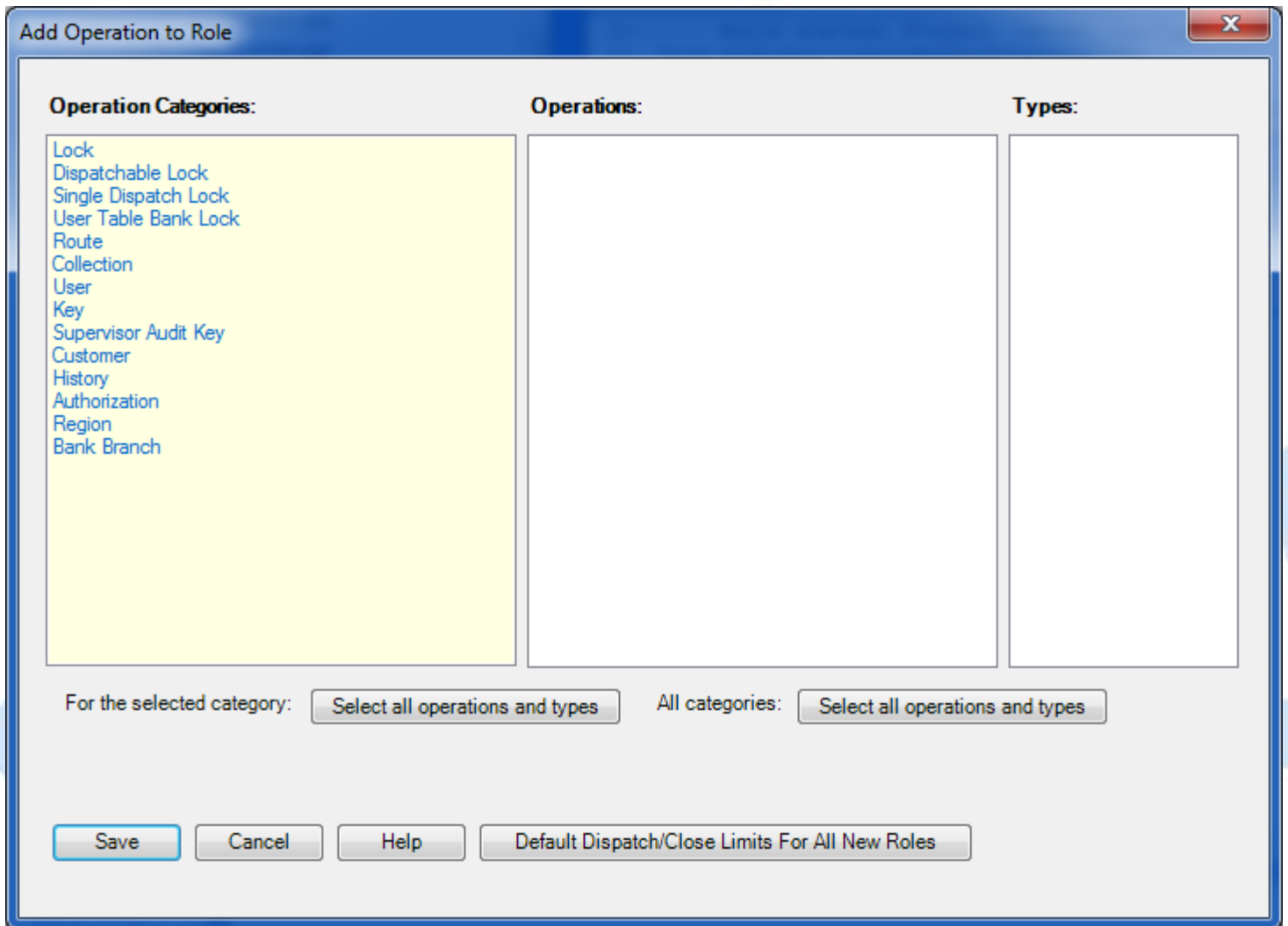
Since our new user is only allowed to dispatch, reassign, and close FLM locks, select the Dispatchable Lock category to display the available tasks related to dispatching locks. Then select Dispatch Lock, Reassign Lock, and Close Lock in the Operations list, followed by FLM only in the Types list for each operation selected.
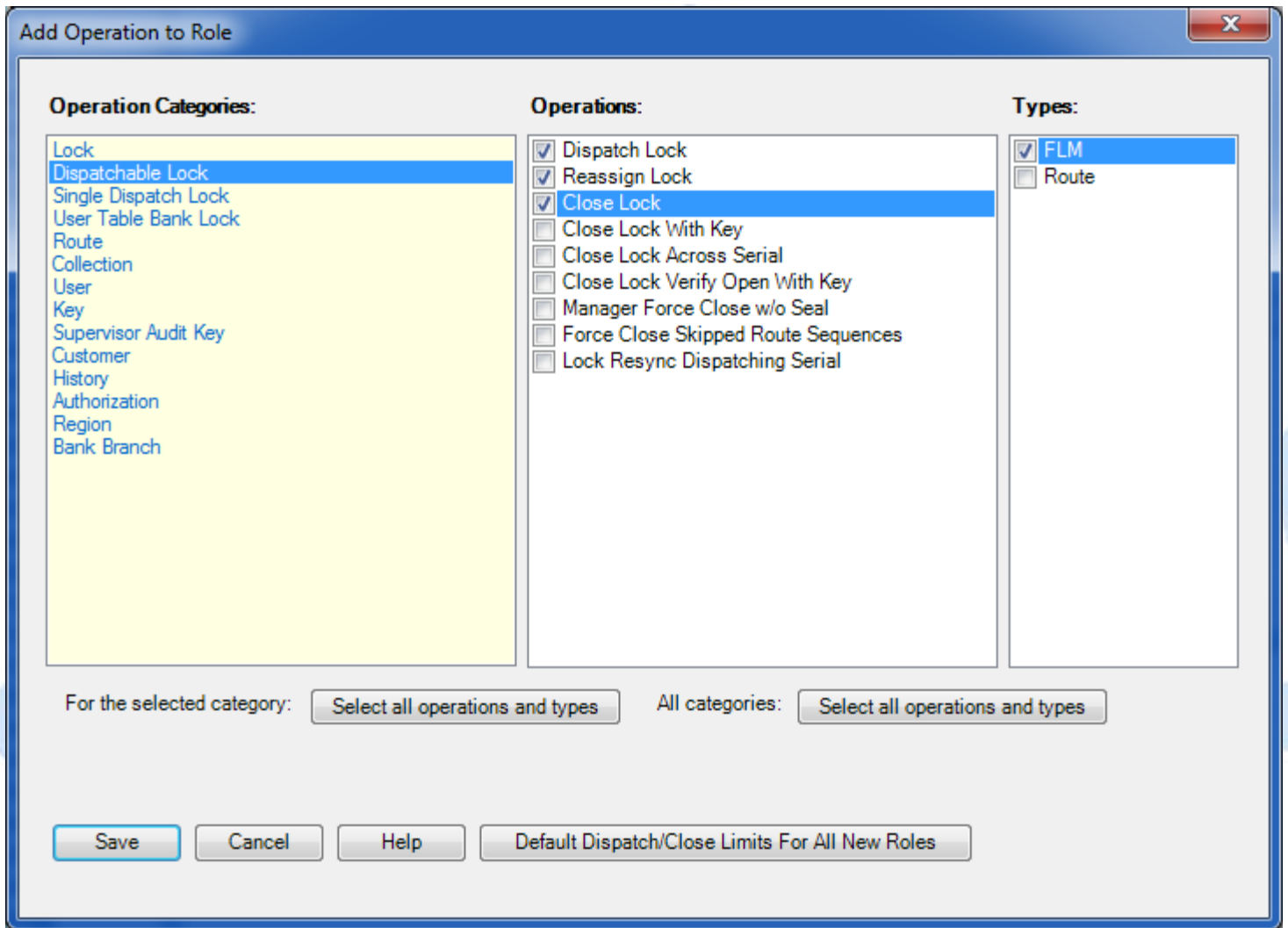
Finally, select Save to assign the selected tasks to the new role. The newly defined role will now be displayed in the User Type selection list on the Add a New User form. Resultant Authorization Definition Report for the new role:

Other Authorization Role Report operations:

Edit Role Data

The role edit dialog allows you to make changes to the name, description and status of the selected role:
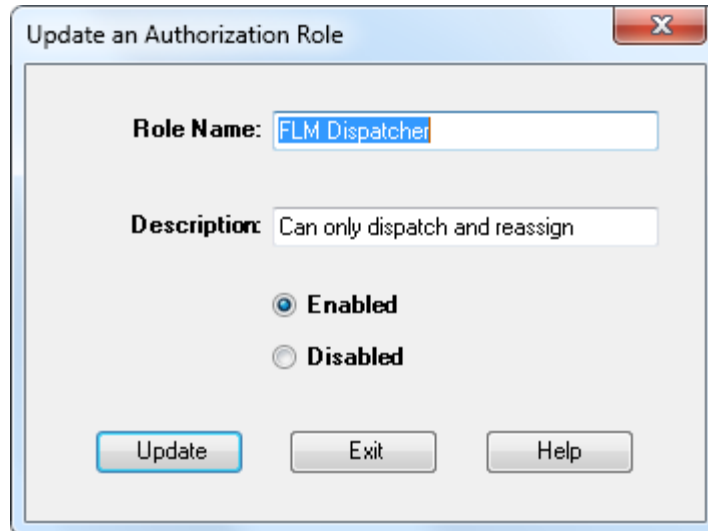
Delete Role

Delete the selected role. A verification dialog is displayed:
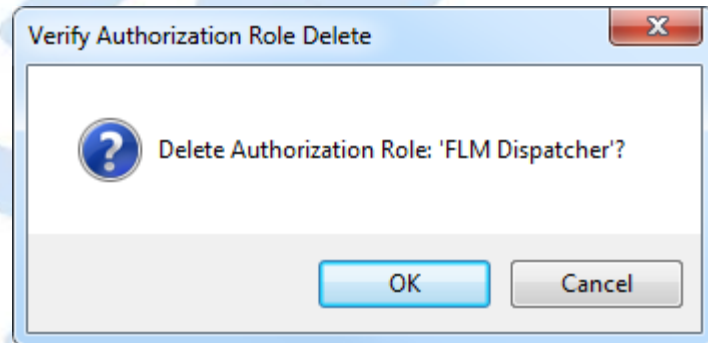
A role may not be deleted if there are any users assigned to it:
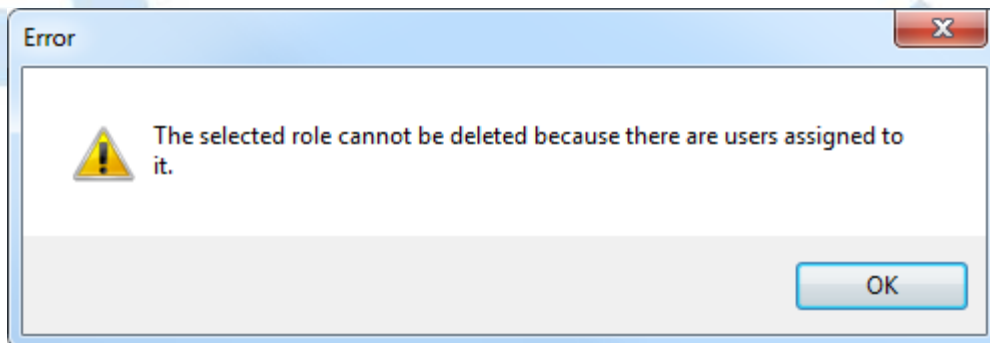
Copy Role

Sample Role Copy dialog:
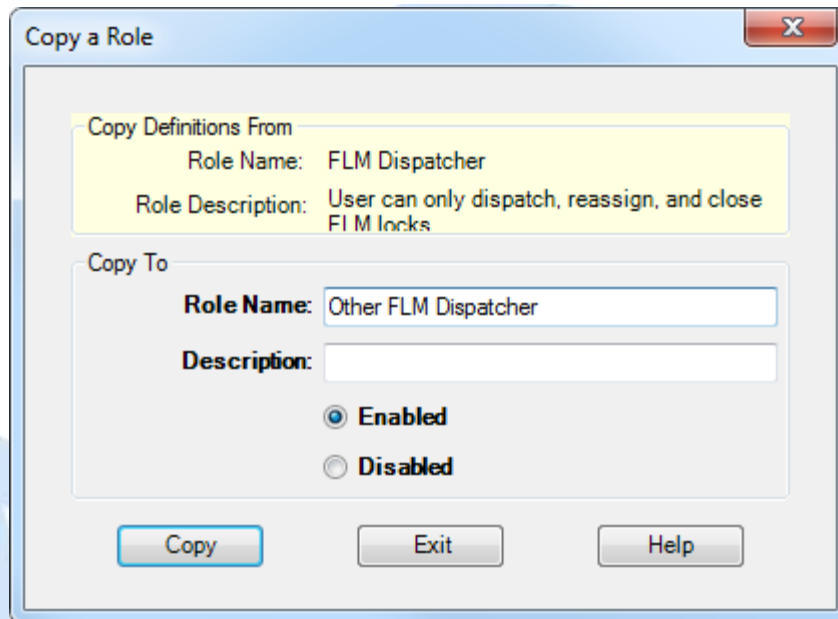
Enter a name for the new role and an optional description. Press **Copy** to create the new role and copy all the authorization definitions from the existing role to the new role:
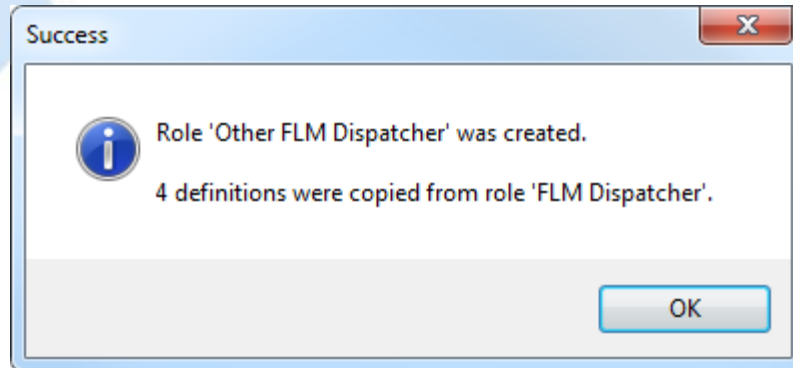
Enable Role

Allows the role to operate normally.

Disable Role

Disables all users assigned to the role such that they may not perform any Cencon operations.

Role Definition Listing

This function opens the Authorization Definition Report.

3.6.2 Authorization Definitions

This report (accessed from the Authorization Role Report) allows you to manage all the operations allowed for the selected role. The following is a sample Role Definition Report for a **Dispatcher Plus** role, which has been copied from the **Dispatcher** role:

Name	Type	Category
Add Customer	Customer	Customer
Add Lock Collection	Collection	Collection
Add Locks To Collection	FLM	Lock
Add Locks To Collection	Route	Lock
Add Locks To Route	Route	Route
Add Route	Route	Route
Add Users To Lock	Bank	User Table Bank Lock
Assign Lock	FLM	Single Dispatch Lock
Audit Table Query	Audit	History
Change Other User Password	Bank	User
Change Other User Password	FLM	User
Change Other User Password	Route	User
Change Own User Password	Dispatcher	Authorization
Change User Nickname	Bank	User
Change User Nickname	FLM	User
Change User Nickname	Route	User
Change User Open Windows	Bank	User
Change User Open Windows	FLM	User
Change User Open Windows	Route	User
Close Lock	FLM	Dispatchable Lock
Close Lock	Route	Dispatchable Lock
Close Lock Across Serial	FLM	Dispatchable Lock
Close Lock Across Serial	Route	Dispatchable Lock
Close Lock With Key	FLM	Dispatchable Lock
Close Lock With Key	Route	Dispatchable Lock
Close Locks On Route	Route	Route
Close Route Using Key	Route	Route
Customer Table Query	Customer	Customer
Delete Customer	Customer	Customer

145 Authorizations for role found. (145 records currently in memory.) (1 - 31 displayed.) DONE

For example, the above report indicates that the **Dispatcher Plus** role is authorized to change the user nickname for Bank, FLM and Route type users but not for any other users.

The available operations are:

Add

Use the Add dialog to add additional operations. For example, the following **Add** dialog gives our **Dispatcher Plus** role the authorization to also change the nickname for Special Supervisors:

<div style="border:1px solid #888">

Note

Types which have already been added to the current role, as well as those operations for which all the related types have already been added, are marked as selected in the Add Operation to Role dialog; these selections cannot be changed in this dialog.

</div>

Default Dispatch/Close Limits For All New Roles: Some operations (dispatch and close lock in FLM and Route mode) have common associated values which can be set. The associated values are 'Number of simultaneous dispatches allowed for FLM/Route keys' and 'Allowed number of failed attempts to close a specific FLM/Route lock':
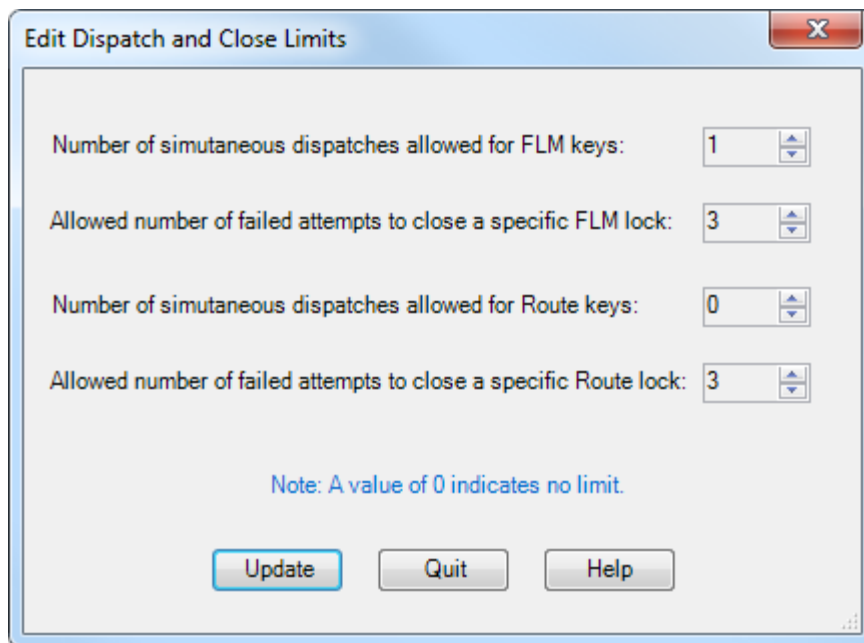
Edit Operation Data

Some operations (dispatch and close lock in FLM and Route mode) have associated settings which may be modified as in the following example for closing locks:
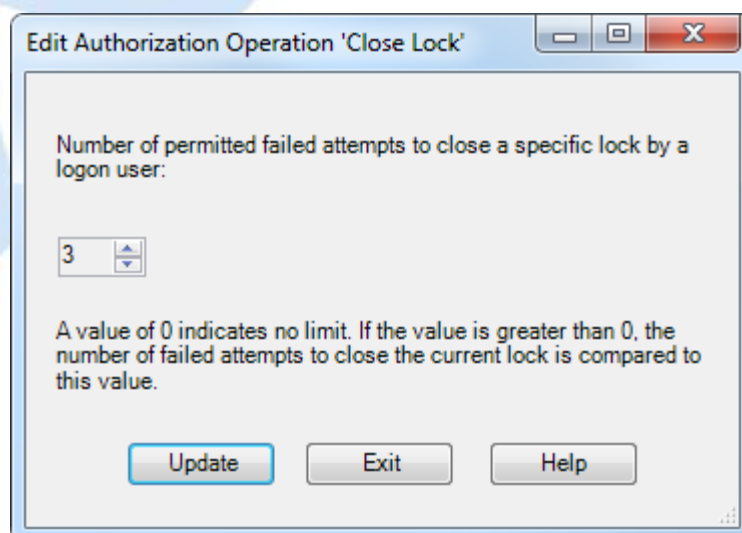
Delete

Removes the selected task from the role. A verification dialog is displayed.

3.6.3 Region Maintenance

A variety of common operations can be done with reports, to include printing, saving in various formats, and sorting the contents of the report. You can refer to these common report operations in section 3.0 Reports.

This report allows you to add, edit and delete regions defined for the Cencon system.

Region Implementation Of Access Control

The use of Region control can be enabled or disabled from the Update Configuration File function.

Region control is a method of controlling what locks and FLM/RSP IDs can be viewed or accessed by different Cencon logon users.

This is done by assigning a region ID to locks and users. A region ID is a name up to 64 characters long. There is a table of region IDs that is maintained to keep track of what regions have been defined.

There are two types of regions: Global and Local. A Cencon logon assigned to a global region can view and administer any lock and FLM/RSP ID in the system. A Cencon logon assigned to a local region can only view and administer locks and FLM/RSP IDs with the same assigned region. The type of region only affects what Cencon logon users can view. It make no difference as to how regions are used for lock operations.

Additionally, regions control which locks that FLM/RSP IDs can be dispatched to. FLM/RSP IDs can not be dispatched to locks assigned to a different region.

Example:

Assume you have two regions: Lexington which is a global region, and Richmond which is a local region.

The following are assigned to the Lexington global region:

Locks:	LockLex1, LockLex2
FLM IDs:	FLMUserLex1, FLMUserLex2
Dispatcher:	DispatcherLex

The following are assigned to the Richmond local region:

Locks:	LockRich1, LockRich2
FLM IDs:	FLMUserRich1, FLMUserRich2
Dispatcher:	DispatcherRich

DispatcherLex can see and dispatch all of the locks - LockLex1, LockLex2, LockRich1, LockRich2. DispatcherLex can also see and dispatch all of the FLM/RSP IDs - FLMUserLex1, FLMUserLex2, FLMUserRich1, FLMUserRich2.

DispatcherRich can only see and dispatch the locks assigned to region Richmond - LockRich1, LockRich2. DispatcherRich can also only see and dispatch the users assigned to region Richmond - FLMUserRich1, FLMUserRich2.

The FLM IDs FLMUserLex1 and FLMUserLex2 can only be dispatched to the locks assigned to the same Lexington region - LockLex1, LockLex2.

The FLM IDs FLMUserRich1 and FLMUserRich2 can only be dispatched to the locks assigned to the same Richmond region - LockRich1, LockRich2.

Click on **Regions** under the System Category on the main window. The following Search screen is displayed prior to generating the report to allow filtering for specific region records:

Upon selecting 'OK', the regions matching the given search parameters will be displayed. Depending on the number of matching regions and the speed of your database connection, it may take several seconds for the regions to be displayed. You can still do operations with the report even while regions are still being loaded into memory. If your computer does not have enough memory to keep all of the regions in memory, then the report will fetch regions as needed depending on the portion of the report you are looking at. If this occurs, then the word 'Partial' will be displayed on the report status bar.

Sample Regions report:

Region Report

File   Edit   Font   Operations   Format   Help

Region	Type
TEST6	Regional
TEST5	Regional
TEST4	Global
TEST3	Regional
TEST2	Regional
TEST1	Global
TEST CREATE LOGON REG...	Global
SOMETEMPREGION	Global
SOMEOTHERREGION	Global
SOMENEWREGION	Global
S	Global
PACIFIC WEST	Regional
ONEMOREREGION	Global
NORTH BANK	Regional
NEWREGION	Global
NCR CENBANK	Regional
NASHVILLE	Regional
LOOMIS	Global
LOCALBANK	Regional
LOCAL1	Regional
KENTUCKY	Regional
JERRILL'S REGION	Regional
FRANKFORT	Regional
EAST BANK	Global
DIEBOLD	Regional
CENTRAL	Regional
ANOTHERNEWREGION	Regional

41 regions found. (41 records currently in memory.) (15 - 41 displayed.)   DONE

The region operations are Add, Modify and Delete:
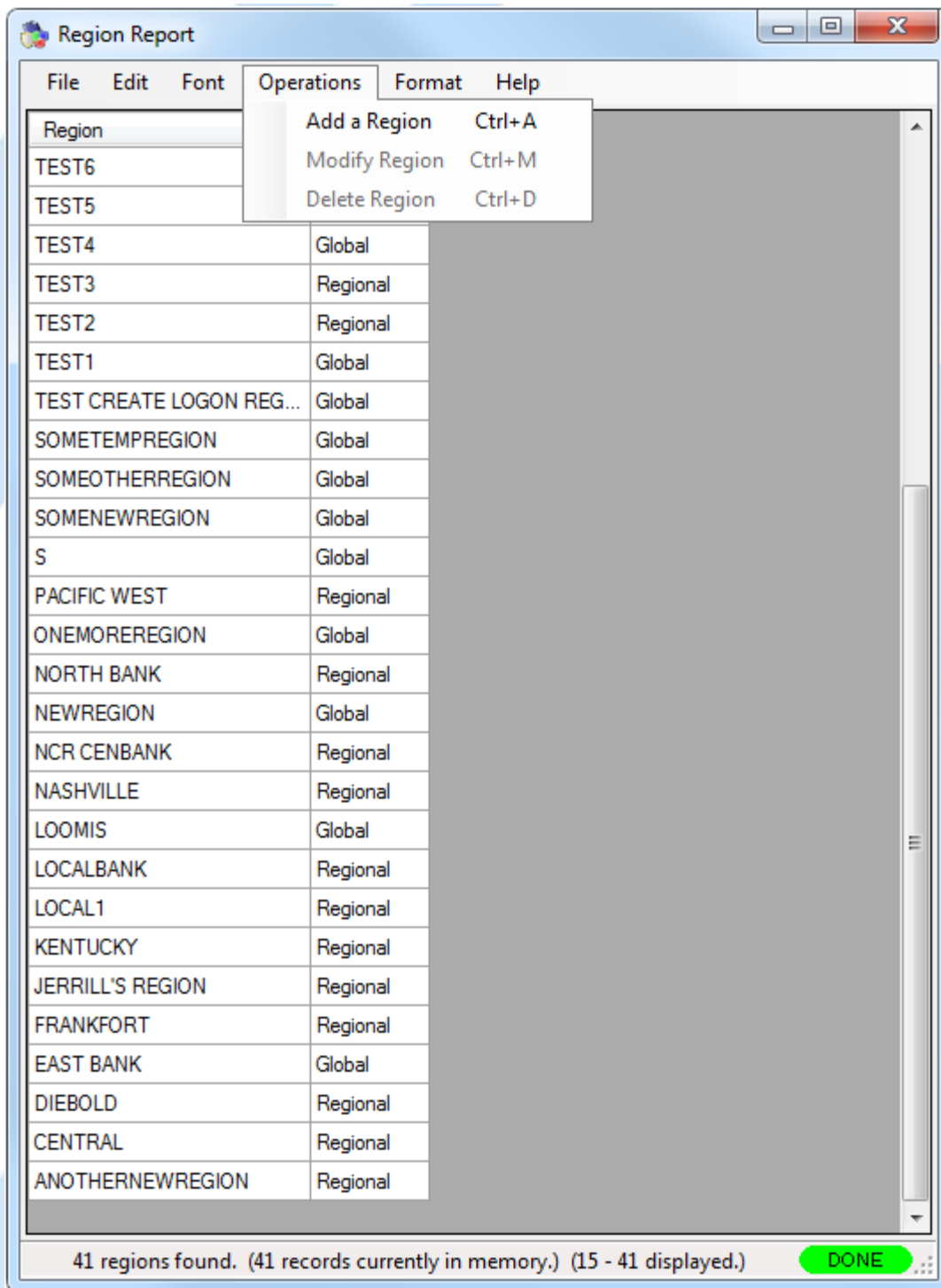
To add a region, click on **Add a Region**. The Create New Region window is displayed. Enter the name of the new region, select the region type, and click on **Add and Exit** if you are just adding one region or **Add** to continue adding new regions.

Use **Modify Region** to change the type of an existing region. Use **Delete Region** to delete a region.

3.6.4 Update Configuration File

To update the configuration file, complete the following steps:

1. Click on **Change Configuration Settings**. The Update Configuration Data window is displayed.

2. Edit the following data fields as desired.

Region Control

This field indicated if you want to use region control or not. If you don't want to use region control, leave this box unchecked. If you do want to use region control, check this box. Region control is a method of controlling what locks and FLM/RSP IDs can be viewed or accessed by different Cencon logon users.

This is done by assigning a region ID to locks and users. A region ID is a name up to 64 characters long. There is a table of region IDs that is maintained to keep track of what regions have been defined.

There are two types of regions: Global and Local. A Cencon logon assigned to a global region can view and administer any lock and FLM/RSP ID in the system. A Cencon logon assigned to a local region can only view and administer locks and FLM/RSP IDs with the same assigned region. The type of region only affects what Cencon logon users can view. It make no difference as to how regions are used for lock operations.

Additionally, regions control which locks that FLM/RSP IDs can be dispatched to. FLM/RSP IDs can not be dispatched to locks assigned to a different region.

Example
Assume you have two regions: Lexington which is a global region, and Richmond which is a local region.

The following are assigned to the Lexington global region:

Locks:	LockLex1, LockLex2
FLM IDs:	FLMUserLex1, FLMUserLex2
Dispatcher:	DispatcherLex

The following are assigned to the Richmond local region:

Locks:	LockRich1, LockRich2
FLM IDs:	FLMUserRich1, FLMUserRich2
Dispatcher:	DispatcherRich

DispatcherLex can see and dispatch all of the locks - LockLex1, LockLex2, LockRich1, LockRich2. DispatcherLex can also see and dispatch all of the FLM/RSP IDs - FLMUserLex1, FLMUserLex2, FLMUserRich1, FLMUserRich2.

DispatcherRich can only see and dispatch the locks assigned to region Richmond - LockRich1, LockRich2. DispatcherRich can also only see and dispatch the users assigned to region Richmond - FLMUserRich1, FLMUserRich2.

The FLM IDs FLMUserLex1 and FLMUserLex2 can only be dispatched to the locks assigned to the same Lexington region - LockLex1, LockLex2.

The FLM IDs FLMUserRich1 and FLMUserRich2 can only be dispatched to the locks assigned to the same Richmond region - LockRich1, LockRich2.

Enable Cencon Lock Remote Shelve to Require a Change Key Be Present In The Lock

This field indicates if you want to require that a change key be present in the lock in order to shelve the lock remotely, such as across a network. This is used if you want to require that someone is present at the lock when you are remotely shelving the lock.

This field affects remotely shelving a lock with Cencon as well as CenTran. In the case of Cencon, if a change key is not present in the lock and this flag is set, then an error message will be displayed. In the case of CenTran and this same circumstance occurs, an error code will be returned.

User Nickname Expiration

This field designates the number of days allowed to pass before a nickname for a user expires and must be changed to a different nickname. Nicknames can be designated for FLM and Route personnel for added security purposes. If not using nicknames in the system or you do not wish to define an expiration time for nicknames, set the value to 0.

Lock User Defined Fields 1 - 4

These fields designate the column titles to be used when they are displayed on a lock report.

Lock Description Fields 1 - 4

These fields designate the column titles to be used when they are displayed on a lock report.

3. Click on **OK**.

3.6.5 Preference Settings

To update the preferences, complete the following steps:

1. Click on **Preference Settings**. The Preference Settings window is displayed.
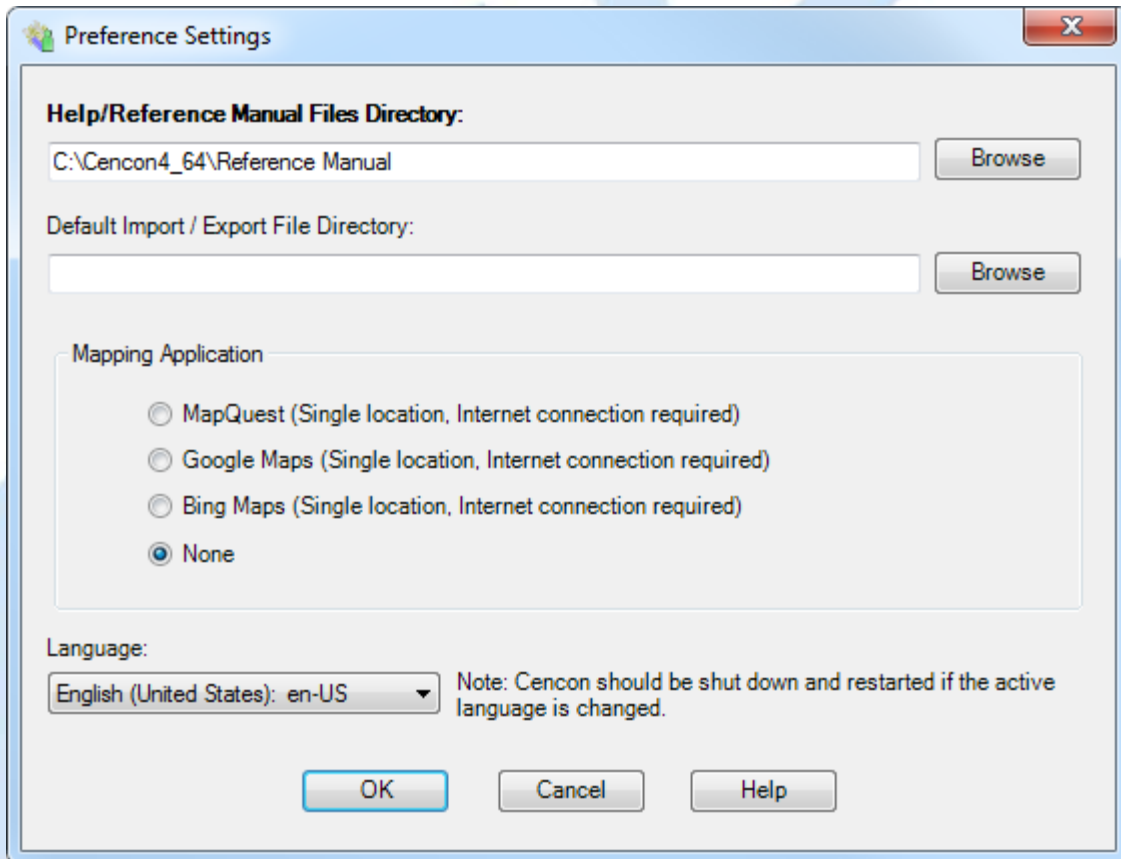
2. Edit the following data fields as desired:

Help Files Directory
> Specify the location of the Cencon Help files.

Default Route File Directory
> Specify the default location for route definition files.

Mapping Software
> Specifies which mapping software to use for displaying geographic locations.
>
> **MapQuest**, **Google Maps** and **Bing Maps** are free internet services that display a single location on a map. An active internet connection is required to use these.

Language
> Specifies the language translation used for window text and messages.

3. Click on **OK** to save the settings.

3.6.6 Security Hardware Report

Select **Security Hardware Report** to display information about the active security device. There are no operations for this report.

Sample Cencon Key Box security report:

Security Hardware Report

Hardware Details

Security Hardware Type	Cencon USB Key Box
Firmware Version ID	200712
Firmware Version	1.3.1635 2009/10/20 17:05:37
Hardware Serial Number	01264E9412000098
Device ID	0009
Customer ID	Brink's Route ALL CARDS
Kaba Mas Customer Number	0063
Kaba Mas Order Number	2009-10-22 13:22:12Z
Device Initialization Date	2009-10-22
Abbreviated Device ID	0137
Abbreviated Customer ID	0063
Device Description	Testing Unlimited
Maximum Number FLM Locks Restriction	Unrestricted
Maximum Number Route Locks Restriction	Unrestricted
Maximum Number Bank Locks Restriction	Unrestricted
Maximum Number Key Box Reinstallation Restriction	Unrestricted
Last Install - Description	
Last Install - Date	1/11/2010 1:51:19 PM
Last Install - Audit Count	16
Last Install - Install Count	15
Last Install - IP Address	10.108.6.106 (IPv4)
Last Install - MAC Address	00:1A:A0:11:BD:28
Last Install - Key ID	18A1BB5400000088
Total Audit Count	16

The toolbar provides access to the following standard functions:

- Save
- Save As

Page Setup

- Print
- Exit

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Chapter 4 - Cencon Locks

4.1 Model Types and Operating Differences

4.1.0 Cencon Locks

The Cencon Locks operate in conjunction with the Cencon Software. From a functional standpoint, all Cencon locks offer the same basic capabilities. For more than a decade, the Cencon lock which we now refer to as Gen1, has met and exceeded the market's needs.

Cencon Gen2 Locks

Those users who are familiar with the operation of the Gen1 lock will notice few differences if operating the Gen2 lock as they did the Gen1 lock. However, many product enhancements exist with the Gen2 lock that are dependent on the type of PC equipment used to activate the lock. A few highlights are as follows:

Compatibility Mode occurs when the Gen2 lock's mode is activated from Cencon software using a PCI card (FLM or Route) or from the CenBank software (Bank Mode).

Gen2 Features Available in Compatibility Mode:

- Clock is in the lock, providing more accurate audit times and provide a consistent basis for all keys servicing that lock
- Time-stamped audits of factory mode activity.
- **bEC** indicates upon power-up that clock battery is low or dead (after up to 9 years).
- **cEC** notifies user when the clock has been reset to 1/1/2000 after battery was removed/replaced.
- Clearing Lock Out is easier (now any authorized key + combo can clear the LCO after the penalty period is complete).
- Connector for Door Contact Switch and Remote Disable function input to the lock.
- Pressing Keypad Prompts (#7x) displays helpful information to the field user: which modes are active; current GMT date/time; last open record and activation record by mode; key serial number & type; etc.
- Faster Downloading of Audit records to SA key.
- More audit memory storage, new audit types, and clearer audit descriptions.
- Back Cover can be returned to Kaba Mas for firmware upgrades in the future.
- Lock will not continue to display "IPI" after mode shelved or factory reset, when the key forgot to get its last close seal
- Improved ESD-resistance to the memory.

Full Gen2 Mode

To take advantage of its full range of features, the Gen2 lock would need to be originally activated from the Cencon 5 software using a new USB Key Box. Alternatively, if Gen2 locks were originally activated in compatibility mode and then later imported into Cencon 5 which used the USB Box, an "update activation key" could be programmed and taken to the lock in order to reinitialize it into full Gen2 Mode.

Gen2 Features Available in full Gen2 Mode (all of the Gen2 Features Available in Compatibility Mode plus the following):

- Algorithm Encryption method made more secure.
- Lock Synchronization Key to re-sync locks with database in rare cases of audit count mismatch.
- Allows usage of future DS1963 keys for F, R, or B mode.
- Starts using a 4-digit Close Seal, improving security by encoding duress and clock/battery warning back to the dispatcher.
- Allows use of the Serial Interface Connection, to do remote operations or operations directly connected to Cencon PC (audit, activate, shelve, etc.).
- Allows a Lock Serial Number greater than 1 million to be activated and dispatched.
- Additional information from #7: local time by mode; which customer and USB key box activated each mode; etc.

- Bank Mode Features:
  - Expanded bank mode User Table; from 32 to 100 user IDs available.
  - Bank mode allows User Table download to determine current active users.
  - Time delay range will be expanded from 5-99 minutes to 1-99 minutes.
  - Ability to set the default Bank mode combinations on the key during activation in the software.

Battery Notes

All time window processing and audit time stamps are based on the time maintained in the lock.

The **cEC** prompt is a modified "Enter Combination" prompt which indicates that the clock has not been set. If you see this prompt, use the Cencon software to create a clock set key (see Initialize Lock Time Set Key for details).

The **bEC** prompt is a modified "Enter Combination" prompt which indicates that the clock battery needs replacing. When selecting a user to change the battery, choose a user who does not have time windows restrictions. If using a bank user key to open the lock and a time delay is set, the lock will honor the delay but will require additional power ups during the delay period (each power up cycle provides about 2 minutes of time).

4.1.1 Lock Operating Tips

The method for powering locks is to turn the dial to the left (counter-clockwise), using full wrist turns, until EC appears. Please note that on the new Swingbolt Cencon Locks you power the lock by turning the dial briskly in any direction, until EC appears.

When performing operations that involve opening the lock, you have an approximate 40-60 second window in which to enter the combination(s) and present the key order to get **OPr** and open the lock. If any delay in activity occurs during that window which might cause the lock to get low on power, you should dial left to "repower" lock. Especially in dual mode, it is sometimes necessary to power the lock before entering the second combination to ensure that the lock does not power down during the operation. If the lock loses power, the operation must be restarted.

After opening and closing any lock, you should always check to ensure that the lock is physically relocked (i.e., bolt fully extended and locked in place) by turning the dial to the right for a Deadbolt lock. If the bolt does not retract, you can be assured the lock is secured. For a Swingbolt Lock you close the container door and turn the boltworks handle to verify locking.

4.1.2 Lock Operations

The following section covers detailed Lock Operations. A few general items that apply throughout this section are noted below.

CW= Clockwise; CCW = Counter Clockwise for Deadbolt Locks. Turn the dial briskly in any direction for Swingbolt Locks.

Note

When performing operations that involve opening the lock, you have an approximate 40-60 second window in which to enter the combination(s) and present the key(s) in order to get OPr and open the lock. If any delay in activity occurs during that window which might cause the lock to get low on power, you should dial left to "repower" the lock. Especially in dual mode, it is sometimes necessary to power the lock before entering the second combination to ensure that the lock does not power down during the operation. If the lock loses power, the operation must be restarted.

Note

If **-dL** appears on the lock display at anytime during an operation, it indicates that you should dial Left (CCW) for Deadbolt Locks.
If **-dL** appears on the lock display at anytime during an operation, it indicates that you should turn the dial briskly in any direction for Swingbolt locks.

Note

After opening and closing a Deadbolt lock, you should always check to ensure that the lock is physically relocked (i.e., bolt fully extended and locked in place) by turning the dial to the right. If the bolt does not retract, you can be assured the lock is secured. For a Swingbolt Lock you close the container door and turn the boltworks handle to verify locking.

4.1.3 Lock Operations with a Door Contact Switch

If a Gen2 Cencon lock is attached to a Door Contact Switch, close seals (FLM and Route modes) and close confirmations (Bank mode) cannot be retrieved if the door is open. When the door is open, instead of an IPI prompt the lock displays **OPd** (**Op**en **d**oor) and powers down, indicating that the door is open and that the close seal or close confirmation cannot be retrieved. This situation is most likely to occur If the lock bolt is extended with the door open, in which case the user is probably not going to be able to close the door and must reopen the lock to do so.

The user will require a second dispatched combination (FLM and Route modes) to open the lock, close the door, and extend the bolt to obtain the close seal (FLM and Route mode) or close confirmation (Bank mode). This second combination is obtained by the dispatcher by performing a **Manager Force Close w/o Seal** followed by a dispatch.

In order to dial to the **EC** prompt to enter the second combination to reopen the lock and allow the door to be closed, the user must dial clockwise to bypass the **OPd** prompt.

After **EC** is displayed, the user enters the second combination and presents the key in the normal manner. At this point, the lock automatically closes out the last call. An example of the lock audit for this is:

> FLM, Open
>
> Sensor - door open
>
> FLM, Open/Close

It is the responsibility of the safe manufacturer to secure the Door Contact Switch and associated cables to prevent tampering.

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4.2.1 Open Lock In Shelved Mode

Each lock is shipped from the factory in Shelved Mode. The "one time only" combination feature is not available when the lock is shelved. Instead, the Shelved Mode combination is used to open the lock. The default Factory Combination is set to 50-25-50. The default combination may be changed, in which case the new combination would be used to open the lock while in Shelved Mode. The correct opening procedure for a shelved lock is:

1. **Power Lock → EC**
   Turn the dial left (CCW) until the letters **EC** (**E**nter **C**ombination) appear in the display window.

2. **EC → Enter Shelved Mode Combination → OPr**
   If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. Enter the current Shelved Mode combination, whether it be the Factory Combination of 50-25-50 or a new Shelved Mode combination, by sequentially pressing those digits on the lock keypad. The LCD will display the numbers as the combination is entered. When the combination has been correctly entered, the LCD will read **OPr**, meaning "**OP**en **r**ight."

3. **OPr → Retract Bolt**
   Turn the dial to the right (CW) to retract the bolt.

4. **Open Door**

5. **Close Door**

6. **Extend Bolt** Turn the dial a minimum of one complete rotation to the left (CCW) to extend the bolt.

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4.2.2 Change Shelved Mode Combination

For Cencon Locks with a code level of 71, or greater, you may change the Shelved Mode combination. You may change the default Factory Combination of 50-25-50 to a new combination to be used while the lock is still in Shelved Mode. Once you have changed the combination for the first time, you may want to change the combination again to a different Shelved Mode combination. You can even change it back to the Factory combination of 50-25-50 if you would like.

Required Items: Change Key, Current Shelved Mode Combination

> **Note**
>
> You can only change the Shelved Mode combination while operating in Shelved Mode. Once a lock is "activated" in any mode, the Shelved Mode combination returns to the Factory Default of 50-25-50.

To change the Shelved Mode combination:

1. **Power Lock → EC**
   Turn the Dial to the left (CCW) until "**EC**" (**E**nter **C**ombination) is displayed.

2. **EC → Enter Shelved Mode Combination → OPr**
   If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. Enter the current Shelved Mode combination (either 50-25-50 or a changed Shelved Mode combination) by sequentially pressing those digits on the lock keypad. The numbers will be displayed on the LCD as they are entered. When the combination has been correctly entered, the LCD will read **OPr**, meaning "**OP**en **r**ight."

3. **OPr → Retract Bolt**
   Turn the Dial to the right (CW) to retract the bolt.

4. **Open Door**

5. **Insert Change Key**
   Insert the change key into the change key socket on the back of the lock.

6. **Extend Bolt**
   Turn the Dial to the left (CCW) to extend the bolt. Do not close the door.

7. **Power Lock →** `tEC`

   Turn the dial to the left (CCW) until `tEC` (the Change Key symbol along with **E**nter **C**ombination) is displayed.

8. `tEC` **→ Press #8 → EcF**

   Press the "#" button followed by the "8" button. **EcF** (**E**nter **c**urrent **F**actory combination) will be displayed.

9. **EcF → Enter Current Shelved Mode Combination → EnF**
   Enter the current shelved mode combination, "**EnF**" (**E**nter **n**ew **F**actory combination) will be displayed.

10. **EnF → Enter New Combination → CnF**
    Select and enter the new combination. "**CnF**" (**C**onfirm **n**ew **F**actory combination) will be displayed.

    > **Note**
    >
    > The new Shelved Mode combination should be recorded and stored in a secure area.

11. **CnF → Enter New Combination → POC**
    Enter new combination again to confirm. **POC** (**P**ull **O**ut **C**hange key) will be displayed.

12. **POC → Remove Change Key → EOP**
    Remove the change key. **EOP** (**E**nd **OP**eration) is displayed.

13. **EOP → Power Lock → EC**
    Turn the dial to the left (CCW) until **EC** (**E**nter **C**ombination) is displayed.

14. **EC → Enter New Shelved Mode Combination → OPr**

If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. Enter the new shelved mode combination by pressing those digits on the lock's keypad. The numbers will be displayed on the LCD as they are entered. When the combination has been correctly entered, the LCD will read **OPr**, meaning "**OP**en **r**ight."

15. **OPr → Retract Bolt**
   Turn the Dial to the right (CW) to retract the bolt.

16. **Close Door**

17. **Extend Bolt**
   Turn the Dial to the left (CCW) to extend the bolt.

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4.2.3 Display Serial Number

The Lock's Serial Number may be displayed at any time.

1. **Power Lock → EC**
   Power the Lock by turning the dial to the left (CCW) until **EC** appears in the display window.

2. **EC → Press #2 → Sn- xx xx xx** or **Sn- xxx xxx xxx**
   Press **#** followed by **2**.

   For Gen1 locks: The lock will display **Sn-** (**S**erial **n**umber) followed by the serial number, displaying two digits at a time. If the Lock Serial Number is **998877**, "**Sn-**", then "**99**", then "**88**", then "**77**" will be displayed.

   For Gen2 locks: The lock will display **Sn-** (**S**erial **n**umber) followed by the serial number, displaying three digits at a time. If the Lock Serial Number is **1000022**, "**Sn-**", then "**001**", then "**000**", then "**022**" will be displayed.

3. **Sn- xx xx xx** or **Sn- xxx xxx xxx → Record Serial Number**
   Record the Serial Number. You will need this number when you activate the lock.

> **Note**
>
> As long as the Gen2 serial number starts with 000 (3 zeros) you can enter this Gen2 serial number into versions of Cencon and CenBank software released before 2009, by ignoring the first 3 digits and typing in only the last 6 digits. If your Gen2 lock serial number begins the first 3 digits with 001 or higher, you must be using Cencon version 4.0 or higher to activate the lock.

> **Note**
>
> This display can be canceled by pressing the asterisk (*) key, or it will automatically be canceled when the lock powers down.

4.2.4 FLM and Route Lock Activation

Lock activation requires a coordinated effort between a Dispatcher and an FLM or Route Person. Remember that a lock may be activated in more than one mode at a time, which means that sometimes the lock will already be activated in one mode when you want to activate it in another.

A *Dispatcher* activates the lock at the PC using the software program and the red **SA** key. An *FLM or Route Person* physically goes to the lock to complete the activation, using the initialized **SA** key, a blue F or yellow R key, change key and an activation combination obtained from the Dispatcher.

> **Note**
>
> If the lock is already active in another mode, a service call must be issued for that mode so that the lock can be opened for the new activation.

A Change Key is required for this procedure. This is a tool that will normally be in the possession of the FLM or Route Service Person. The change key has two prongs that, when extended, fit securely into the change key holes on the back of the lock body. Any change key may be used in any Cencon Lock. The change key is not encoded or unique in any way.

To Activate Lock from Shelved Mode:

This process should be followed when the lock is not currently activated in any mode; that is, it is in Shelved Mode.

Required Items: Shelved Mode Combination, Change Key, SA Key, F or R Key

1. **Power Lock → EC**
   Turn the dial to the left (CCW) until **EC** (**E**nter **C**ombination) appears in the display window.

2. **EC → Enter Shelved Mode Combination → OPr**
   If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. When **EC** is displayed, key in the current Shelved Mode combination. This could either be the default Factory Combination of 50-25-50 or a unique combination that was set while the lock was in Shelved Mode. **OPr** (**OP**en **r**ight) is displayed.

3. **OPr → Retract Bolt**
   At **OPr** turn the dial to the right (CW) to retract the bolt.

4. **Open Door**

5. **Insert Change Key**
   Extend the prongs on the change key and insert it into the change key socket on the back of the Lock.

6. **Extend Bolt**
   With the door open, turn the dial to the left (CCW) to extend the bolt.

7. **Power Lock → ‹tEC›**

   Turn the dial to the left (CCW) until ‹tEC› (the Change Key symbol along with Enter Combination) appears in the display window.

> **Note**
>
> At this point the container door is open. If a door sensor is connected to the Cencon lock, the message **OPd** will be displayed to indicate that the door is open as you turn the lock dial CCW (counter-clockwise) or if you turn the lock dial back and forth.
>
> You will not be able to get a close seal from the lock while the container door is open with a door sensor attached.
>
> Dial CW (clockwise) to get past the **OPd** message to an **EC** prompt.

8. **‹tEC› → Enter Shelved Mode Combination → ISA**

If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. When ▯ᵗᴱᴄ▯ is displayed, key

in the current Shelved Mode combination. Again, this could either be the default Factory Combination of 50-25-50 or a unique combination that was set while the lock was in Shelved Mode. **ISA** (**I**nsert **S**upervisor **A**udit key) is displayed.

9. **ISA → Insert and Hold SA Key → Ini**
   Insert and hold the **SA** Key in the key reader on the side of the lock. The lock will display **Ini** (**Ini**tializing) with a flashing bar over the "n" while the information is being processed.

10. **Ini → POC**
    Continue to hold the **SA** Key in the reader until **POC** (**P**ull **O**ut **C**hange Key) is displayed.

11. **POC → Remove SA Key & Pull Out Change Key → OPr**
    At the **POC** prompt remove the **SA Key** and **P**ull **O**ut the **C**hange key. **OPr** (**OP**en **r**ight) is displayed.

12. **OPr → Retract Bolt**
    At **OPr** turn the dial to the right (CW) to retract the bolt.

13. **Extend Bolt**

    Turn the Dial to the left (CCW) to extend the bolt.

14. **Power Lock → EC**
    Turn the dial to the left (CCW) until **EC** (**E**nter **C**ombination) appears in the display window.

15. **EC → Enter Activation Combination → IPI**
    If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. When **EC** is displayed, key in the activation combination. This is the combination that was issued at the PC software. **IPI** (**I**nsert **P**ersonal **I**dentifier) is displayed.

16. **IPI → Insert Personal Identifier Key → OPr**
    At **IPI** insert a valid FLM or Route key. **OPr** is displayed.

> **Note**
>
> If you have activated the lock in Dual Access Mode, the lock will prompt **EC2** for the second combination and then **IP2** for the second user's key before **OPr** will appear.

17. **OPr → Retract Bolt**
    At **OPr** turn the dial to the right (CW) to retract the bolt.

18. **Close Door**

19. **Extend Bolt**
    Turn the dial to the left (CCW) to extend the bolt.

20. **Power Lock → IPI**
    Turn the dial to the left (CCW) until **IPI** (**I**nsert **P**ersonal **I**dentifier) appears.

21. **IPI → Insert Personal Identifier Key → cxx or Cxx xx (C**lose Seal)
    At **IPI** insert a valid FLM or Route key.

    For Gen1 locks: The lock will display **cxx** (**c**lose seal) where **xx** is a two-digit number that is the Close Seal number for this opening.

    For Gen2 locks: The lock will display **Cxx xx** (**C**lose seal) where **xx xx** is a four-digit number that is the Close Seal number for this opening.

> **Note**
>
> To remove a two-digit close seal from the display, turn the dial to the left (CCW) until EOP appears. To stop the display of a four-digit close seal, press and briefly hold the * key. If you do not choose to manually eliminate the display of the close seal, it will automatically disappear when the lock powers down.

> **Note**
>
> An audit record will be recorded each time a key is inserted in the opening and closing operations.

22. **cxx** or **Cxx xx → Record Close Seal**
This Close Seal number should be called in to the Dispatch Center to close the activation call.

To Activate an FLM or Route Lock Mode from an Active FLM or Route Mode:

This procedure should be used when the lock has already been activated in at least one mode, either FLM or Route, and you wish to activate the other Cencon operating mode.

> **Note**
>
> Since the Lock has already been activated in one Mode and you are activating another, you will be required to meet someone at the Lock who has the authority to open it.

Required Items: Default Factory Combination, Change Key, SA Key, Activation Combination, F or R Key, Service Call Combination and F or R Key for Active Mode.

1. **Power Lock → EC**
   Turn the dial to the left (CCW) until **EC** (**E**nter **C**ombination) appears in the display window.

2. **EC → Enter Service Call Combination for Active Mode → IPI**
   If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. When **EC** is displayed, key in the one time combination that is already active. When the final number of the combination is keyed, the display will prompt **IPI** (**I**nsert **P**ersonal **I**dentifier).

3. **IPI → Insert Personal Identifier Key → OPr**
   At **IPI** insert the Personal Identifier Key for the mode that is already active into the Lock's key reader. **OPr** (**OP**en **r**ight) is displayed.

4. **OPr → Retract Bolt**
   At **OPr** turn the dial to the right (CW) to retract the bolt.

5. **Open Door**

6. **Insert Change Key**
   Extend the prongs on the change key and insert it into the change key socket on the back of the Lock.

7. **Extend Bolt**
   With the door open, turn the dial left (CCW) to extend the bolt.

8. **Power Lock →** `tEC`

   Turn the Dial left (CCW) until `tEC` (the change key symbol along with **E**nter **C**ombination) appears in the display

   window.

9. `tEC` **→ Enter Factory Combination → ISA**

   If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. Enter the Default Factory Combination of 50-25-50. **ISA** (**I**nsert **S**upervisor **A**udit key) is displayed.

10. **ISA → Insert and Hold SA Key → Ini**
    Insert and hold the **SA** Key in the key reader on the side of the lock. The lock will display **Ini** (**Ini**tializing) with a flashing bar over the "n" while the information is being processed.

11. **Ini → POC**
    Continue to hold the **SA** Key in the reader until **POC** (**P**ull **O**ut **C**hange Key) is displayed.

12. **POC → Remove SA Key & Pull Out Change Key → OPr**
    At the **POC** prompt remove the SA Key and **P**ull **O**ut the **C**hange key. **OPr** (**OP**en **r**ight) is displayed.

13. **OPr → Retract Bolt**
    At **OPr** turn the dial to the right (CW) to retract the bolt.

14. **Extend Bolt**
    With the door open, turn the dial left (CCW) to extend the bolt.

15. **Power Lock → IPI**
    Turn the Dial CCW until **IPI** (**I**nsert **P**ersonal **I**dentifier) appears in the display window.

16. **IPI → Insert Personal Identifier Key → cxx** or **Cxx xx** (**C**lose Seal)
    At **IPI** insert a valid FLM or Route key.

    For Gen1 locks: The lock will display **cxx** (**c**lose seal) where **xx** is a two-digit number that is the Close Seal number for this opening.

    For Gen2 locks: The lock will display **Cxx xx** (**C**lose seal) where **xx xx** is a four-digit number that is the Close Seal number for this opening.

17. **cxx** or **Cxx xx → Record Service Call Close Seal**
    This is the Close Seal number for the original service call that opened the Lock. It should be called in to Dispatch to close out this service call.

18. **Power Lock → EC**
    Turn the dial to the left (CCW) until **EC** (**E**nter **C**ombination) appears.

19. **EC → Enter Activation Combination → IPI**
    If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. When **EC** is displayed, key in the activation combination for the new mode being activated. **IPI** is displayed.

20. **IPI → Insert Personal Identifier Key → OPr**
    At **IPI** insert the Personal Identifier Key for the new mode being activated. **OPr** (**OP**en **r**ight) is displayed.

21. **OPr → Retract Bolt**
    At **OPr** turn the dial right (CW) to retract the bolt.

22. **Close Door**

23. **Extend Bolt**
    Extend the bolt and secure the Lock by turning the dial left (CCW).

24. **Power Lock → IPI**
    Turn the dial left (CCW) until **IPI** (**I**nsert **P**ersonal **I**dentifier) appears.

25. **IPI → Insert Personal Identifier Key → cxx** or **Cxx xx** (**C**lose Seal)
    At **IPI** insert a valid FLM or Route key.

    For Gen1 locks: The lock will display **cxx** (**c**lose seal) where **xx** is a two-digit number that is the Close Seal number for this opening.

    For Gen2 locks: The lock will display **Cxx xx** (**C**lose seal) where **xx xx** is a four-digit number that is the Close Seal number for this opening.

26. **cxx** or **Cxx xx** → **Record Activation Close Seal**
   This Close Seal number should be called in to the Dispatch Center to close the activation call.

To Activate an FLM or Route Lock Mode from an Active Bank Mode:

This procedure should be used when the lock has already been activated in Bank mode and you wish to activate another Cencon operating mode.

Required Items: Default Factory Combination, Change Key, SA Key, Activation Combination, F or R Key, Bank User Combination and B Key for Active Mode.

1. **Power Lock → EC**
   Turn the dial to the left (CCW) until **EC** (**E**nter **C**ombination) appears in the display window.

2. **EC → Enter Bank User Combination for Active Mode → IPI**
   If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. When **EC** is displayed, key in the one time combination that is already active. When the final number of the combination is keyed, the display will prompt **IPI** (**I**nsert **P**ersonal **I**dentifier).

3. **IPI → Insert Personal Identifier Key → OPr**
   At **IPI** insert the Personal Identifier Key for Bank mode into the Lock's key reader. **OPr** (**OP**en **r**ight) is displayed.

4. **OPr → Retract Bolt**
   At **OPr** turn the dial to the right (CW) to retract the bolt.

5. **Open Door**

6. **Insert Change Key**
   Extend the prongs on the change key and insert it into the change key socket on the back of the Lock.

7. **Extend Bolt**
   With the door open, turn the dial left (CCW) to extend the bolt.

8. **Power Lock →** [tEC]

   Turn the Dial left (CCW) until [tEC] (the change key symbol along with **E**nter **C**ombination) appears in the display window.

9. [tEC] **→ Enter Factory Combination → ISA**

   If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. Enter the Default Factory Combination of 50-25-50. **ISA** (**I**nsert **S**upervisor **A**udit key) is displayed.

10. **ISA → Insert and Hold SA Key → Ini**
   Insert and hold the **SA** Key in the key reader on the side of the lock. The lock will display **Ini** (**Ini**tializing) with a flashing bar over the "n" while the information is being processed.

11. **Ini → POC**
   Continue to hold the **SA** Key in the reader until **POC** (**P**ull **O**ut **C**hange Key) is displayed.

12. **POC → Remove SA Key & Pull Out Change Key → OPr**
   At the **POC** prompt remove the SA Key and **P**ull **O**ut the **C**hange key. **OPr** (**OP**en **r**ight) is displayed.

13. **OPr → Retract Bolt**
    At **OPr** turn the dial to the right (CW) to retract the bolt.

14. **Extend Bolt**
    With the door open, turn the dial left (CCW) to extend the bolt.

15. **Power Lock → IPI**
    Turn the Dial CCW until **IPI** (**I**nsert **P**ersonal **I**dentifier) appears in the display window.

> **Note**
>
> At this point the container door is open. If a door sensor is connected to the Cencon lock, the message **OPd** will be displayed to indicate that the door is open as you turn the lock dial CCW (counter-clockwise) or if you turn the lock dial back and forth.
>
> You will not be able to confirm the lock is closed while the container door is open with a door sensor attached.
>
> Dial CW (clockwise) to get past the **OPd** message to an **EC** prompt. Continue with step **18** to enter a combination and retract the bolt. The lock will prompt with **IPI** once the container door is closed, and you will be able to confirm the lock is closed then.

16. **IPI → Insert Personal Identifier Key → EOP** (**E**nd of **OP**eration)
    At **IPI** insert a valid Bank key to confirm the lock is closed and to display **EOP** (**E**nd of **OP**eration)

> **Note**
>
> An audit record will be recorded each time a key is inserted for opening and closing operations.

17. **Power Lock → EC**
    Turn the dial to the left (CCW) until **EC** (**E**nter **C**ombination) appears.

18. **EC → Enter Activation Combination → IPI**
    If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. When **EC** is displayed, key in the activation combination for the new mode being activated. **IPI** is displayed.

19. **IPI → Insert Personal Identifier Key → OPr**
    At **IPI** insert the Personal Identifier Key for the new mode being activated. **OPr** (**OP**en **r**ight) is displayed.

20. **OPr → Retract Bolt**
    At **OPr** turn the dial right (CW) to retract the bolt.

21. **Close Door**

22. **Extend Bolt**
    Extend the bolt and secure the Lock by turning the dial left (CCW).

23. **Power Lock → IPI**
    Turn the dial left (CCW) until **IPI** (**I**nsert **P**ersonal **I**dentifier) appears.

24. **IPI → Insert Personal Identifier Key → cxx** or **Cxx xx** (**C**lose Seal)
    At **IPI** insert a valid FLM or Route key.

    For Gen1 locks: The lock will display **cxx** (**c**lose seal) where **xx** is a two-digit number that is the Close Seal number for this opening.

    For Gen2 locks: The lock will display **Cxx xx** (**C**lose seal) where **xx xx** is a four-digit number that is the Close Seal number for this opening.

> **Note**
>
> To remove a two-digit close seal from the display, turn the dial to the left (CCW) until EOP appears. To stop the display of a four-digit close seal, press and briefly hold the * key. If you do not choose to manually eliminate the display of the close seal, it will automatically disappear when the lock powers down.

> **Note**
>
> An audit record will be recorded each time a key is inserted for opening and closing operations.

25. **cxx** or **Cxx xx** → **Record Activation Close Seal**
    This Close Seal number should be called in to the Dispatch Center to close the activation call.

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4.2.5 Open Lock - FLM or Route Mode

Once a lock has been activated in FLM and/or Route Mode, a "one time combination" is needed to open the lock. This combination is issued from the Cencon software. The correct opening procedure for an activated lock is:

Required Items: Issued Combination, Blue F or Yellow R Key

1. **Power Lock → EC**
   Turn the dial to the left (CCW) until **EC** (**E**nter **C**ombination) appears in the display window.

2. **EC → Enter Combination → IPI**
   If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. When **EC** is displayed, key in the one time combination. When the final number of the combination is keyed, the display will prompt **IPI** (**I**nsert **P**ersonal Identifier).

3. **IPI → Insert Personal Identifier Key → OPr**
   At **IPI** insert a valid FLM or Route key in the lock's key reader. **OPr** (**OP**en **r**ight) is displayed.

4. **Opr → Retract Bolt**
   At **OPr** turn the dial to the right (CW) to retract the bolt.

5. **Open Door**

6. **Perform Operations**
   Perform the service or route operations for the lock.

7. **Close Door**

8. **Extend Bolt → IPI**
   Extend the bolt and secure the lock by turning the dial left (CCW). When the lock is fully locked, the display will prompt **IPI** (**I**nsert **P**ersonal **I**dentifier).

9. **IPI → Insert Personal Identifier Key → cxx** or **Cxx xx** (**C**lose Seal)
   At **IPI** insert a valid FLM or Route key.

   For Gen1 locks: The lock will display **cxx** (**c**lose seal) where **xx** is a two-digit number that is the Close Seal number for this opening.

   For Gen2 locks: The lock will display **Cxx xx** (**C**lose seal) where **xx xx** is a four-digit number that is the Close Seal number for this opening.

> **Note**
>
> To remove a two-digit close seal from the display, turn the dial to the left (CCW) until EOP appears. To stop the display of a four-digit close seal, press and briefly hold the * key. If you do not choose to manually eliminate the display of the close seal, it will automatically disappear when the lock powers down.

> **Note**
>
> If the Cencon lock has a door sensor connected and you have not closed the container door, you will be prompted **OPd** to indicate that the door is open. You will not be able to get a close seal under this circumstance.

> **Note**
>
> An audit record will be recorded each time a key is inserted for opening and closing operations.

10. **cxx** or **Cxx xx → Record Close Seal**
    This Close Seal number should be called in to Dispatch to close out this service call if the call was dispatched as an individual call (FLM or Route). If dispatched as a part of a Route, the Close Seal can be called in at the close of the call. It can also be read from the key or entered manually into a menu at the PC upon completion of the route.

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4.2.6 Open Lock - FLM or Route Dual Mode

If a lock has been activated in FLM and/or Route Dual Mode, two unique combinations are required to open the lock. Each combination is a one time combination that is issued from the Cencon software. The procedure for opening the lock in Dual Mode is:

Required Items: Two Issued Combinations, Two Blue F or Yellow R Keys

1. **Power Lock → EC**
   Turn the dial to the left (CCW) until **EC** (**E**nter **C**ombination) appears in the display window.

2. **EC → Enter 1st Combination → IPI**
   If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. When **EC** is displayed, key in the one time combination. When the final number of the combination is keyed, the display will prompt **IPI** (**I**nsert **P**ersonal **I**dentifier).

3. **IPI → Insert 1st Personal Identifier Key → EC2**
   At **IPI** insert the first valid FLM or Route key in the Lock's key reader. For Dual Mode **EC2** (**E**nter **C**ombination **2**) will be displayed.

4. **EC2 → Enter 2nd Combination → IP2**
   At **EC2** key in the second valid combination. **IP2** (**I**nsert **P**ersonal **I**dentifier 2) will be displayed.

5. **IP2 → Insert 2nd Personal Identifier Key → OPr**
   At **IP2** insert the second valid FLM or Route key. **OPr** (**OP**en **r**ight) will be displayed.

6. **OPr → Retract Bolt**
   At **OPr** turn the dial to the right (CW) to retract the bolt.

7. **Open Door**

8. **Perform Operations**
   Perform the service or route operations for the lock.

9. **Close Door**

10. **Extend Bolt → IPI**
    Extend the bolt and secure the lock by turning the dial left (CCW). When the lock is fully locked, the display will prompt **IPI** (**I**nsert **P**ersonal **I**dentifier).

11. **IPI → Insert Personal Identifier Key → cxx or Cxx xx** (**C**lose Seal)
    At **IPI** insert a valid FLM or Route key.

    For Gen1 locks: The lock will display **cxx** (**c**lose seal) where **xx** is a two-digit number that is the Close Seal number for this opening.

    For Gen2 locks: The lock will display **Cxx xx** (**C**lose seal) where **xx xx** is a four-digit number that is the Close Seal number for this opening.

> **Note**
>
> To remove a two-digit close seal from the display, turn the dial to the left (CCW) until EOP appears. To stop the display of a four-digit close seal, press and briefly hold the * key. If you do not choose to manually eliminate the display of the close seal, it will automatically disappear when the lock powers down.

> **Note**
>
> An audit record will be recorded each time a key is inserted for opening or closing operations. In the case where a lock is operating in Dual Mode, two records will be written for the closing even though only one key is required to retrieve the close seal and end the call.

12. **cxx or Cxx xx → Record Close Seal**
    This Close Seal number should be called in to Dispatch to close out this service call **if the call was dispatched as an individual call** (FLM or Route). If dispatched as a part of a Route, the Close Seal can be called in at the close of the call, or it can be read from the key or entered into a menu upon completion of the route.

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4.2.7 View Last Close Seal Number

It is possible to retrieve the last close seal number that was issued by a lock for a particular mode. To view the last close seal:

1. **Power Lock → EC**
   Power the lock by turning the dial to the left (CCW) until **EC** (**E**nter **C**ombination) appears in the display window.

2. **Press #4 → IPI**
   Press **#** followed by **4**. **IPI** (**I**nsert **P**ersonal **I**dentifier) will be displayed.

3. **IPI → Insert Personal Identifier Key → cxx or Cxx xx** (**C**lose Seal)
   At **IPI** insert a valid FLM or Route key.

   For Gen1 locks: The lock will display **cxx** (**c**lose seal) where **xx** is a two-digit number that is the last Close Seal number issued for the previous FLM or Route Mode opening.

   For Gen2 locks: The lock will display **Cxx xx** (**C**lose seal) where **xx xx** is a four-digit number that is the last Close Seal number issued for the previous FLM or Route Mode opening.

> **Note**
>
> To remove a two-digit close seal from the display, turn the dial to the left (CCW) until EOP appears. To stop the display of a four-digit close seal, press and briefly hold the * key. If you do not choose to manually eliminate the display of the close seal, it will automatically disappear when the lock powers down.

4.2.8 Display Audit Counts

There are two types of counts that are tracked in the locks. The first type tracks the number of openings in each activated mode for the time period of an activation. The second type of count tracks the total number of openings for the lifetime of the lock.

The lock always keeps track of how many times it has been opened (Total Audit Count) no matter in which mode the opening occurred, including Shelved Mode, FLM, Route, and Bank. To learn the Total Audit Count, press the pound symbol, "#," followed by the "3" whenever "EC" is displayed on the LCD. The display will flash two sets of numbers alternately on the screen. When taken as one four-digit number, this represents the Total Audit Count. For instance, if the LCD flashes "AC-" then "00" followed by "07," the lock has a Total Audit Count of "0007," meaning the lock has been opened seven times in all modes combined. This display can be cancelled by pressing the asterisk (*) button. The Total Audit Count does not reset when the lock is shelved. Once the counter exceeds 9999 openings, the Gen2 lock begins displaying more digits.

To Obtain the Audit Count for a Mode:

To retrieve the audit count for a Mode activation period, a valid PI key is required. The type of Personal Identifier key inserted in the key reader will tell the lock which Audit Count to show.

> **Note**
>
> In current versions of the lock the audit counts are initialized when a lock is activated. This allows you to retrieve the audit count for the last activated time period for a specific mode. In older versions the counts are reset when the lock is shelved; therefore, previous activation period counts are not available.

Required Items: Blue F or Yellow R Key

1. **Power Lock → EC**
   Turn the dial to the left (CCW) until **EC** (**E**nter **C**ombination) appears in the display window.

2. **Press ## → IPI**
   Press the pound (#) button twice. The display will prompt **IPI** (**I**nsert **P**ersonal **I**dentifier).

3. **IPI → Insert Personal Identifier Key → SC- xx xx or SS- xx xx**
   At **IPI** insert a valid FLM or Route key in the Lock's key reader. **SC** will display if the lock is active . **SS** will display if the lock is shelved. The display will then indicate the Audit Count for the Mode of the key that was inserted, displayed two digits at a time.

> **Note**
>
> This display can be canceled by pressing the asterisk (*) button, or it will automatically be canceled when the lock powers down.

To Obtain the Total Audit Count for All Modes (Including Shelved Mode):

1. **Power Lock → EC**
   Turn the dial to the left (CCW) until **EC** (**E**nter **C**ombination) appears in the display window.

2. **Press #3 → AC- xx xx**
   AC- will display followed by the total audit count for all modes, displayed two digits at a time.

> **Note**
>
> This display can be canceled by pressing the asterisk (*) button, or it will automatically be canceled when the lock powers down.

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4.2.9 Retrieve Audit Download From Lock

It is possible to use an initialized Supervisor Audit key to retrieve valuable records from the Cencon lock. The information is downloaded from the lock into the SA key, which is then returned to the Cencon dispatch center. The information in the key can then be extracted by a Supervisor by downloading it into the PC system via the Reports Menu. To retrieve the audit from the lock:

Required Items: Initialized Red SA Key

<table>
<tr><td>Note - Gen2 Locks</td></tr>
<tr><td>A 5 minute delay will be imposed if more than five (5) #0 operations are done in 5 minutes (a 'dLY' prompt is displayed). Either wait for the delay to elapse or open the lock to clear the count and reset the delay.</td></tr>
</table>

1. **Power Lock → EC**
   Turn the dial to the left (CCW) until **EC** (**E**nter **C**ombination) appears in the display window.

2. **EC → Press #0 → -dL** or **ISA**
   Press the pound (**#**) button followed by the **0** button.

3. **-dL → ISA** (Gen2 locks only)
   For Gen2 locks, the **-dL** (**d**ial **L**eft) prompt will be displayed indicating that the user is required to dial counter-clockwise (CCW) to supply additional power to the lock before the **ISA** (**I**nsert **SA** key) prompt is displayed.

4. **ISA → Insert and Hold SA Key → Aud**
   ISA will be displayed. **Insert and hold** the initialized Supervisor Audit key in the lock's key reader. The lock will display **Aud** (**Aud**it in Progress) with a flashing bar over the "u" while the Audit Download is being processed.

5. **Aud → EOP**
   Continue to hold the SA Key in the reader until **EOP** (**E**nd of **OP**eration) is displayed.

<table>
<tr><td>Note</td></tr>
<tr><td>You must periodically turn the dial to maintain power during this time.</td></tr>
</table>

6. **EOP → Remove SA Key**
   When the display prompts **EOP**, remove the **SA** key.

7. **Return SA Key**
   Return the SA Key to the dispatch center to be read by the Supervisor.

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4.2.10 Shelve Lock (at Lock)

When a lock mode is deactivated, we say that the mode has been "shelved". When all modes are deactivated, the lock is shelved or in Shelved Mode. Lock shelving requires a coordinated effort between a Special Supervisor and an FLM or Route Person. An SA key must be specially prepared and taken to the lock. Once the shelving procedure has taken place at the lock, the SA key is returned to the Dispatch Center where information is extracted from the key. Remember that you must shelve each mode of the lock if you wish to return the lock to Shelved Mode.

We will need a change key for these procedures, which is a tool that will normally be in the possession of the FLM or Route Service Person. The change key has two prongs that, when extended, fit securely into the change key holes on the rear of the lock body. Any change key may be used in any Cencon lock. The change key is not encoded or unique in any way.

> **Note**
>
> Keep in mind that the lock may or may not be activated in Bank Mode. Bank Mode can only be shelved through the Cenbank System or through Cencon 5.0 or later version of the Cencon software.

To Shelve A Lock Mode or Modes using FLM or Route Mode:

This procedure should be used when you want to shelve any combination of FLM, Route Mode, or Bank Mode (Cencon 5.0 or later only).

> **Note**
>
> The designation of how many modes are to be shelved, and which ones, occurs at the PC using the Cencon software. That information is written to an SA key which is then used in this process.

If you will be shelving ALL active modes, this process will return the lock to Shelved Mode where it will open with the Factory Combination of 50-25-50.

Required Items: Blue F or Yellow R Key, Shelving Combination, Change Key, Red SA Key

1. **Power Lock → EC**
   Turn the dial to the left (CCW) until **EC** (**E**nter **C**ombination) appears in the display window.

2. **EC → Enter Shelving Combination → IPI**
   If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. When **EC** is displayed, key in the one time shelving combination. When the final number of the combination is keyed, the display will prompt **IPI** (**I**nsert **P**ersonal **I**dentifier).

3. **IPI → Insert Key → OPr**
   At **IPI** insert the key for the mode being shelved into the Lock's key reader. **OPr** is displayed.

   > **Note**
   >
   > If the lock is activated for Dual Combination Access, the lock will prompt **EC2** for the second combination and then **IP2** for the second user's key before **OPr** will appear.

4. **OPr → Retract Bolt**
   At **OPr** turn the dial right (CW) to retract the bolt.

5. **Open Door**

6. **Insert Change Key**
   Extend the prongs on the change key and insert it into the change key socket on the back of the lock. Do not close the door.

7. **Extend Bolt**
   With the door open, turn the dial left (CCW) to extend the bolt.

8. **Power Lock →** `tEC`

Turn the dial to the left (CCW) until $\boxed{\text{t}\text{E}\text{C}}$ (the Change Key symbol along with **EC**) appears in the display window.

> **Note**
>
> At this point the container door is open. If a door sensor is connected to the Cencon lock, the message **OPd** will be displayed to indicate that the door is open as you turn the lock dial CCW (counter-clockwise) or if you turn the lock dial back and forth.
>
> You will not be able to get a close seal from the lock while the container door is open with a door sensor attached.
>
> Dial CW (clockwise) to get past the **OPd** message to an **EC** prompt.

9. $\boxed{\text{t}\text{E}\text{C}}$ → **Enter Factory Combination → ISA**

   If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. Enter the default Factory Combination of 50-25-50. **ISA** is displayed.

10. **ISA → Insert SA Key → POC**
    After the Factory Combination has been correctly entered, the **ISA** symbol, meaning "**I**nsert **S**upervisor **A**udit" key will be displayed. Insert the Supervisor Audit Key in the Lock's key reader and continue to hold it there until **POC** is displayed.

11. **POC → Remove SA Key AND Pull Out Change Key → OPr**
    At the **POC** prompt remove the **SA** Key and **P**ull **O**ut the **C**hange key. **OPr** is displayed.

12. **OPr → Retract Bolt**
    At **OPr** turn the dial to the right (CW) to retract the bolt.

13. **Close Door**

14. **Extend Bolt**
    Turn the dial to the left (CCW) to extend the bolt.

15. **Power Lock → IPI**
    Turn the dial to the left (CCW) until **IPI** (**I**nsert **P**ersonal **I**dentifier) appears in the display window.

16. **IPI → Insert Personal Identifier Key → cxx** or **Cxx xx** (**C**lose Seal)
    At **IPI** insert a valid FLM or Route key.

    For Gen1 locks: The lock will display **cxx** (**c**lose seal) where **xx** is a two-digit number that is the Close Seal number for this opening.

    For Gen2 locks: The lock will display **Cxx xx** (**C**lose seal) where **xx xx** is a four-digit number that is the Close Seal number for this opening.

> **Note**
>
> An audit record will be recorded each time a key is inserted for opening and closing operations.

17. **cxx** or **Cxx xx → Record Shelving Close Seal**
    This Close Seal number should be called in to Dispatch to close the shelving.

> **Note**
>
> If the lock has been shelved in ALL active modes, you should at this time test the opening of the lock with the Default Factory Combination of 50-25-50.

18. **Return SA Key**
    Return the SA Key to the Dispatch Center to verify the shelving operation.

To Shelve A Lock Mode or Modes using Bank Mode:

This procedure should be used when you want to shelve any combination of FLM, Route Mode, or Bank Mode (Cencon 5.0 or later only).

> **Note**
>
> The designation of how many modes are to be shelved, and which ones, occurs at the PC using the Cencon software. That information is written to an SA key which is then used in this process.

If you will be shelving ALL active modes, this process will return the lock to Shelved Mode where it will open with the Factory Combination of 50-25-50.

Required Items: Teal B Key, User Key Combination, Change Key, Red SA Key

1. **Power Lock → EC**
   Turn the dial to the left (CCW) until **EC** (**E**nter **C**ombination) appears in the display window.

2. **EC → Enter User Key Combination → IPI**
   If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. When **EC** is displayed, key in the one time shelving combination. When the final number of the combination is keyed, the display will prompt **IPI** (**I**nsert **P**ersonal **I**dentifier).

3. **IPI → Insert Key → OPr**
   At **IPI** insert the key for the mode being shelved into the Lock's key reader. **OPr** is displayed.

   > **Note**
   >
   > If the lock is activated for Dual Combination Access, the lock will prompt **EC2** for the second combination and then **IP2** for the second user's key before **OPr** will appear.

4. **OPr → Retract Bolt**
   At **OPr** turn the dial right (CW) to retract the bolt.

5. **Open Door**

6. **Insert Change Key**
   Extend the prongs on the change key and insert it into the change key socket on the back of the lock. Do not close the door.

7. **Extend Bolt**
   With the door open, turn the dial left (CCW) to extend the bolt.

8. **Power Lock →** $\boxed{\text{tEC}}$

   Turn the dial to the left (CCW) until $\boxed{\text{tEC}}$ (the Change Key symbol along with **EC**) appears in the display window.

9. $\boxed{\text{tEC}}$ **→ Enter Factory Combination → ISA**

   If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. Enter the default Factory Combination of 50-25-50. **ISA** is displayed.

10. **ISA → Insert SA Key → POC**
    After the Factory Combination has been correctly entered, the **ISA** symbol, meaning "**I**nsert **S**upervisor **A**udit" key will be displayed. Insert the Supervisor Audit Key in the Lock's key reader and continue to hold it there until **POC** is displayed.

11. **POC → Remove SA Key AND Pull Out Change Key → OPr**
    At the **POC** prompt remove the **SA** Key and **P**ull **O**ut the **C**hange key. **OPr** is displayed.

12. **OPr → Retract Bolt**
    At **OPr** turn the dial to the right (CW) to retract the bolt.

13. **Close Door**

14. **Extend Bolt**
    Turn the dial to the left (CCW) to extend the bolt.

15. **Power Lock → IPI**
    Turn the dial to the left (CCW) until **IPI** (**I**nsert **P**ersonal **I**dentifier) appears in the display window.

16. **IPI → Insert Personal Identifier Key → EOP** (**E**nd of **OP**eration)

At **IPI** insert a valid Bank key to confirm the lock is closed and to display **EOP** (**E**nd of **OP**eration)

Note
An audit record will be recorded each time a key is inserted for opening and closing operations.

Note
If the lock has been shelved in ALL active modes, you should at this time test the opening of the lock with the Default Factory Combination of 50-25-50.

17. **Return SA Key**
    Return the SA Key to the Dispatch Center to verify the shelving operation.

4.2.11 Bank Lock Activation

Take the initialized **SA** key, a **Change Key**, and a minimum of one lock user's **Bank key** to the lock. The lock will be in Shelved mode so it can be opened with the Shelved Mode combination (either **50-25-50** or a changed combination) and no PI.

Note

Cencon bank mode limitations differ between Cencon Gen 1 locks and Cencon Gen 2 locks. The following table summarizes the differences between the lock versions:

Feature	Cencon Gen 1	Cencon Gen 2
Number of Users On Lock	1-32	1-100
Bank Mode User ID Limit Per Bank Branch	1-79	0-2147483647
Bank Branch ID Limit	1-9999	1-2147483647
Initial Combinations	Bank mode user keys always have an initial default combination of **50-25-50**.	Bank mode user keys have an initial combination as set by the Cencon software.
Combination Valid To Open Lock	Must change bank mode user key initial combination before opening the lock.	Requirement to change the bank mode user key initial combination before opening the lock is set per bank mode user by the Cencon software.

Feature	DS1427 Bank Key	DS1963S Bank Key
Cencon Gen 1	Supported	Not Supported
Cencon Gen 2	Supported	Supported
Security	Legacy Cencon Security	Enhanced Security and Hardware Authentication
Bank Mode User ID Limit Per Bank Branch	1-79	0-2147483647
Bank Branch ID Limit	1-9999	1-2147483647

To Activate a Bank Lock from Shelved Mode:

Required Items: Shelved Mode Combination, Change Key, SA Key, B Key

1. **Power Lock → EC**
   Turn the dial to the left (CCW) until **EC** (**E**nter **C**ombination) appears in the display window.

2. **EC → Enter Shelved Mode Combination → OPr**
   If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. When EC is displayed, key in the current Shelved Mode combination. This could either be the default Factory Combination of 50-25-50 or a unique combination that was set while the lock was in Shelved Mode. **OPr** (**OP**en **r**ight) is displayed.

3. **OPr → Retract Bolt**
   At **OPr** turn the dial to the right (CW) to retract the bolt.

4. **Open Container Door**

5. **Insert Change Key**
   Extend the prongs on the change key and insert it into the change key socket on the back of the Lock while OPr is displayed.

6. **Extend Bolt**
   With the door open, turn the dial to the left (CCW) to extend the bolt.

7. **Power Lock →** [tEC]

   Turn the dial to the left (CCW) until [tEC] (the Change Key symbol along with Enter Combination) appears in the display window.

   > **Note**
   >
   > At this point the container door is open. If a door sensor is connected to the Cencon lock, the message **OPd** will be displayed to indicate that the door is open as you turn the lock dial CCW (counter-clockwise) or if you turn the lock dial back and forth.
   >
   > You will not be able to get a close seal from the lock while the container door is open with a door sensor attached.
   >
   > Dial CW (clockwise) to get past the **OPd** message to an **EC** prompt.

8. [tEC] **→ Enter Shelved Mode Combination → ISA**

   If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. When EC is displayed, key in the current Shelved Mode combination. Again, this could either be the default Factory Combination of 50-25-50 or a unique combination that was set while the lock was in Shelved Mode. **ISA** (**I**nsert **S**upervisor **A**udit key) is displayed.

9. **ISA → Insert and Hold SA Key → Inl**
   Insert and hold the **SA** Key in the key reader on the side of the lock. The lock will display **Inl** (**Inl**tializing) with a flashing bar over the "n" while the information is being processed.

10. **Inl → POC**
    Continue to hold the **SA** Key in the reader until **POC** (**P**ull **O**ut **C**hange Key) is displayed.

11. **POC → Remove SA Key & Pull Out Change Key → OPr**
    At the **POC** prompt remove the **SA Key** and **P**ull **O**ut the **C**hange key. **OPr** (**OP**en **r**ight) is displayed.

12. **OPr → Retract Bolt**
    At **OPr** turn the dial to the right (CW) to retract the bolt.

13. **Extend Bolt**
    Turn the Dial to the left (CCW) to extend the bolt.

14. **Power Lock → EC**
    Turn the dial to the left (CCW) until **EC** (**E**nter **C**ombination) appears in the display window.

    > **Note**
    >
    > At this point the container door is open. If a door sensor is connected to the Cencon lock, the message **OPd** will be displayed to indicate that the door is open as you turn the lock dial CCW (counter-clockwise) or if you turn the lock dial back and forth.
    >
    > Dial CW (clockwise) to get past the **OPd** message to an **EC** prompt.

15. **EC → Enter User Combination → IPI**

    For Cencon Gen 1 locks enter the default user combination of **50-25-50** for your bank user key.

    For Cencon Gen 2 locks enter the assigned initial user combination for your bank user key as set from the Cencon software.

    The lock will prompt **IPI** (**I**nsert **P**ersonal **I**dentifier key) on the display.

    > **Note**
    >
    > To determine the code level of your lock, see Appendix F.

For Locks with Code Level 64B and below:

16. **IPI → Insert the bank mode Personal Identifier Key → bc xxxxxx**
Insert bank mode Personal Identifier **B** Key into the key reader. The lock will display **bc** (**b**ank combination) followed by the new combination, displayed two digits at a time.

17. **bc xxxxxx → Record Combination and Press * → cc**
Record the combination and press * to acknowledge receipt of new combination. The display will prompt **cc** (**c**onfirm **c**ombination).

18. **cc → Enter New Combination → EOP**
Enter the new combination by pressing those digits on the lock's keypad. The numbers will be displayed as they are entered. **EOP** (**E**nd **OP**eration) will be displayed. The newly confirmed combination is now active for that Bank User and Personal Identifier Key. (Go to Step 19.)

> **Note**
>
> If a flashing lightning bolt appears on the display, the combination was not confirmed properly. Reset by pressing the * key and rekey the operation.

For Locks with Code Level 65B and above:

16. **IPI → Insert bank mode Personal Identifier Key → EnC**

Insert the bank mode Personal Identifier **B** Key into the key reader.

For Cencon Gen 1 or Cencon Gen 2 The lock will display **EnC** (**En**ter **C**ombination).

17. **EnC → Enter New Combination of xx-xx-xx → CnC**
Enter a new combination for your bank user key. The combination can be any value from 00-00-00 to 99-99-99. The display will display **CnC** (**C**onfirm **n**ew **C**ombination).

> **Warning**
>
> For security purposes, you should define your own values for User Combinations in your Cenbank system.

18. **CnC → Enter New Combination → EOP**
Enter the new combination again by pressing those digits on the lock's keypad. The numbers will be displayed as they are entered. **EOP** (**E**nd **OP**eration) will be displayed.

> **Note**
>
> If a flashing lightning bolt appears on the display, the combination was not confirmed properly. Reset by pressing the * key and rekey the operation.

> **Note**

It is a good practice to dial the new combinations and open the lock at least once after initially setting them, before closing the door and extending the bolt.

19. **Power Lock → IPI**
    Turn the dial to the left (CCW) until **IPI** (**I**nsert **P**ersonal **I**dentifier) appears.

20. **EC → Enter New Combination → IPI**
    Enter the new bank mode combination by pressing those digits on the lock's keypad. The numbers will be displayed as they are entered.

21. **IPI → Insert Bank Mode Personal Identifier Key → OPr**
    Insert Bank Mode Personal Identifier **B** Key into the key reader. The lock will display **OPr** (**OP**en **r**ight).

22. **OPr → Retract Bolt**
    Turn the dial to the right (CW) to retract the bolt.

23. **Close Container Door**

24. **Extend Bolt → IPI**
    Turn the dial to the left (CCW) to extend the bolt and continue to turn until **IPI** (**I**nsert **P**ersonal **I**dentifier) is displayed.

25. **IPI → Insert Bank Mode Personal Identifier Key → EOP**
    Insert Bank Mode Personal Identifier B key to record the lock closure. The lock will verify a completed closure by storing the date and time for the close in the B key and displaying **EOP** (**E**nd of **Op**eration).

> **Note**
>
> An Audit record is created each time a key is inserted during the opening and closing operations. These are reported as "Open Time" and "Close Time" on the Audit Log Reports.

4.2.12 Bank Lock Activation From Existing Active Mode

Take the initialized **SA** key, a **Change Key**, and a minimum of one lock user's **Bank key** to the lock.

The lock is already active in **FLM** and/or **Route** mode. You will need an **FLM** or **Route** mode user key. You will also need a valid combination dispatched for your **FLM** or **Route** mode user key.

<table>
<thead>
<tr><th>Note</th></tr>
</thead>
</table>

Cencon bank mode limitations differ between Cencon Gen 1 locks and Cencon Gen 2 locks. The following table summarizes the differences between the lock versions:

Feature	Cencon Gen 1	Cencon Gen 2
Number of Users On Lock	1-32	1-100
Bank Mode User ID Limit Per Bank Branch	1-79	0-2147483647
Bank Branch ID Limit	1-9999	1-2147483647
Initial Combinations	Bank mode user keys always have an initial default combination of **50-25-50**.	Bank mode user keys have an initial combination as set by the Cencon software.
Combination Valid To Open Lock	Must change bank mode user key initial combination before opening the lock.	Requirement to change the bank mode user key initial combination before opening the lock is set per bank mode user by the Cencon software.

Feature	DS1427 Bank Key	DS1963S Bank Key
Cencon Gen 1	Supported	Not Supported
Cencon Gen 2	Supported	Supported
Security	Legacy Cencon Security	Enhanced Security and Hardware Authentication
Bank Mode User ID Limit Per Bank Branch	1-79	0-2147483647
Bank Branch ID Limit	1-9999	1-2147483647

<table>
<thead>
<tr><th>Note</th></tr>
</thead>
</table>

For opening the lock in FLM or Route mode, you can also refer to the following sections:

- If the lock is active in single open mode for FLM or Route, you can refer to the instructions in section 4.2.5 Open Lock - FLM or Route Mode to open the lock.
- If the lock is active in dual open mode for FLM or Route, you can refer to the instructions in section 4.2.6 Open Lock - FLM or Route Dual Mode to open the lock.

Follow this procedure to activate the Lock and change a user combination as needed:

To Activate a Bank Lock from an active Mode:

1. **Power Lock → EC**
   Turn the dial to the left (CCW) until **EC** (**E**nter **C**ombination) appears in the display window.

2. **EC → Enter Combination → IPI**
   If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. When **EC** is displayed, key in the one time combination. When the final number of the combination is keyed, the display will prompt **IPI** (**I**nsert **P**ersonal Identifier).

3. **IPI → Insert Personal Identifier Key → OPr**
   At **IPI** insert a valid FLM or Route key in the lock's key reader. **OPr** (**OP**en **r**ight) is displayed.

4. **Opr → Retract Bolt**
   At **OPr** turn the dial to the right (CW) to retract the bolt.

5. **Open Container Door**

6. **Insert Change Key**
   Extend the prongs on the change key and insert it into the change key socket on the back of the Lock while OPr is displayed.

7. **Extend Bolt**
   With the door open, turn the dial to the left (CCW) to extend the bolt.

8. **Power Lock → [tEC]**

   Turn the dial to the left (CCW) until [tEC] (the Change Key symbol along with Enter Combination) appears in the display window.

   > **Note**
   >
   > At this point the container door is open. If a door sensor is connected to the Cencon lock, the message **OPd** will be displayed to indicate that the door is open as you turn the lock dial CCW (counter-clockwise) or if you turn the lock dial back and forth.
   >
   > You will not be able to get a close seal from the lock while the container door is open with a door sensor attached.
   >
   > Dial CW (clockwise) to get past the **OPd** message to an **EC** prompt.

9. **[tEC] → Enter Shelved Mode Combination → ISA**

   If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. When EC is displayed, key in the current Shelved Mode combination. Again, this could either be the default Factory Combination of 50-25-50 or a unique combination that was set while the lock was in Shelved Mode. **ISA** (**I**nsert **S**upervisor **A**udit key) is displayed.

10. **ISA → Insert and Hold SA Key → InI**
    Insert and hold the **SA** Key in the key reader on the side of the lock. The lock will display **InI** (**InI**tializing) with a flashing bar over the "n" while the information is being processed.

11. **InI → POC**
    Continue to hold the **SA** Key in the reader until **POC** (**P**ull **O**ut **C**hange Key) is displayed.

12. **POC → Remove SA Key & Pull Out Change Key → OPr**
    At the **POC** prompt remove the **SA Key** and **P**ull **O**ut the **C**hange key. **OPr** (**OP**en **r**ight) is displayed.

13. **OPr → Retract Bolt**
    At **OPr** turn the dial to the right (CW) to retract the bolt.

14. **Extend Bolt**
    Turn the Dial to the left (CCW) to extend the bolt.

15. **Power Lock → IPI**
    Turn the dial to the left (CCW) until **IPI** (**I**nsert **P**ersonal Identifier) appears in the display window.

16. **IPI → Insert Personal Identifier Key → cxx or Cxx xx** (**C**lose Seal)
    At **IPI** insert a valid FLM or Route key.

    For Gen1 locks: The lock will display **cxx** (**c**lose seal) where **xx** is a two-digit number that is the Close Seal number for this opening.

    For Gen2 locks: The lock will display **Cxx xx** (**C**lose seal) where **xx xx** is a four-digit number that is the Close Seal number for this opening.

> **Note**
>
> To remove a two-digit close seal from the display, turn the dial to the left (CCW) until EOP appears. To stop the display of a four-digit close seal, press and briefly hold the * key. If you do not choose to manually eliminate the display of the close seal, it will automatically disappear when the lock powers down.

> **Note**
>
> An audit record will be recorded each time a key is inserted for opening and closing operations.

17. **Power Lock → EC**
    Turn the dial to the right (clockwise) until **EC** (**E**nter **C**ombination) appears in the display window.

18. **EC → Enter User Combination → IPI**

    For Cencon Gen 1 locks enter the default user combination of **50-25-50** for your bank user key.

    For Cencon Gen 2 locks enter the assigned initial user combination for your bank user key as set from the Cencon software.

    The lock will prompt **IPI** (**I**nsert **P**ersonal **I**dentifier key) on the display.

> **Note**
>
> To determine the code level of your lock, see Appendix F.

> **Note**
>
> For Cencon Gen 2 locks your bank user key may or may not be required to change your initial bank user key combination before being permitted to open the lock. Refer to how you set up the bank user key from the Cencon software to determine this.
>
> The first time you use a bank mode initial combination with a bank mode user key at a Cencon lock and the bank mode user initial combination needs to be changed, you will automatically be prompted to change the combination.
>
> If you are not required to change the combination for your bank mode user key, continue with step **25** below to retract the bolt.

For Cencon Gen 1 Locks with Code Level 64B and below:

19. **IPI → Insert the bank mode Personal Identifier Key → bc xxxxxx**
Insert bank mode Personal Identifier **B** Key into the key reader. The lock will display **bc** (**b**ank combination) followed by the new combination, displayed two digits at a time.

20. **bc xxxxxx → Record Combination and Press * → cc**
Record the combination and press * to acknowledge receipt of new combination. The display will prompt **cc** (**c**onfirm **c**ombination).

21. **cc → Enter New Combination → EOP**
Enter the new combination by pressing those digits on the lock's keypad. The numbers will be displayed as they are entered. **EOP** (**E**nd **OP**eration) will be displayed. The newly confirmed combination is now active for that Bank User and Personal Identifier Key. (Go to Step 22.)

> **Note**
>
> If a flashing lightning bolt appears on the display, the combination was not confirmed properly. Reset by pressing the * key and rekey the operation.

For Cencon Gen 1 Locks with Code Level 65B and above or Cencon Gen 2 locks:

19. **IPI → Insert bank mode Personal Identifier Key → EnC**

Insert the bank mode Personal Identifier **B** Key into the key reader.

For Cencon Gen 1 or Cencon Gen 2 The lock will display **EnC** (**En**ter **C**ombination).

20. **EnC → Enter New Combination of xx-xx-xx → CnC**
Enter a new combination for your bank user key. The combination can be any value from 00-00-00 to 99-99-99. The display will display **CnC** (**C**onfirm **n**ew **C**ombination).

> **Warning**
>
> For security purposes, you should define your own values for User Combinations in your Cenbank system.

21. **CnC → Enter New Combination → EOP**
Enter the new combination again by pressing those digits on the lock's keypad. The numbers will be displayed as they are entered. **EOP** (**E**nd **OP**eration) will be displayed.

> **Note**
>
> If a flashing lightning bolt appears on the display, the combination was not confirmed properly. Reset by pressing the * key and rekey the operation.

> **Note**
>
> It is a good practice to dial the new combinations and open the lock at least once after initially setting them, before closing the door and extending the bolt.

22. **Power Lock → IPI**
Turn the dial to the left (CCW) until **IPI** (**I**nsert **P**ersonal **I**dentifier) appears.

23. **EC → Enter New Combination → IPI**
Enter the new bank mode user combination by pressing those digits on the lock's keypad. The numbers will be displayed as they are entered.

24. **IPI → Insert Personal Identifier Key → OPr**
Insert Personal Identifier bank mode key into the key reader. The lock will display **OPr** (**OP**en **r**ight).

25. **OPr → Retract Bolt**
Turn the dial to the right (CW) to retract the bolt.

26. **Close Container Door**

27. **Extend Bolt → IPI**

Turn the dial to the left (CCW) to extend the bolt and continue to turn until **IPI** (**I**nsert **P**ersonal **I**dentifier) is displayed.

28. **IPI → Insert Personal Identifier Key → EOP**
    Insert Personal Identifier bank mode key to record the lock closure. The lock will verify a completed closure by storing the date and time for the close in the bank mode key and displaying **EOP** (**E**nd of **Op**eration).

Note
An Audit record is created each time a key is inserted during the opening and closing operations. These are reported as "Open Time" and "Close Time" on the Audit Log Reports.

4.2.13 Open Lock - Bank Mode

Open/Close a Single User Lock - No Delay

Required Items: B Key, Combination

1. **Power Lock → EC**
   Turn the dial to the left (CCW) until EC (Enter Combination) appears in the display window.

2. **EC → Enter Combination → IPI**
   If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. When **EC** is displayed, key in the bank user's combination. When the final number of the combination is keyed, the display will prompt IPI (Insert Personal Identifier).

3. **IPI → Insert Personal Identifier Key → OPr**
   At **IPI** insert a valid B key in the lock's key reader. **OPr** (**OP**en **r**ight) is displayed.

4. **Opr → Retract Bolt**
   At **OPr** turn the dial to the right (CW) to retract the bolt.

5. **Open Door**

6. **Perform Operations**
   Perform the service or bank operation.

7. **Close Door**

8. **Extend Bolt → IPI**
   Extend the bolt and secure the lock by turning the dial left (CCW). When the lock is fully locked, the display will prompt **IPI** (**I**nsert **P**ersonal **I**dentifier).

9. **IPI → Insert Personal Identifier Key → EOP**
   Insert the Personal Identifier B Key again to record the lock closure. The lock will verify a completed closure by storing the date and time for the close in the B key and displaying **EOP** (**E**nd **o**f **O**peration).

   > **Note**
   >
   > An Audit record will be created each time a key is inserted during the opening and closing operations. These will be reported as "Open Time" and "Close Time" on the Audit Log Reports.

Open/Close a Single User Lock with Delay

Required Items: B Key, Combination

1. **Power Lock → EC**
   Turn the dial to the left (CCW) until EC (Enter Combination) appears in the display window.

2. **EC → Enter Combination → IPI**
   If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. When **EC** is displayed, key in the bank user's combination. When the final number of the combination is keyed, the display will prompt IPI (Insert Personal Identifier).

3. **IPI → Insert Personal Identifier Key → dxx**
   Insert the User's Personal Identifier **B** Key into the key reader. **dxx** (**d**elay xx) will be displayed showing the amount of time delay remaining before the lock can be opened.

4. **dxx → Wait for Time Delay → IPI**
   When the programmed delay time has elapsed, the lock will prompt with **IPI** (**I**nsert **P**ersonal **I**dentifier).

   > **Note**
   >
   > It may be necessary to power the lock again before you will get the **IPI** prompt.

5. **IPI → Insert Personal Identifier Key → OPr**
   At **IPI** insert a valid B key in the lock's key reader. **OPr** (**OP**en **r**ight) is displayed.

6. **OPr → Retract Bolt**
At **OPr** turn the dial to the right (CW) to retract the bolt.

> **Note**
>
> If the Window to Open expires before the lock is opened, it will reset itself and the entire open procedure must be repeated, including the delay time.

7. **Open Door**

8. **Perform Operations**
Perform the service or bank operation.

9. **Close Door**

10. **Extend Bolt → IPI**
Extend the bolt and secure the lock by turning the dial left (CCW). When the lock is fully locked, the display will prompt **IPI** (**I**nsert **P**ersonal **I**dentifier).

11. **IPI → Insert Personal Identifier Key → EOP**
Insert the Personal Identifier B Key again to record the lock closure. The lock will verify a completed closure by storing the date and time for the close in the B key and displaying **EOP** (**E**nd **o**f **O**peration).

Open/Close a Dual User Lock - No Delay

Required Items: Two B Keys, Two Combinations

1. **Power Lock → EC**
Turn the dial to the left (CCW) until **EC** (**E**nter **C**ombination) appears in the display window.

2. **EC → Enter Combination → IPI**
If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. When **EC** is displayed, key in the first bank user's combination. When the final number of the combination is keyed, the display will prompt **IPI** (**I**nsert **P**ersonal **I**dentifier).

3. **IPI → Insert First Personal Identifier Key → EC2**
Insert the first User's Personal Identifier B Key into the key reader. **EC2** (**E**nter **C**ombination **2**) is displayed.

4. **EC2 → Enter Second Combination → IP2**
Key in the combination for the second User. **IP2** (Insert Personal Identifier 2) is displayed..

5. **IPI → Insert Second Personal Identifier Key → OPr**
Insert the second User's Personal Identifier **B** key into the key reader. **OPr** (**OP**en **r**ight) is displayed.

6. **OPr → Retract Bolt**
At **OPr** turn the dial to the right (CW) to retract the bolt.

7. **Open Door**

8. **Perform Operations**
Perform the service or bank operation.

9. **Close Door**

10. **Extend Bolt → IP?**
Extend the bolt by turning the dial to the left (CCW) until **IP?** (Insert Personal Identifier ?, either 1 or 2) is displayed.

11. **IP? → Insert Personal Identifier Key → EOP**
Insert either User's Personal Identifier **B** Key into the key reader. The lock will confirm the closure by writing the date and time of the close into the **B** key and displaying **EOP** (End of Operation).

> **Note (Gen 1 locks only)**
>
> If you experience a lockout situation with dual user access, you should be aware that user order on a retry is important. After the lockout period expires, the lock will open if the first combination and the first key used in the current entry attempt are the same as those used during the entry attempt that caused the lockout. If the first combination and the first key used are not the same as those used when the lockout occurred, the lock will prompt with **IP2** and will then prompt with **EC2**. **This requirement does not apply to Gen 2 locks.**

Open/Close a Dual User Lock with Delay

Required Items: Two B Keys, Two Combinations

1. **Power Lock → EC**
   Turn the dial to the left (CCW) until **EC** (**E**nter **C**ombination) appears in the display window.

2. **EC → Enter Combination → IPI**
   If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. When **EC** is displayed, key in the first bank user's combination. When the final number of the combination is keyed, the display will prompt **IPI** (**I**nsert **P**ersonal **I**dentifier).

3. **IPI → Insert First Personal Identifier Key → EC2**
   Insert the first User's Personal Identifier B Key into the key reader. **EC2** (**E**nter **C**ombination **2**) is displayed.

4. **EC2 → Enter Second Combination → IP2**
   Key in the combination for the second User. **IP2** (Insert Personal Identifier 2) is displayed..

5. **IPI → Insert Second Personal Identifier Key → dxx**
   Insert the second User's Personal Identifier **B** key into the key reader. **d**xx (**d**elay xx), with xx being the time delay remaining before the lock can be opened, is displayed.

6. **dxx → Wait for Time Delay → IPI**
   When the programmed delay time has elapsed, the lock will prompt with **IPI** (**I**nsert **P**ersonal **I**dentifier).

Note
It may be necessary to power the lock again before you will get the **IPI** prompt.

7. **IPI → Insert First Personal Identifier Key → IP2**
   Insert the first User's Personal Identifier **B** key into the key reader. **IP2** (Insert Personal Identifier 2) is displayed.

8. **IPI → Insert Second Personal Identifier Key → OPr**
   Insert the second User's Personal Identifier **B** key into the key reader. **OPr** (**OP**en **r**ight) is displayed.

9. **OPr → Retract Bolt**
   At **OPr** turn the dial to the right (CW) to retract the bolt.

Note
If the Window to Open expires before the lock is opened, it will reset itself and the entire open procedure must be repeated, including the delay time.

10. **Open Door**

11. **Perform Operations**
    Perform the service or bank operation.

12. **Close Door**

13. **Extend Bolt → IP?**
    Extend the bolt by turning the dial to the left (CCW) until **IP?** (Insert Personal Identifier ?, either 1 or 2) is displayed.

14. **IP? → Insert Personal Identifier Key → EOP**
    Insert either User's Personal Identifier **B** Key into the key reader. The lock will confirm the closure by writing the date and time of the close into the **B** key and displaying **EOP** (End of Operation).

Note
If you experience a lockout situation with dual user access, you should be aware that user order on a retry is important. After the lockout period expires, the lock will open if the first combination and the first key used in the current entry attempt are the same as those used during the entry attempt that caused the lockout. If the first combination and the first key used are not the same as those used when the lockout occurred, the lock will prompt with **IP2** and will then prompt with **EC2**.

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4.2.14 Bank Mode - Add Users

Open/Close a Single User Lock - No Delay

Required Items: B Key, Combination, Change Key, SA Key

1. **Power Lock → EC**
   Turn the dial to the left (CCW) until EC (Enter Combination) appears in the display window.

2. **EC → Enter Combination → IPI**
   If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. When **EC** is displayed, key in the bank user's combination. When the final number of the combination is keyed, the display will prompt IPI (Insert Personal Identifier).

3. **IPI → Insert Personal Identifier Key → OPr**
   At **IPI** insert a valid B key in the lock's key reader. **OPr** (**OP**en **r**ight) is displayed.

4. **OPr → Retract Bolt**
   At **OPr** turn the dial to the right (CW) to retract the bolt.

5. **Open Door**

6. **Insert Change Key**
   Insert the change key into the change key socket.

7. **Extend Bolt**
   With the door open, extend the bolt.

8. **Power Lock →** `tEC`

   Turn the dial to the left (CCW) until `tEC` (Change Key Symbol along with **E**nter **C**ombination) appears on the display.

> **Note**
>
> At this point the container door is open. If a door sensor is connected to the Cencon lock, the message **OPd** will be displayed to indicate that the door is open as you turn the lock dial CCW (counter-clockwise) or if you turn the lock dial back and forth.
>
> You will not be able to get a close seal from the lock while the container door is open with a door sensor attached.
>
> Dial CW (clockwise) to get past the **OPd** message to an **EC** prompt.

9. `tEC` **→ Enter Default Combination → ISA**

   If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. When **EC** is displayed, Enter the default factory combination of **50-25-50**. **ISA** (Insert Supervisor Audit Key) will be displayed.

10. **ISA → Insert and Hold SA Key → Add**
    Insert and hold the **SA** key in the key reader on the side of the lock. The lock will display **Add** (**Add**ing Users) while the information is being processed.

11. **Add → POC**
    Continue to hold the **SA** Key in the reader until **POC** (**P**ull **O**ut **C**hange Key) is displayed.

12. **POC → Remove SA Key and Pull Out Change Key → OPr**
    Remove the **SA** key and the change Key. **OPr** (OPen right) will be displayed.

13. **OPr → Retract Bolt**
    Turn the dial to the right (CW) to retract the bolt. Adding Users is now complete for the Users that were programmed into the **SA** key.

14. **Close Door**

15. **Extend Bolt → IPI**

Extend the bolt by turning the dial to the left (CCW). **IPI** (Insert Personal Identifier) will be displayed.

16. **IPI → Insert Personal Identifier Key → EOP**
    Insert the User's Personal Identifier **B** Key into the key reader again. The lock will confirm the closure by writing the date and time of the close into the **B** key and displaying **EOP** (End of Operation).

Note
After adding a User you will need to change the combinations for the User that was added. All Bank User combinations are initially set to the default combination of **50-25-50** but will not open the lock until changed to a valid new combinations.

Note
If the lock is in dual mode and a bank user is forced to change their combo, the dual combo entry process is aborted. When the user's combo is successfully changed, the lock indicates the end of the operation (EOP).

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4.2.15 Bank Mode - Remove Users

Follow this procedure to delete Users from the lock at the lock after deleting them from the PC System:

Required Items: B Key, Combination, Change Key, SA Key

1. **Power Lock → EC**
   Turn the dial to the left (CCW) until EC (Enter Combination) appears in the display window.

2. **EC → Enter Combination → IPI**
   If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. When **EC** is displayed, key in the bank user's combination. When the final number of the combination is keyed, the display will prompt IPI (Insert Personal Identifier).

3. **IPI → Insert Personal Identifier Key → OPr**
   At **IPI** insert a valid B key in the lock's key reader. **OPr** (**OP**en **r**ight) is displayed.

4. **Opr → Retract Bolt**
   At **OPr** turn the dial to the right (CW) to retract the bolt.

5. **Open Door**

6. **Insert Change Key**
   Insert the change key into the change key socket.

7. **Extend Bolt**
   With the door open, extend the bolt.

8. **Power Lock →** [tEC]

   Turn the dial to the left (CCW) until [tEC] (Change Key Symbol along with **E**nter **C**ombination) appears on the display.

   > **Note**
   >
   > At this point the container door is open. If a door sensor is connected to the Cencon lock, the message **OPd** will be displayed to indicate that the door is open as you turn the lock dial CCW (counter-clockwise) or if you turn the lock dial back and forth.
   >
   > You will not be able to get a close seal from the lock while the container door is open with a door sensor attached.
   >
   > Dial CW (clockwise) to get past the **OPd** message to an **EC** prompt.

9. [tEC] **→ Enter Default Combination → ISA**

   If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. When **EC** is displayed, Enter the default factory combination of **50-25-50**. **ISA** (Insert Supervisor Audit Key) will be displayed.

10. **ISA → Insert and Hold SA Key → dEL**
    Insert and hold the **SA** key in the key reader on the side of the lock. The lock will display dEL (**dEL**eting Users) while the information is being processed.

11. **dEL → POC**
    Continue to hold the **SA** Key in the reader until **POC** (**P**ull **O**ut **C**hange Key) is displayed.

12. **POC → Remove SA Key and Pull Out Change Key → OPr**
    Remove the **SA** key and the change Key. **OPr** (OPen right) will be displayed.

13. **OPr → Retract Bolt**
    Turn the dial to the right (CW) to retract the bolt. Deleting Users is now complete for the Users that were programmed into the **SA** key.

14. **Close Door**

15. **Extend Bolt → IPI**

Extend the bolt by turning the dial to the left (CCW). **IPI** (Insert Personal Identifier) will be displayed.

16. **IPI → Insert Personal Identifier Key → EOP**
    Insert the User's Personal Identifier **B** Key into the key reader again. The lock will confirm the closure by writing the date and time of the close into the **B** key and displaying **EOP** (End of Operation).

Warning
If the lock is only activated in Bank Mode, do not delete all users!

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4.2.16 Bank Users - Change Combination

The combination for a Bank User can be changed whenever desired. It is recommended that the combination be changed periodically to maintain a high level of security. To change the combination:

Required Items: B Key, Current Combination

1. **Power Lock → EC**
   Power the lock by turning the dial to the left (CCW) until **EC** (Enter Combination) is displayed.

2. **EC → Press #8 → IPI**
   Press the # button followed by 8. **IPI** (**I**nsert **P**ersonal **I**dentifier) is displayed.

3.

Note
To determine the code level of your lock, see Appendix E.

   For Locks with Code Level 64B and below:

4. **IPI → Insert 01 Personal Identifier Key → bc xxxxxx**
   Insert User 01's Personal Identifier **B** Key into the key reader. The lock will display **bc** (**b**ank **c**ombination) followed by the new combination, displayed two digits at a time.

5. **bc xxxxxx → Record Combination and Press * → cc**
   Record the combination for User 01 and press * to acknowledge receipt of new combination. The display will prompt cc (confirm combination).

6. **cc → Enter New Combination → EOP**
   Enter the new combination by pressing those digits on the lock's keypad. The numbers will be displayed as they are entered. **EOP** (**E**nd **OP**eration) will be displayed. The newly confirmed combination is now active for that Bank User and Personal Identifier Key.

Note
If a flashing lightning bolt appears on the display, the combination was not confirmed properly. Reset by pressing the "*" key and rekey the operation.

   For Locks with Code Level 65B and above:

4. **IPI → Insert Personal Identifier Key → EcC**
   Insert the User's Personal Identifier **B** Key into the key reader. The lock will display **EcC** (**E**nter **c**urrent **C**ombination).

5. **EcC → Enter current Combination → EnC**
   Enter the user's current combination. The display will display **EnC** (**E**nter **n**ew **C**ombination).

Warning
For security purposes, you should define your own values for User Combinations in your Cenbank system.

6. **EnC → Enter New Combination → CnC**
   Enter the new combination on the lock's keypad. The numbers are displayed as they are entered. **CnC** (**C**onfirm **n**ew **C**ombination) will be displayed.

7. **CnC → Confirm New Combination → EOP**
   Enter the new combination again by pressing those digits on the lock's keypad. The numbers will be displayed as they are entered. **EOP** (**E**nd **OP**eration) will be displayed. The newly confirmed combination is now active for that Bank User and Personal Identifier Key.

Note
Note: If a flashing lightning bolt appears on the display, the combination was not confirmed properly. Reset by pressing the "*" key and rekey the operation.

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4.2.17 Set the Lock Time

An initialized DS1922 key is required to set the time in a lock (Gen2).

Required Items: Initialized DS1922 Key

1. **Power Lock → EC**
   Turn the dial to the left (CCW) until **EC** (**E**nter **C**ombination) appears in the display window.

2. **EC → Press #0 →-dL**
   Press the pound (#) button followed by the 0 button. **-dL** will be displayed.

   > **Note**
   >
   > If the lock has sufficient power, the **#0** will go directly to **ISA** without the **-dL** indicated in steps 2 and 3.

3. **-dL → ISA**
   Turn the dial to the left (CCW) until ISA is displayed.

4. **ISA → Insert and Hold DS1922 Key → CLS**
   Insert and hold the initialized DS1922 key in the lock's key reader. The lock will display **CLS** (**CL**ock **S**et in Progress) while the clock is being set and the daylight savings time information is being saved.

   > **Note**
   >
   > You may need to turn the dial to maintain power during this time.

5. **CLS → EOP**
   Continue to hold the key in the reader until **EOP** (**E**nd **OP**eration) is displayed.

6. **EOP → Remove Key**
   When the display prompts **EOP**, remove the DS1922 key.

   > **Note**
   >
   > The clock set key is not lock specific and may be reused to set the time on additional locks.

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4.2.18 Retrieve Bank Users From Lock

It is possible to use an initialized Supervisor Audit key to retrieve a list of the bank users from a Cencon Gen2 lock. The information is downloaded from the lock into the SA key, which is then returned to the Cencon dispatch center. The information in the key can then be viewed using the Cencon Key Report function. To retrieve the list of bank users assigned to the lock:

Required Items: Initialized Red SA Key

1. **Power Lock → EC**
   Turn the dial to the left (CCW) until **EC** (**E**nter **C**ombination) appears in the display window.

2. **EC → Press #0 →-dL**
   Press the pound (#) button followed by the 0 button. **-dL** will be displayed.

   > **Note**
   >
   > If the lock has sufficient power, the **#0** will go directly to **ISA** without the **-dL** indicated in steps 2 and 3.

3. **-dL → ISA**
   Turn the dial to the left (CCW) until ISA is displayed.

4. **ISA → Insert and Hold SA Key → UdP**
   Insert and hold the initialized SA key in the lock's key reader. The lock will display **UdP** (**U**ser **d**um**P** in progress) while the user retrieval is being processed.

   > **Note**
   >
   > You may need to turn the dial to maintain power during this time.

5. **UdP → EOP**
   Continue to hold the SA Key in the reader until **EOP** (**E**nd **OP**eration) is displayed.

6. **EOP → Remove SA Key**
   When the display prompts **EOP**, remove the **SA** key.

7. **Return SA Key**
   Return the SA Key to the dispatch center to be read using the Cencon **Key Report** function.

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4.2.19 Resynchronize the Database with a Lock

It is possible to use an initialized DS1963 key to retrieve the status of Cencon Gen2 lock. The lock status information is downloaded from the lock into the DS1963 key, which is then returned to the Cencon dispatch center and used to update the Cencon database.

Required Items: Initialized Grey Resynchronization Key

1. **Power Lock → EC**
   Turn the dial to the left (CCW) until **EC** (**E**nter **C**ombination) appears in the display window.

2. **EC → Press #0 →-dL**
   Press the pound (#) button followed by the 0 button. **-dL** will be displayed.

   > **Note**
   >
   > If the lock has sufficient power, the **#0** will go directly to **ISA** without the **-dL** indicated in steps 2 and 3.

3. **-dL → ISA**
   Turn the dial to the left (CCW) until ISA is displayed.

4. **ISA → Insert and Hold DS1963 Key → rSY**
   Insert and hold the initialized key in the lock's key reader. The lock will display **rSY** (**r**e**SY**nchronization in Progress) while the lock data retrieval is being processed.

   > **Note**
   >
   > You may need to turn the dial to maintain power during this time.

5. **rSY → EOP**
   Continue to hold the Key in the reader until **EOP** (**E**nd **OP**eration) is displayed.

6. **EOP → Remove Key**
   When the display prompts **EOP**, remove the key.

7. **Return Key**
   Return the Key to the dispatch center to be read using the **Resynchronize the Database with Lock Data** operation.

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4.2.20 Display Lock Level

It is sometimes necessary to determine the code level of the Cencon Lock with which you are working. This can be done through the keypad with the level displayed on the LCD. Use the following procedure:

1. **Power Lock → EC**
   Power the Lock by turning the dial to the left (CCW) until **EC** appears in the display window.

2. **EC → Press #1**
   Press # followed by **1**.

All Gen 2 locks will display "LL-" , "G2", followed by 4 sets of 3 numbers, followed by "HL-" with 2 number pairs.

If the LCD instead shows the letters "LL-" followed by a string of number pairs then "HL-" followed by 2 number pairs, then this lock is a Gen1 lock.

> **Note**
>
> To determine the exact Lock Level of a Gen 1 lock, please refer to Appendix F of the Cencon Reference Manual. 4.
>
> The lock will continue repeating the Lock Level until either the * key is held down or until the dial has not been turned in 40 seconds.

4.2.21 Gen2 Lock Menu Prompts

The Gen 2 lock allows the user to gather additional information in the field simply by pressing keypad commands, sometimes presenting their user key, and then reading the LCD. For each of the commands that displays either current or historic Date and Time (#71, #72, #78, and #79), the format is the same: Starting from the largest time increment (4-digit Year) and moving down to the smallest (2-digit second). For readability, the date and the time are broken apart by the "Hr-" (hour) prompt in the middle.

All the prompts that request a user key (blue FLM, yellow Route, or green Bank) be presented will do so by displaying the "IPI" after the command is entered. The difference to note is that #73 will be reading and displaying information unique to a particular key, whereas #72, #76, #78, and #79 are reading which particular mode this key is associated with (FLM, Route, or Bank) and then displaying information for that entire mode.

As is the case with interacting with the other prompts, the information will continue to display to the user until the lock powers down or until the * is held down.

#70: Display active modes and activator identification

Without requiring a user key or an audit key, it is possible to determine the following:

- Which modes on the lock are currently active: FL (First Line Maintenance), ro (Route), or bA (Bank mode).
- Whether this mode is active in Single or Dual access, noted by either a 1 or 2 before the mode abbreviation.

If the activating company activated their mode using a USB Key Box and the 4.0 or higher software, additional security benefits are incorporated in the lock. One example is that the #70 also would display the following (rather than displaying only 0's if the customer activated the lock with a version below 4.0 or with a PCI card system.):

- A unique 4-digit code (Cn-) assigned by Kaba Mas for the company that has activated that mode, in order that vendors sharing access might know who to contact for service needs at the ATM,
- Which USB Key Box 4-digit number (bn-) assigned to that particular customer, created the activation key, in order for tracking and to deter possible security violations.

  (For example, "01-", "1FL", " Cn", " 00", " 00", " bn", " 00", " 00", "02-", "1ro", " Cn", " 00", " 00", " bn", " 00", " 00", "03-", "2bA", " Cn", " 00", " 00", " bn", " 00", " 00", where "FL" indicates FLM mode, "ro" indicates route mode, "bA" indicates bank mode, the "1" prefix indicates single mode, the "2" prefix indicates dual mode, the " Cn" prompt precedes the company code, and " bn" precedes the USB key box device ID)

#71: Display internal UTC/GMT date/time

Each Gen 2 lock is programmed to the current UTC/GMT date/time when the lock is manufactured at Kaba Mas (For example, "UtC", "Yr-", " 20", " 09", " 12", " 25", "Hr-", " 22", " 30", " 59"),

#72: Display the local date/time by user key

If a customer uses Cencon 5.0 with a USB Box with their Gen2 lock, the lock will store which the TimeZone information, for that particular company, in order that they might use Time Windows for their user keys. This also allows this customer to check the local time setting for this lock, which simply adjusts the internal GMT clock with the time zone information (For example, "LCL", "Yr-", " 20", " 09", " 12", " 25", "Hr-", " 17", " 30", " 59").

#73: Display key type and key serial number for the key presented

Each SmartKey has a unique serial number engraved on the key, which is also recorded in the Cencon software when that key is added to the customer's database. At times in the field, to troubleshoot and to ensure that the user has the appropriate key that the combination was dispatched to, it may be necessary to relay the key serial number over the phone back to the dispatcher. The #73 function of the Gen2 lock allows any user key to be presented to the lock's key reader to display the key serial number which assists the user in this serial number's legibility. The serial number typically starts with 6 zeros, and then has 6 alpha-numeric characters, including letters A-F. (For example, "CL-", "14", "27", "CS-", "00", "00", "00", "11", "d7", "EF", to display the iButton device number and 12 digit serial number.)

#74: Display door contact switch status

The Gen2 lock has a 4-pin alarm input cable to optionally use Door Contact switches and for a Remote Disable function. After installing the door contact switches, the customer will want to determine the status of these sensor, often while the lock is still in factory mode, and later when the lock is activated (For example, "OPd" for "OPened door", "CLd" for "closed door", or "nCC" for "no door contact connection" accordingly).

#76: Display software level the mode was activated with by user key

Because the Gen2 lock will incorporate many more security and functional enhancements as well as future compatibility allowances when the lock used in conjunction with the Cencon 5.0 or higher software + the USB Key Box, it is important for a customer in the field to know whether or not the mode being used has been programmed with this updated settings (For example, "SL-", " 01", where software level "01" is compatibility mode, and software level "02" indicates Cencon 5.0 or higher with a USB Key Box).

#77: Display UTC/GMT date/time on DS1994 FLM and Route keys and DS1427 Bank Keys

Even though the Gen2 lock no longer uses the internal iButton timekeeping registers on DS1994 FLM and Route keys or from DS1427 Bank keys, that time can be now be read at the Gen2 lock for diagnosing problems encountered when operating Gen1 locks. The time is displayed in UTC/GMT format since time zone information may not be available to Gen2 locks operating in compatibility mode. (For example, "PIC", "Yr-", " 20", " 09", " 10", " 31", "Hr-", " 16", " 45", " 00").

#78: Display last opening local date/time by user key

For purposes of quick minimal auditing of a lock in a field, the Gen2 lock will display the last opening date and time (in that customer's local time setting) by presenting that mode's key (For example, "LOP", "Yr-", " 20", " 09", " 10", " 31", "Hr-", " 16", " 45", " 00").

#79: Display activation local date/time by user key

For purposes of determining when a mode was activated, without the necessity of using an audit key and software, the Gen2 lock will display the date and time of the current activation by that mode if a user key from that mode's system is presented (For example, "ACt", "Yr-", " 20", " 09", " 10", " 21", "Hr-", " 13", " 30", " 05").

4.2.22 Update Activate of Gen 2 Lock Activated as Gen 1 Lock

When a Gen 2 lock is activated using a previous version of Cencon or with Cencon 5 using a Cencon PCIO key reader, we say that the lock is in Gen 1 compatibility mode. The **Update Activate** function reactivates the lock in full Gen 2 mode to take advantage of the Gen 2 operations and use the new Cencon keys.

We will need a change key for these procedures, which is a tool that will normally be in the possession of the FLM or Route Service Person. The change key has two prongs that, when extended, fit securely into the change key holes on the rear of the lock body. Any change key may be used in any Cencon lock. The change key is not encoded or unique in any way.

To Update the Activation of a lock:

Required Items: Blue F or Yellow R Key, Combination, Change Key, Red SA Key

1. **Power Lock → EC**
   Turn the dial to the left (CCW) until EC (Enter Combination) appears in the display window.

2. **EC → Enter Combination → IPI**
   If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. When **EC** is displayed, key in the one time shelving combination. When the final number of the combination is keyed, the display will prompt **IPI** (**I**nsert **P**ersonal **I**dentifier).

3. **IPI → Insert Key → OPr**
   At **IPI** insert the user key into the Lock's key reader. **OPr** is displayed.

   > **Note**
   >
   > If the lock is activated for Dual Combination Access, the lock will prompt **EC2** for the second combination and then **IP2** for the second user's key before **OPr** will appear.

4. **Opr → Retract Bolt**
   At **OPr** turn the dial right (CW) to retract the bolt.

5. **Open Door**

6. **Insert Change Key**
   Extend the prongs on the change key and insert it into the change key socket on the back of the lock while OPr is displayed. Do not close the door.

7. **Extend Bolt**
   With the door open, turn the dial left (CCW) to extend the bolt.

8. **Power Lock →**

   Turn the dial to the left (CCW) until (the Change Key symbol along with EC) appears in the display window.

   > **Note**
   >
   > At this point the container door is open. If a door sensor is connected to the Cencon lock, the message **OPd** will be displayed to indicate that the door is open as you turn the lock dial CCW (counter-clockwise) or if you turn the lock dial back and forth.
   >
   > You will not be able to get a close seal from the lock while the container door is open with a door sensor attached.
   >
   > Dial CW (clockwise) to get past the **OPd** message to an **EC** prompt.

9. **→ Enter Factory Combination → ISA**

   If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. Enter the default Factory Combination of 50-25-50. ISA is displayed.

10. **ISA → Insert and Hold SA Key → UPA**
    Insert and hold the SA key in the lock's key reader. The lock will display **UPA** (**UP**date **A**ctivate in Progress) while the lock is being reactivated as a Gen 2 lock.

11. **POC → Remove SA Key AND Pull Out Change Key → OPr**
    At the **POC** prompt remove the **SA** Key and **P**ull **Out** the **C**hange key. **Opr** is displayed.

12. **Opr → Retract Bolt**
    At **OPr** turn the dial to the right (CW) to retract the bolt.

13. **Close Door**

14. **Extend Bolt**
    Turn the dial to the left (CCW) to extend the bolt.

15. **Power Lock → IPI**
    Turn the dial to the left (CCW) until **IPI** (**I**nsert **P**ersonal **I**dentifier) appears in the display window.

16. **IPI → Insert Key → c**xx or **c**xx xx (Close Seal)
    At **IPI** insert the personal identifier key of the FLM or Route person who opened the lock. The LCD will display **c**xx where xx is a two-digit number (the Close Seal number for this opening).

> **Note**
>
> An audit record is recorded each time a key is inserted for opening and closing operations.

17. **c**xx or **c**xx xx → **Record Shelving Close Seal**
    This Close Seal number should be called in to Dispatch to close the operation.

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4.3.1 Open Lock In Shelved Mode

Each lock is shipped from the factory in Shelved Mode. The "one time only" combination feature is not available when the lock is shelved. Instead, the Shelved Mode combination is used to open the lock. The default Factory Combination is set to 50-25-50. The default combination may be changed, in which case the new combination would be used to open the lock while in Shelved Mode. The correct opening procedure for a shelved lock is:

1. **Power Lock → EC**
   Turn the dial briskly in any direction until the letters **EC** (**E**nter **C**ombination) appear in the display window.

2. **EC → Enter Shelved Mode Combination → OPr**
   Enter the current Shelved Mode combination, whether it be the Factory Combination of 50-25-50 or a new Shelved Mode combination, by sequentially pressing those digits on the lock keypad. The LCD will display the numbers as the combination is entered. When the combination has been correctly entered, the LCD will read **OPr**, meaning "**OP**en **r**ight."

3. **OPr → Retract Bolt**
   Rotate the container handle to unlock the lock.

4. **Open Door**

5. **Close Door**

6. **Extend Bolt** Rotate the container handle to extend the bolt.

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4.3.2 Change Shelved Mode Combination

You may change the default Factory Combination of 50-25-50 to a new combination to be used while the lock is still in Shelved Mode. Once you have changed the combination for the first time, you may want to change the combination again to a different Shelved Mode combination. You can even change it back to the Factory combination of 50-25-50 if you would like.

Required Items: Current Shelved Mode Combination

> **Note**
>
> You can only change the Shelved Mode combination while operating in Shelved Mode. Once a lock is "activated" in any mode, the Shelved Mode combination returns to the Factory Default of 50-25-50.

To change the Shelved Mode combination:

1. **Power Lock → EC**
   Turn the dial briskly in any direction until the letters **EC** (**E**nter **C**ombination) appear in the display window.

2. **EC → Enter Shelved Mode Combination → OPr**
   Enter the current Shelved Mode combination (either 50-25-50 or a changed Shelved Mode combination) by sequentially pressing those digits on the lock keypad. The numbers will be displayed on the LCD as they are entered. When the combination has been correctly entered, the LCD will read **OPr**, meaning "**OP**en **r**ight."

3. **OPr → Retract Bolt**
   Rotate the container handle to unlock the lock.

4. **Open Door**

5. **Power Lock →**
   Turn the dial briskly in any direction until **CLb** is displayed

6. **CLb→ Press #8 → EcF**
   Press the "#" button followed by the "8" button. **EcF** (**E**nter **c**urrent **F**actory combination) will be displayed.

7. **EcF → Enter Current Shelved Mode Combination → EnF**
   Enter the current shelved mode combination, "**EnF**" (**E**nter **n**ew **F**actory combination) will be displayed.

8. **EnF → Enter New Combination → CnF**
   Select and enter the new combination. "**CnF**" (**C**onfirm **n**ew **F**actory combination) will be displayed.

   > **Note**
   >
   > The new Shelved Mode combination should be recorded and stored in a secure area.

9. **CnF → Enter New Combination**
   Enter new combination again to confirm. **EOP** (**E**nd **o**f **P**rocess) will be displayed.

10. **Extend Bolt**
    Do not close the door. Rotate the container handle to extend the bolt.

11. **EC → Enter New Shelved Mode Combination → OPr**
    Turn the dial briskly in any direction until the letters **EC** (**E**nter **C**ombination) appear in the display window. Enter the new shelved mode combination by pressing those digits on the lock's keypad. The numbers will be displayed on the LCD as they are entered. When the combination has been correctly entered, the LCD will read **OPr**, meaning "**OP**en **r**ight."

12. **OPr → Retract Bolt**
    Rotate the container handle to unlock the lock.

13. **Close Door**

14. **Extend Bolt**
    Rotate the container handle to extend the bolt.

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4.3.3 Display Serial Number

The Lock's Serial Number may be displayed at any time.

1. **Power Lock → EC**
   Turn the dial briskly in any direction until the letters **EC** (**E**nter **C**ombination) appear in the display window.

2. **EC → Press #2 → Sn- xx xx xx** or **Sn- xxx xxx xxx**
   Press **#** followed by **2**.

   For Gen2 locks: The lock will display **Sn-** (**S**erial **n**umber) followed by the serial number, displaying three digits at a time. If the Lock Serial Number is **1000022**, "**Sn-**", then "**001**", then "**000**", then "**022**" will be displayed.

3. **Sn- xxx xxx xxx → Record Serial Number**
   Record the Serial Number. You will need this number when you activate the lock.

Note
This display can be canceled by pressing the asterisk (*) key, or it will automatically be canceled when the lock powers down.

4.3.4 FLM and Route Lock Activation

Lock activation requires a coordinated effort between a Dispatcher and an FLM or Route Person. Remember that a lock may be activated in more than one mode at a time, which means that sometimes the lock will already be activated in one mode when you want to activate it in another.

A *Dispatcher* activates the lock at the PC using the software program and the red **SA** key. An *FLM or Route Person* physically goes to the lock to complete the activation, using the initialized **SA** key, a blue F or yellow R key, change key and an activation combination obtained from the Dispatcher.

> **Note**
>
> If the lock is already active in another mode, a service call must be issued for that mode so that the lock can be opened for the new activation.

The Change Key is no longer required for this procedure as it was with the deadbolt version of the Cencon lock. In it's place is the new Change Key Function. To initiate this function, the FL or Route technician must first open the lock, then with lock open power up the lock again until they receive a CLb prompt on the lock display. Then the FL or Route technician must enter a #50 command on the keypad in order to get an ISA prompt on the lock.

To Activate Lock from Shelved Mode:

This process should be followed when the lock is not currently activated in any mode; that is, it is in Shelved Mode.

Required Items: Shelved Mode Combination, SA Key, F or R Key

1. **Power Lock → EC**
   Turn the dial briskly in any direction until the letters **EC** (**E**nter **C**ombination) appear in the display window.

2. **EC → Enter Shelved Mode Combination → OPr**
   When **EC** is displayed, key in the current Shelved Mode combination. This could either be the default Factory Combination of 50-25-50 or a unique combination that was set while the lock was in Shelved Mode. **OPr** (**OP**en **r**ight) is displayed.

3. **OPr → Retract Bolt**
   Rotate the container handle to unlock the lock.

4. **Open Door**

5. **Power Lock →**
   Turn the dial briskly in any direction until **CLb** is displayed.

6. **CLb→ Enter #50 → ISA**
   Enter **#50** on the lock keypad. **ISA** (**I**nsert **S**upervisor **A**udit key) is displayed.

7. **ISA → Insert and Hold SA Key → Ini**
   Insert and hold the **SA** Key in the key reader on the side of the lock. The lock will display **Ini** (**Ini**tializing) with a flashing bar over the "n" while the information is being processed.

8. **Ini → EOP**
   Continue to hold the **SA** Key in the reader until **EOP** (**E**nd **of P**rocess) is displayed.

9. **Extend Bolt**
   Do not close the door. Rotate the container handle to extend the bolt.

10. **Power Lock → EC**
    Turn the dial briskly in any direction until the letters **EC** (**E**nter **C**ombination) appear in the display window.

11. **EC → Enter Activation Combination → IPI**
    When **EC** is displayed, key in the activation combination. This is the combination that was issued at the PC software. **IPI** (**I**nsert **P**ersonal **I**dentifier) is displayed.

12. **IPI → Insert Personal Identifier Key → OPr**
    At **IPI** insert a valid FLM or Route key. **OPr** is displayed.

> **Note**
>
> If you have activated the lock in Dual Access Mode, the lock will prompt **EC2** for the second combination and then **IP2**

for the second user's key before **OPr** will appear.

13. **OPr → Retract Bolt**
At **OPr,** Rotate the container handle to unlock the lock.

14. **Close Door**

15. **Extend Bolt**
Rotate the container handle to extend the bolt.

16. **Power Lock → IPI**
Turn the dial briskly in any direction until **IPI** (**I**nsert **P**ersonal **I**dentifier) appears in the display window.

17. **IPI → Insert Personal Identifier Key →Cxx xx** (**C**lose Seal)
At **IPI** insert a valid FLM or Route key.

For Gen2 locks: The lock will display **Cxx xx** (**C**lose seal) where **xx xx** is a four-digit number that is the Close Seal number for this opening.

> **Note**
>
> To stop the display of a four-digit close seal, press and briefly hold the * key. If you do not choose to manually eliminate the display of the close seal, it will automatically disappear when the lock powers down.

> **Note**
>
> An audit record will be recorded each time a key is inserted in the opening and closing operations.

18. **Cxx xx → Record Close Seal**
This Close Seal number should be called in to the Dispatch Center to close the activation call.

To Activate an FLM or Route Lock Mode from an Active FLM or Route Mode:

This procedure should be used when the lock has already been activated in at least one mode, either FLM or Route, and you wish to activate the other Cencon operating mode.

> **Note**
>
> Since the Lock has already been activated in one Mode and you are activating another, you will be required to meet someone at the Lock who has the authority to open it.

Required Items: Default Factory Combination, SA Key, Activation Combination, F or R Key, Service Call Combination and F or R Key for Active Mode.

1. **Power Lock → EC**
Turn the dial briskly in any direction until the letters **EC** (**E**nter **C**ombination) appear in the display window.

2. **EC → Enter Service Call Combination for Active Mode → IPI**
When **EC** is displayed, key in the one time combination that is already active. When the final number of the combination is keyed, the display will prompt **IPI** (**I**nsert **P**ersonal **I**dentifier).

3. **IPI → Insert Personal Identifier Key → OPr**
At **IPI** insert the Personal Identifier Key for the mode that is already active into the Lock's key reader. **OPr** (**OP**en **r**ight) is displayed.

4. **OPr → Retract Bolt**
Rotate the container handle to unlock the lock.

5. **Open Door**

6. **Power Lock →**
Turn the dial briskly in any direction until **CLb** is displayed.

7. **CLb→ Enter #50 → ISA**
Enter **#50** on the lock keypad. **ISA** (**I**nsert **S**upervisor **A**udit key) is displayed.

8. **ISA → Insert and Hold SA Key → Ini**

Insert and hold the **SA** Key in the key reader on the side of the lock. The lock will display **Ini** (**Ini**tializing) with a flashing bar over the "n" while the information is being processed.

9. **Ini → EOP**

   Continue to hold the **SA** Key in the reader until **EOP** (**E**nd **o**f **P**rocess) is displayed.

10. **Extend Bolt**

    Do not close the door. Rotate the container handle to extend the bolt.

11. **Power Lock → IPI**

    Turn the dial briskly in any direction until **IPI** (**I**nsert **P**ersonal **I**dentifier) appears in the display window.

> **Note**
>
> At this point the container door is open. If a door sensor is connected to the Cencon lock, the message **OPd** will be displayed to indicate that the door is open as you turn the lock dial CCW (counter-clockwise) or if you turn the lock dial back and forth.
>
> You will not be able to get a close seal from the lock while the container door is open with a door sensor attached.
>
> Dial CW (clockwise) to get past the **OPd** message to an **EC** prompt. Continue with step **15** to enter a combination and retract the bolt. The lock will prompt with **IPI** once the container door is closed, and you will be able to get a close seal then.

12. **IPI → Insert Personal Identifier Key → Cxx xx** (**C**lose Seal)

    At **IPI** insert the valid FLM or Route key that originally opened the lock.

    For Gen2 locks: The lock will display **Cxx xx** (**C**lose seal) where **xx xx** is a four-digit number that is the Close Seal number for this opening.

> **Note**
>
> To stop the display of a four-digit close seal, press and briefly hold the * key. If you do not choose to manually eliminate the display of the close seal, it will automatically disappear when the lock powers down.

> **Note**
>
> An audit record will be recorded each time a key is inserted for opening and closing operations.

13. **Cxx xx → Record Service Call Close Seal**

    This is the Close Seal number for the original service call that opened the Lock. It should be called in to Dispatch to close out this service call.

14. **Power Lock → EC**

    Turn the dial briskly in any direction until the letters **EC** (**E**nter **C**ombination) appear in the display window.

15. **EC → Enter Activation Combination → IPI**

    When **EC** is displayed, key in the activation combination for the new mode being activated. **IPI** is displayed.

16. **IPI → Insert Personal Identifier Key → OPr**

    At **IPI** insert the Personal Identifier Key for the new mode being activated. **OPr** (**OP**en **r**ight) is displayed.

17. **OPr → Retract Bolt**

    Rotate the container handle to unlock the lock.

18. **Close Door**

19. **Extend Bolt**

    Rotate the container handle to extend the bolt.

20. **Power Lock → IPI**

    Turn the dial briskly in any direction until **IPI** (**I**nsert **P**ersonal **I**dentifier) appears in the display window.

21. **IPI → Insert Personal Identifier Key → Cxx xx** (**C**lose Seal)

    At **IPI** insert a valid FLM or Route key.

    For Gen2 locks: The lock will display **Cxx xx** (**C**lose seal) where **xx xx** is a four-digit number that is the Close Seal

number for this opening.

22. **Cxx xx → Record Activation Close Seal**
    This Close Seal number should be called in to the Dispatch Center to close the activation call.

To Activate an FLM or Route Lock Mode from an Active Bank Mode:

This procedure should be used when the lock has already been activated in Bank mode and you wish to activate another Cencon operating mode.

Required Items: Default Factory Combination, SA Key, Activation Combination, F or R Key, Bank User Combination and B Key for Active Mode.

1. **Power Lock → EC**
   Turn the dial briskly in any direction until the letters **EC** (**E**nter **C**ombination) appear in the display window.

2. **EC → Enter Bank User Combination for Active Mode → IPI**
   When **EC** is displayed, key in the bank user's combination. When the final number of the combination is keyed, the display will prompt **IPI** (**I**nsert **P**ersonal **I**dentifier).

3. **IPI → Insert Personal Identifier Key → OPr**
   At **IPI** insert the Personal Identifier Key for Bank mode into the Lock's key reader. **OPr** (**OP**en **r**ight) is displayed.

4. **OPr → Retract Bolt**
   Rotate the container handle to unlock the lock.

5. **Open Door**

6. **Power Lock →**
   Turn the dial briskly in any direction until **CLb** is displayed.

7. **CLb→ Enter #50 → ISA**
   Enter **#50** on the lock keypad. **ISA** (**I**nsert **S**upervisor **A**udit key) is displayed.

8. **ISA → Insert and Hold SA Key → Ini**
   Insert and hold the **SA** Key in the key reader on the side of the lock. The lock will display **Ini** (**Ini**tializing) with a flashing bar over the "n" while the information is being processed.

9. **Ini → EOP**
   Continue to hold the **SA** Key in the reader until **EOP** (**E**nd **o**f **P**rocess) is displayed.

10. **Extend Bolt**
    Do not close the door. Rotate the container handle to extend the bolt.

11. **Power Lock → IPI**
    Turn the dial briskly in any direction until **IPI** (**I**nsert **P**ersonal **I**dentifier) appears in the display window.

You will not be able to confirm the lock is closed while the container door is open with a door sensor attached.

Dial CW (clockwise) to get past the **OPd** message to an **EC** prompt. Continue with step **14** to enter a combination and retract the bolt. The lock will prompt with **IPI** once the container door is closed, and you will be able to confirm the lock is closed then.

12. **IPI → Insert Personal Identifier Key → EOP** (**E**nd of **OP**eration)
    At **IPI** insert a valid Bank key to confirm the lock is closed and to display **EOP** (**E**nd of **OP**eration)

> **Note**
>
> An audit record will be recorded each time a key is inserted for opening and closing operations.

13. **Power Lock → EC**
    Turn the dial briskly in any direction until the letters **EC** (**E**nter **C**ombination) appear in the display window.

14. **EC → Enter Activation Combination → IPI**
    When **EC** is displayed, key in the activation combination for the new mode being activated. **IPI** is displayed.

15. **IPI → Insert Personal Identifier Key → OPr**
    At **IPI** insert the Personal Identifier Key for the new mode being activated. **OPr** (**OP**en **r**ight) is displayed.

16. **OPr → Retract Bolt**
    Rotate the container handle to unlock the lock.

17. **Close Door**

18. **Extend Bolt**
    Rotate the container handle to extend the bolt.

19. **Power Lock → IPI**
    Turn the dial briskly in any direction until **IPI** (**I**nsert **P**ersonal **I**dentifier) appears in the display window.

20. **IPI → Insert Personal Identifier Key → Cxx xx** (**C**lose Seal)
    At **IPI** insert a valid FLM or Route key.

    For Gen2 locks: The lock will display **Cxx xx** (**C**lose seal) where **xx xx** is a four-digit number that is the Close Seal number for this opening.

> **Note**
>
> To stop the display of a four-digit close seal, press and briefly hold the * key. If you do not choose to manually eliminate the display of the close seal, it will automatically disappear when the lock powers down.

> **Note**
>
> An audit record will be recorded each time a key is inserted for opening and closing operations.

21. **Cxx xx → Record Activation Close Seal**
    This Close Seal number should be called in to the Dispatch Center to close the activation call.

4.3.5 Open Lock - FLM or Route Mode

Once a lock has been activated in FLM and/or Route Mode, a "one time combination" is needed to open the lock. This combination is issued from the Cencon software. The correct opening procedure for an activated lock is:

Required Items: Issued Combination, Blue F or Yellow R Key

1. **Power Lock → EC**
   Turn the dial briskly in any direction until the letters **EC** (**E**nter **C**ombination) appear in the display window.

2. **EC → Enter Combination → IPI**
   When **EC** is displayed, key in the one time combination. When the final number of the combination is keyed, the display will prompt **IPI** (**I**nsert **P**ersonal Identifier).

3. **IPI → Insert Personal Identifier Key → OPr**
   At **IPI** insert a valid FLM or Route key in the lock's key reader. **OPr** (**OP**en **r**ight) is displayed.

4. **Opr → Retract Bolt**
   At **OPr,** Rotate the container handle to unlock the lock.

5. **Open Door**

6. **Perform Operations**
   Perform the service or route operations for the lock.

7. **Close Door**

8. **Extend Bolt → IPI**
   Rotate the container handle to extend the bolt. When the lock is fully locked, the display will prompt **IPI** (**I**nsert **P**ersonal **I**dentifier).

9. **IPI → Insert Personal Identifier Key → Cxx xx** (**C**lose Seal)
   At **IPI** insert a valid FLM or Route key.

   For Gen2 locks: The lock will display **Cxx xx** (**C**lose seal) where **xx xx** is a four-digit number that is the Close Seal number for this opening.

> **Note**
>
> To stop the display of a four-digit close seal, press and briefly hold the * key. If you do not choose to manually eliminate the display of the close seal, it will automatically disappear when the lock powers down.

> **Note**
>
> An audit record will be recorded each time a key is inserted for opening and closing operations.

---

10. **Cxx xx → Record Close Seal**
    This Close Seal number should be called in to Dispatch to close out this service call if the call was dispatched as an individual call (FLM or Route). If dispatched as a part of a Route, the Close Seal can be called in at the close of the call. It can also be read from the key or entered manually into a menu at the PC upon completion of the route.

4.3.6 Open Lock - FLM or Route Dual Mode

If a lock has been activated in FLM and/or Route Dual Mode, two unique combinations are required to open the lock. Each combination is a one time combination that is issued from the Cencon software. The procedure for opening the lock in Dual Mode is:

Required Items: Two Issued Combinations, Two Blue F or Yellow R Keys

1. **Power Lock → EC**
   Turn the dial briskly in any direction until the letters **EC** (**E**nter **C**ombination) appear in the display window.

2. **EC → Enter 1st Combination → IPI**
   When **EC** is displayed, key in the one time combination. When the final number of the combination is keyed, the display will prompt **IPI** (**I**nsert **P**ersonal **I**dentifier).

3. **IPI → Insert 1st Personal Identifier Key → EC2**
   At **IPI** insert the first valid FLM or Route key in the Lock's key reader. For Dual Mode **EC2** (**E**nter **C**ombination **2**) will be displayed.

4. **EC2 → Enter 2nd Combination → IP2**
   At **EC2** key in the second valid combination. **IP2** (**I**nsert **P**ersonal **I**dentifier 2) will be displayed.

5. **IP2 → Insert 2nd Personal Identifier Key → OPr**
   At **IP2** insert the second valid FLM or Route key. **OPr** (**OP**en **r**ight) will be displayed.

6. **OPr → Retract Bolt**
   At **OPr,** Rotate the container handle to unlock the lock.

7. **Open Door**

8. **Perform Operations**
   Perform the service or route operations for the lock.

9. **Close Door**

10. **Extend Bolt → IPI**
    Rotate the container handle to extend the bolt. When the lock is fully locked, the display will prompt **IPI** (**I**nsert **P**ersonal **I**dentifier).

11. **IPI → Insert Personal Identifier Key → Cxx xx** (**C**lose Seal)
    At **IPI** insert a valid FLM or Route key.

    For Gen2 locks: The lock will display **Cxx xx** (**C**lose seal) where **xx xx** is a four-digit number that is the Close Seal number for this opening.

> **Note**
>
> To stop the display of a four-digit close seal, press and briefly hold the * key. If you do not choose to manually eliminate the display of the close seal, it will automatically disappear when the lock powers down.

> **Note**
>
> An audit record will be recorded each time a key is inserted for opening or closing operations. In the case where a lock is operating in Dual Mode, two records will be written for the closing even though only one key is required to retrieve the close seal and end the call.

12. **Cxx xx → Record Close Seal**
    This Close Seal number should be called in to Dispatch to close out this service call **if the call was dispatched as an individual call** (FLM or Route). If dispatched as a part of a Route, the Close Seal can be called in at the close of the call, or it can be read from the key or entered into a menu upon completion of the route.

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4.3.7 View Last Close Seal Number

It is possible to retrieve the last close seal number that was issued by a lock for a particular mode. To view the last close seal:

1. **Power Lock → EC**
   Turn the dial briskly in any direction until the letters **EC** (**E**nter **C**ombination) appear in the display window.

2. **Press #4 → IPI**
   Press **#** followed by **4**. **IPI** (**I**nsert **P**ersonal **I**dentifier) will be displayed.

3. **IPI → Insert Personal Identifier Key →Cxx xx** (**C**lose Seal)
   At **IPI** insert a valid FLM or Route key.

   For Gen2 locks: The lock will display **Cxx xx** (**C**lose seal) where **xx xx** is a four-digit number that is the last Close Seal number issued for the previous FLM or Route Mode opening.

> **Note**
>
> To stop the display of a four-digit close seal, press and briefly hold the * key. If you do not choose to manually eliminate the display of the close seal, it will automatically disappear when the lock powers down.

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4.3.8 Display Audit Counts

There are two types of counts that are tracked in the locks. The first type tracks the number of openings in each activated mode for the time period of an activation. The second type of count tracks the total number of openings for the lifetime of the lock.

The lock always keeps track of how many times it has been opened (Total Audit Count) no matter in which mode the opening occurred, including Shelved Mode, FLM, Route, and Bank. To learn the Total Audit Count, press the pound symbol, "#," followed by the "3" whenever "EC" is displayed on the LCD. The display will flash two sets of numbers alternately on the screen. When taken as one four-digit number, this represents the Total Audit Count. For instance, if the LCD flashes "AC-" then "00" followed by "07," the lock has a Total Audit Count of "0007," meaning the lock has been opened seven times in all modes combined. This display can be cancelled by pressing the asterisk (*) button. The Total Audit Count does not reset when the lock is shelved. Once the counter exceeds 9999 openings, the Gen2 lock begins displaying more digits.

To Obtain the Audit Count for a Mode:

To retrieve the audit count for a Mode activation period, a valid PI key is required. The type of Personal Identifier key inserted in the key reader will tell the lock which Audit Count to show.

> **Note**
>
> In current versions of the lock the audit counts are initialized when a lock is activated. This allows you to retrieve the audit count for the last activated time period for a specific mode.

Required Items: Blue F or Yellow R Key

1. **Power Lock → EC**
   Turn the dial briskly in any direction until the letters **EC** (**E**nter **C**ombination) appear in the display window.

2. **Press ## → IPI**
   Press the pound (#) button twice. The display will prompt **IPI** (**I**nsert **P**ersonal **I**dentifier).

3. **IPI → Insert Personal Identifier Key → SC- xx xx or SS- xx xx**
   At **IPI** insert a valid FLM or Route key in the Lock's key reader. **SC** will display if the lock is active . **SS** will display if the lock is shelved. The display will then indicate the Audit Count for the Mode of the key that was inserted, displayed two digits at a time.

> **Note**
>
> This display can be canceled by pressing the asterisk (*) button, or it will automatically be canceled when the lock powers down.

To Obtain the Total Audit Count for All Modes (Including Shelved Mode):

1. **Power Lock → EC**
   Turn the dial briskly in any direction until the letters **EC** (**E**nter **C**ombination) appear in the display window.

2. **Press #3 → AC- xx xx**
   AC- will display followed by the total audit count for all modes, displayed two digits at a time.

> **Note**
>
> This display can be canceled by pressing the asterisk (*) button, or it will automatically be canceled when the lock powers down.

4.3.9 Retrieve Audit Download From Lock

It is possible to use an initialized Supervisor Audit key to retrieve valuable records from the Cencon lock. The information is downloaded from the lock into the SA key, which is then returned to the Cencon dispatch center. The information in the key can then be extracted by a Supervisor by downloading it into the PC system via the Reports Menu. To retrieve the audit from the lock:

Required Items: Initialized Red SA Key

> **Note - Gen2 Locks**
>
> A 5 minute delay will be imposed if more than five (5) #0 operations are done in 5 minutes (a 'dLY' prompt is displayed). Either wait for the delay to elapse or open the lock to clear the count and reset the delay.

1. **Power Lock → EC**
   Turn the dial briskly in any direction until the letters **EC** (**E**nter **C**ombination) appear in the display window.

2. **EC → Press #0 → -dL** or **ISA**
   Press the pound (**#**) button followed by the **0** button.

3. **-dL → ISA** (Gen2 locks)
   For Gen2 locks, the **-dL** (**d**ial **L**eft) prompt will be displayed indicating that the user is required to dial counter-clockwise (CCW) to supply additional power to the lock before the **ISA** (**I**nsert **SA** key) prompt is displayed.

4. **ISA → Insert and Hold SA Key → Aud**
   ISA will be displayed. **Insert and hold** the initialized Supervisor Audit key in the lock's key reader. The lock will display **Aud** (**Aud**it in Progress) with a flashing bar over the "u" while the Audit Download is being processed.

5. **Aud → EOP**
   Continue to hold the SA Key in the reader until **EOP** (**E**nd of **OP**eration) is displayed.

   > **Note**
   >
   > You must periodically turn the dial to maintain power during this time.

6. **EOP → Remove SA Key**
   When the display prompts **EOP**, remove the **SA** key.

7. **Return SA Key**
   Return the SA Key to the dispatch center to be read by the Supervisor.

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4.3.10 Shelve Lock (at Lock)

When a lock mode is deactivated, we say that the mode has been "shelved". When all modes are deactivated, the lock is shelved or in Shelved Mode. Lock shelving requires a coordinated effort between a Special Supervisor and an FLM or Route Person. An SA key must be specially prepared and taken to the lock. Once the shelving procedure has taken place at the lock, the SA key is returned to the Dispatch Center where information is extracted from the key. Remember that you must shelve each mode of the lock if you wish to return the lock to Shelved Mode.

The Change Key is no longer required for this procedure as it was with the deadbolt version of the Cencon lock. In it's place is the new Change Key Function. To initiate this function, the FL or Route technician must first open the lock, then with lock open power up the lock again until they receive a CLb prompt on the lock display. Then the FL or Route technician must enter a #50 command on the keypad in order to get an ISA prompt on the lock.

To Shelve A Lock Mode or Modes using FLM or Route Mode:

This procedure should be used when you want to shelve any combination of FLM, Route Mode, or Bank Mode.

> **Note**
>
> The designation of how many modes are to be shelved, and which ones, occurs at the PC using the Cencon software. That information is written to an SA key which is then used in this process.

If you will be shelving ALL active modes, this process will return the lock to Shelved Mode where it will open with the Factory Combination of 50-25-50.

Required Items: Blue F or Yellow R Key, Shelving Combination, Red SA Key

1. **Power Lock → EC**
   Turn the dial briskly in any direction until the letters **EC** (**E**nter **C**ombination) appear in the display window.

2. **EC → Enter Shelving Combination → IPI**
   When **EC** is displayed, key in the one time shelving combination. When the final number of the combination is keyed, the display will prompt **IPI** (**I**nsert **P**ersonal **I**dentifier).

3. **IPI → Insert Key → OPr**
   At **IPI** insert the key for the mode being shelved into the Lock's key reader. **OPr** is displayed.

   > **Note**
   >
   > If the lock is activated for Dual Combination Access, the lock will prompt **EC2** for the second combination and then **IP2** for the second user's key before **OPr** will appear.

4. **OPr → Retract Bolt**
   Rotate the container handle to unlock the lock.

5. **Open Door**

6. **Power Lock →**
   Turn the dial briskly in any direction until **CLb** is displayed.

7. **CLb→ Enter #50 → ISA**
   Enter **#50** on the lock keypad. **ISA** (**I**nsert **S**upervisor **A**udit key) is displayed.

8. **ISA → Insert and Hold SA Key → Ini**
   Insert and hold the **SA** Key in the key reader on the side of the lock. The lock will display **Ini** (**Ini**tializing) with a flashing bar over the "n" while the information is being processed.

9. **Ini → EOP**
   Continue to hold the **SA** Key in the reader until **EOP** (**E**nd **o**f **P**rocess) is displayed.

10. **Close Door**

11. **Extend Bolt**
    Rotate the container handle to extend the bolt.

12. **Power Lock → IPI**

Turn the dial briskly in any direction until until **IPI** (**I**nsert **P**ersonal **I**dentifier) appears.

13. **IPI → Insert Personal Identifier Key → Cxx xx** (**C**lose Seal)
    At **IPI** insert a valid FLM or Route key.

    For Gen2 locks: The lock will display **Cxx xx** (**C**lose seal) where **xx xx** is a four-digit number that is the Close Seal number for this opening.

    > **Note**
    >
    > An audit record will be recorded each time a key is inserted for opening and closing operations.

14. **Cxx xx → Record Shelving Close Seal**
    This Close Seal number should be called in to Dispatch to close the shelving.

    > **Note**
    >
    > If the lock has been shelved in ALL active modes, you should at this time test the opening of the lock with the Default Factory Combination of 50-25-50.

15. **Return SA Key**
    Return the SA Key to the Dispatch Center to verify the shelving operation.

To Shelve A Lock Mode or Modes using Bank Mode:

This procedure should be used when you want to shelve any combination of FLM, Route Mode, or Bank Mode (Cencon 5.0 or later only).

> **Note**
>
> The designation of how many modes are to be shelved, and which ones, occurs at the PC using the Cencon software. That information is written to an SA key which is then used in this process.

If you will be shelving ALL active modes, this process will return the lock to Shelved Mode where it will open with the Factory Combination of 50-25-50.

Required Items: Teal B Key, User Key Combination, Red SA Key

1. **Power Lock → EC**
   Turn the dial briskly in any direction until the letters **EC** (**E**nter **C**ombination) appear in the display window.

2. **EC → Enter Shelving Combination → IPI**
   When **EC** is displayed, key in the one time shelving combination. When the final number of the combination is keyed, the display will prompt **IPI** (**I**nsert **P**ersonal **I**dentifier).

3. **IPI → Insert Key → OPr**
   At **IPI** insert the key for the mode being shelved into the Lock's key reader. **OPr** is displayed.

   > **Note**
   >
   > If the lock is activated for Dual Combination Access, the lock will prompt **EC2** for the second combination and then **IP2** for the second user's key before **OPr** will appear.

4. **OPr → Retract Bolt**
   Rotate the container handle to unlock the lock.

5. **Open Door**

6. **Power Lock →**
   Turn the dial briskly in any direction until **CLb** is displayed.

7. **CLb→ Enter #50 → ISA**
   Enter **#50** on the lock keypad. **ISA** (**I**nsert **S**upervisor **A**udit key) is displayed.

8. **ISA → Insert and Hold SA Key → Ini**
   Insert and hold the **SA** Key in the key reader on the side of the lock. The lock will display **Ini** (**Ini**tializing) with a flashing bar over the "n" while the information is being processed.

9. **Ini → EOP**
   Continue to hold the **SA** Key in the reader until **EOP** (**E**nd **o**f **P**rocess) is displayed.

10. **Close Door**

11. **Extend Bolt**
    Rotate the container handle to extend the bolt.

12. **Power Lock → IPI**
    Turn the dial briskly in any direction until until **IPI** (**I**nsert **P**ersonal **I**dentifier) appears.

13. **IPI → Insert Personal Identifier Key → EOP** (**E**nd of **OP**eration)
    At **IPI** insert a valid Bank key to confirm the lock is closed and to display **EOP** (**E**nd of **OP**eration)

Note
An audit record will be recorded each time a key is inserted for opening and closing operations.

Note
If the lock has been shelved in ALL active modes, you should at this time test the opening of the lock with the Default Factory Combination of 50-25-50.

14. **Return SA Key**
    Return the SA Key to the Dispatch Center to verify the shelving operation.

4.3.11 Bank Lock Activation

Take the initialized **SA** key, and a minimum of one lock user's **Bank key** to the lock. The lock will be in Shelved mode so it can be opened with the Shelved Mode combination (either **50-25-50** or a changed combination) and no PI. After Activating the lock, you need to change the combination for at least one of the Users. All Bank User keys are initially set to the **50-25-50** combination, but will not open the Lock until changed to a valid new combination. Follow this procedure to activate the Lock and change a user combination:

Note

Cencon bank mode limitations differ between Cencon Gen 1 locks and Cencon Gen 2 locks. The following table summarizes the differences between the lock versions:

Feature	Cencon Gen 1	Cencon Gen 2
Number of Users On Lock	1-32	1-100
Bank Mode User ID Limit Per Bank Branch	1-79	0-2147483647
Bank Branch ID Limit	1-9999	1-2147483647
Initial Combinations	Bank mode user keys always have an initial default combination of **50-25-50**.	Bank mode user keys have an initial combination as set by the Cencon software.
Combination Valid To Open Lock	Must change bank mode user key initial combination before opening the lock.	Requirement to change the bank mode user key initial combination before opening the lock is set per bank mode user by the Cencon software.

Feature	DS1427 Bank Key	DS1963S Bank Key
Cencon Gen 1	Supported	Not Supported
Cencon Gen 2	Supported	Supported
Security	Legacy Cencon Security	Enhanced Security and Hardware Authentication
Bank Mode User ID Limit Per Bank Branch	1-79	0-2147483647
Bank Branch ID Limit	1-9999	1-2147483647

To Activate a Bank Lock from Shelved Mode:

Required Items: Shelved Mode Combination, SA Key, B Key

1. **Power Lock → EC**
   Turn the dial briskly in any direction until the letters **EC** (**E**nter **C**ombination) appear in the display window.

2. **EC → Enter Shelved Mode Combination → OPr**
   When EC is displayed, key in the current Shelved Mode combination. This could either be the default Factory Combination of 50-25-50 or a unique combination that was set while the lock was in Shelved Mode. **OPr** (**OP**en **r**ight) is displayed.

3. **OPr → Retract Bolt**
   At **OPr** ,Rotate the container handle to unlock the lock.

4. **Open Container Door**

5. **Power Lock →**
   Turn the dial briskly in any direction until **CLb** is displayed.

6. **CLb→ Enter #50 → ISA**
   Enter **#50** on the lock keypad. **ISA** (**I**nsert **S**upervisor **A**udit key) is displayed.

7. **ISA → Insert and Hold SA Key → Ini**
   Insert and hold the **SA** Key in the key reader on the side of the lock. The lock will display **Ini** (**Ini**tializing) with a flashing bar over the "n" while the information is being processed.

8. **Ini → EOP**
   Continue to hold the **SA** Key in the reader until **EOP** (**E**nd **of P**rocess) is displayed.

9. **Extend Bolt**
   Do not close the door. Rotate the container handle to extend the bolt.

10. **Power Lock → EC**
    Turn the dial briskly in any direction until the letters **EC** (**E**nter **C**ombination) appear in the display window.

11. **EC → Enter User Combination → IPI**

    Enter the assigned initial user combination for your bank user key as set from the Cencon software.

    The lock will prompt **IPI** (**I**nsert **P**ersonal **I**dentifier key) on the display.

    > **Note**
    >
    > For Cencon Gen 2 locks your bank user key may or may not be required to change your initial bank user key combination before being permitted to open the lock. Refer to how you set up the bank user key from the Cencon software to determine this.
    >
    > The first time you use a bank mode initial combination with a bank mode user key at a Cencon lock and the bank mode user initial combination needs to be changed, you will automatically be prompted to change the combination.
    >
    > If you are not required to change the combination for your bank mode user key, continue with step **18** below to retract the bolt.

12. **IPI → Insert Bank Mode Personal Identifier Key → EnC**
    Insert Bank Mode Personal Identifier **B** Key into the key reader. The lock will display **EnC** (**En**ter **C**ombination).

13. **EnC → Enter New Combination of xx-xx-xx → CnC**
    Enter a new combination for your bank user key. The combination can be any value from 00-00-00 to 99-99-99. The display will display **CnC** (**C**onfirm **n**ew **C**ombination).

    > **Warning**
    >
    > For security purposes, you should define your own values for User Combinations in your Cenbank system.

14. **CnC → Enter New Combination → EOP**
    Enter the new combination again by pressing those digits on the lock's keypad. The numbers will be displayed as they are entered. **EOP** (**E**nd **OP**eration) will be displayed.

    > **Note**
    >
    > If a flashing lightning bolt appears on the display, the combination was not confirmed properly. Reset by pressing the ***** key and rekey the operation.

    > **Note**
    >
    > It is a good practice to dial the new combinations and open the lock at least once after initially setting them, before closing the door and extending the bolt.

15. **Power Lock → IPI**
    Turn the dial briskly in any direction until the letters **EC** (**E**nter **C**ombination) appear in the display window.

16. **EC → Enter New Combination → IPI**
    Enter the new bank mode user combination by pressing those digits on the lock's keypad. The numbers will be displayed as they are entered.

17. **IPI → Insert Personal Identifier Key → OPr**
Insert Personal Identifier bank mode key into the key reader. The lock will display **OPr** (**OP**en **r**ight).

18. **OPr → Retract Bolt**
Rotate the container handle to unlock the lock.

19. **Close Container Door**

20. **Extend Bolt →**
Rotate the container handle to extend the bolt.

21. **Power Lock → IPI**
Turn the dial briskly in any direction until the letters **IPI** (**I**nsert **P**ersonal **I**dentifier) appear in the display window.

22. **IPI → Insert Personal Identifier Key → EOP**
Insert Personal Identifier bank mode key to record the lock closure. The lock will verify a completed closure by storing the date and time for the close in the bank mode key and displaying **EOP** (**E**nd of **Op**eration).

Note
An Audit record is created each time a key is inserted during the opening and closing operations. These are reported as "Open Time" and "Close Time" on the Audit Log Reports.

4.3.12 Bank Lock Mode Activation From Existing Active Mode

Take the initialized **SA** key, a **Change Key**, and a minimum of one lock user's **Bank key** to the lock.

The lock is already active in **FLM** and/or **Route** mode. You will need an **FLM** or **Route** mode user key. You will also need a valid combination dispatched for your **FLM** or **Route** mode user key.

Note

Cencon bank mode limitations differ between Cencon Gen 1 locks and Cencon Gen 2 locks. The following table summarizes the differences between the lock versions:

Feature	Cencon Gen 1	Cencon Gen 2
Number of Users On Lock	1-32	1-100
Bank Mode User ID Limit Per Bank Branch	1-79	0-2147483647
Bank Branch ID Limit	1-9999	1-2147483647
Initial Combinations	Bank mode user keys always have an initial default combination of **50-25-50**.	Bank mode user keys have an initial combination as set by the Cencon software.
Combination Valid To Open Lock	Must change bank mode user key initial combination before opening the lock.	Requirement to change the bank mode user key initial combination before opening the lock is set per bank mode user by the Cencon software.

Feature	DS1427 Bank Key	DS1963S Bank Key
Cencon Gen 1	Supported	Not Supported
Cencon Gen 2	Supported	Supported
Security	Legacy Cencon Security	Enhanced Security and Hardware Authentication
Bank Mode User ID Limit Per Bank Branch	1-79	0-2147483647
Bank Branch ID Limit	1-9999	1-2147483647

Note

For opening the lock in FLM or Route mode, you can also refer to the following sections:

- If the lock is active in single open mode for FLM or Route, you can refer to the instructions in section 4.3.5 Open Lock - FLM or Route Mode to open the lock.
- If the lock is active in dual open mode for FLM or Route, you can refer to the instructions in section 4.3.6 Open Lock - FLM or Route Dual Mode to open the lock.

To Activate a Bank Lock from an active Mode:

Required Items: Shelved Mode Combination, Change Key, SA Key, B Key, either FLM or Route Key, FLM or Route

Dispatched Combination

1. **Power Lock → EC**
   Turn the dial briskly in any direction until the letters **EC** (**E**nter **C**ombination) appear in the display window.

2. **EC → Enter Combination → IPI**
   When **EC** is displayed, key in the one time combination. When the final number of the combination is keyed, the display will prompt **IPI** (**I**nsert **P**ersonal Identifier).

3. **IPI → Insert Personal Identifier Key → OPr**
   At **IPI** insert a valid FLM or Route key in the lock's key reader. **OPr** (**OP**en **r**ight) is displayed.

4. **Opr → Retract Bolt**
   At **OPr** Rotate the container handle to unlock the lock.

5. **Open Container Door**

6. **Power Lock →**
   Turn the dial briskly in any direction until **CLb** is displayed.

7. **CLb→ Enter #50 → ISA**
   Enter **#50** on the lock keypad. **ISA** (**I**nsert **S**upervisor **A**udit key) is displayed.

8. **ISA → Insert and Hold SA Key → Ini**
   Insert and hold the **SA** Key in the key reader on the side of the lock. The lock will display **Ini** (**Ini**tializing) with a flashing bar over the "n" while the information is being processed.

9. **Ini → EOP**
   Continue to hold the **SA** Key in the reader until **EOP** (**E**nd **of** **P**rocess) is displayed.

10. **Extend Bolt**
    Do not close the door. Rotate the container handle to extend the bolt.

11. **Power Lock → IPI**
    Turn the dial briskly in any direction until **IPI** (**I**nsert **P**ersonal Identifier) appears in the display window.

> **Note**
>
> At this point the container door is open. If a door sensor is connected to the Cencon lock, the message **OPd** will be displayed to indicate that the door is open as you turn the lock dial CCW (counter-clockwise) or if you turn the lock dial back and forth.
>
> You will not be able to get a close seal from the lock while the container door is open with a door sensor attached.
>
> Dial CW (clockwise) to get past the **OPd** message to an **EC** prompt. Continue with step **13** to enter a combination and retract the bolt. The lock will prompt with **IPI** once the container door is closed, and you will be able to get a close seal then.

12. **IPI → Insert Personal Identifier Key → Cxx xx (C**lose Seal)
    At **IPI** insert a valid FLM or Route key.

    The lock will display **Cxx xx** (**C**lose seal) where **xx xx** is a four-digit number that is the Close Seal number for this opening.

> **Note**
>
> To stop the display of a four-digit close seal, press and briefly hold the * key. If you do not choose to manually eliminate the display of the close seal, it will automatically disappear when the lock powers down.

> **Note**
>
> An audit record will be recorded each time a key is inserted for opening and closing operations.

13. **Power Lock → EC**
    Turn the dial to the right (clockwise) until **EC** (**E**nter **C**ombination) appears in the display window.

14. **IPI → Insert Bank Mode Personal Identifier Key → EnC**

Insert the bank mode Personal Identifier **B** Key into the key reader. The lock will display **EnC** (**En**ter **C**ombination).

15. **EC → Enter User Combination → IPI**

Enter the assigned initial user combination for your bank user key as set from the Cencon software.

The lock will prompt **IPI** (**I**nsert **P**ersonal **I**dentifier key) on the display.

> **Note**
>
> For Cencon Gen 2 locks your bank user key may or may not be required to change your initial bank user key combination before being permitted to open the lock. Refer to how you set up the bank user key from the Cencon software to determine this.
>
> The first time you use a bank mode initial combination with a bank mode user key at a Cencon lock and the bank mode user initial combination needs to be changed, you will automatically be prompted to change the combination.
>
> If you are not required to change the combination for your bank mode user key, continue with step **22** below to retract the bolt.

16. **IPI → Insert Bank Mode Personal Identifier Key → EnC**
Insert Bank Mode Personal Identifier **B** Key into the key reader. The lock will display **EnC** (**En**ter **C**ombination).

17. **EnC → Enter New Combination of xx-xx-xx → CnC**
Enter a new combination for your bank user key. The combination can be any value from 00-00-00 to 99-99-99. The display will display **CnC** (**C**onfirm **n**ew **C**ombination).

> **Warning**
>
> For security purposes, you should define your own values for User Combinations in your Cenbank system.

18. **CnC → Enter New Combination → EOP**
Enter the new combination again by pressing those digits on the lock's keypad. The numbers will be displayed as they are entered. **EOP** (**E**nd **OP**eration) will be displayed.

> **Note**
>
> If a flashing lightning bolt appears on the display, the combination was not confirmed properly. Reset by pressing the ***** key and rekey the operation.

> **Note**
>
> It is a good practice to dial the new combinations and open the lock at least once after initially setting them, before closing the door and extending the bolt.

19. **Power Lock → IPI**
Turn the dial briskly in any direction until the letters **EC** (**E**nter **C**ombination) appear in the display window.

20. **EC → Enter New Combination → IPI**
Enter the new bank mode user combination by pressing those digits on the lock's keypad. The numbers will be displayed as they are entered.

21. **IPI → Insert Personal Identifier Key → OPr**
Insert Personal Identifier bank mode key into the key reader. The lock will display **OPr** (**OP**en **r**ight).

22. **OPr → Retract Bolt**
Rotate the container handle to unlock the lock.

23. **Close Container Door**

24. **Extend Bolt →**
Rotate the container handle to extend the bolt.

25. **Power Lock → IPI**
Turn the dial briskly in any direction until the letters **IPI** (**I**nsert **P**ersonal **I**dentifier) appear in the display window.

26. **IPI → Insert Personal Identifier Key → EOP**

Insert Personal Identifier bank mode key to record the lock closure. The lock will verify a completed closure by storing the date and time for the close in the bank mode key and displaying **EOP** (**E**nd of **Op**eration).

Note
An Audit record is created each time a key is inserted during the opening and closing operations. These are reported as "Open Time" and "Close Time" on the Audit Log Reports.

4.3.13 Open Lock - Bank Mode

Open/Close a Single User Lock - No Delay

Required Items: B Key, Combination

1. **Power Lock → EC**
   Turn the dial briskly in any direction until the letters **EC** (**E**nter **C**ombination) appear in the display window.

2. **EC → Enter Combination → IPI**
   When **EC** is displayed, key in the bank user's combination. When the final number of the combination is keyed, the display will prompt IPI (Insert Personal Identifier).

3. **IPI → Insert Personal Identifier Key → OPr**
   At **IPI** insert a valid B key in the lock's key reader. **OPr** (**OP**en **r**ight) is displayed.

4. **Opr → Retract Bolt**
   At **OPr,** Rotate the container handle to unlock the lock.

5. **Open Door**

6. **Perform Operations**
   Perform the service or bank operation.

7. **Close Door**

8. **Extend Bolt → IPI**
   Rotate the container handle to extend the bolt. When the lock is fully locked, the display will prompt **IPI** (**I**nsert **P**ersonal **I**dentifier).

9. **IPI → Insert Personal Identifier Key → EOP**
   Insert the Personal Identifier B Key again to record the lock closure. The lock will verify a completed closure by storing the date and time for the close in the B key and displaying **EOP** (**E**nd **o**f **O**peration).

> **Note**
>
> An Audit record will be created each time a key is inserted during the opening and closing operations. These will be reported as "Open Time" and "Close Time" on the Audit Log Reports.

Open/Close a Single User Lock with Delay

Required Items: B Key, Combination

1. **Power Lock → EC**
   Turn the dial briskly in any direction until the letters **EC** (**E**nter **C**ombination) appear in the display window.

2. **EC → Enter Combination → IPI**
   When **EC** is displayed, key in the bank user's combination. When the final number of the combination is keyed, the display will prompt IPI (Insert Personal Identifier).

3. **IPI → Insert Personal Identifier Key → d**xx
   Insert the User's Personal Identifier **B** Key into the key reader. **d**xx (**d**elay xx) will be displayed showing the amount of time delay remaining before the lock can be opened.

4. **d**xx **→ Wait for Time Delay → IPI**
   When the programmed delay time has elapsed, the lock will prompt with **IPI** (**I**nsert **P**ersonal **I**dentifier).

> **Note**
>
> It may be necessary to power the lock again before you will get the **IPI** prompt.

5. **IPI → Insert Personal Identifier Key → OPr**
   At **IPI** insert a valid B key in the lock's key reader. **OPr** (**OP**en **r**ight) is displayed.

6. **OPr → Retract Bolt**
   At **OPr,** Rotate the container handle to unlock the lock.

> **Note**
>
> If the Window to Open expires before the lock is opened, it will reset itself and the entire open procedure must be repeated, including the delay time.

7. **Open Door**

8. **Perform Operations**
   Perform the service or bank operation.

9. **Close Door**

10. **Extend Bolt → IPI**
    Rotate the container handle to extend the bolt. When the lock is fully locked, the display will prompt **IPI** (**I**nsert **P**ersonal **I**dentifier).

11. **IPI → Insert Personal Identifier Key → EOP**
    Insert the Personal Identifier B Key again to record the lock closure. The lock will verify a completed closure by storing the date and time for the close in the B key and displaying **EOP** (**E**nd **o**f **O**peration).

Open/Close a Dual User Lock - No Delay

Required Items: Two B Keys, Two Combinations

1. **Power Lock → EC**
   Turn the dial briskly in any direction until the letters **EC** (**E**nter **C**ombination) appear in the display window.

2. **EC → Enter Combination → IPI**
   When **EC** is displayed, key in the first bank user's combination. When the final number of the combination is keyed, the display will prompt **IPI** (**I**nsert **P**ersonal **I**dentifier).

3. **IPI → Insert First Personal Identifier Key → EC2**
   Insert the first User's Personal Identifier B Key into the key reader. **EC2** (**E**nter **C**ombination **2**) is displayed.

4. **EC2 → Enter Second Combination → IP2**
   Key in the combination for the second User. **IP2** (Insert Personal Identifier 2) is displayed..

5. **IPI → Insert Second Personal Identifier Key → OPr**
   Insert the second User's Personal Identifier **B** key into the key reader. **OPr** (**OP**en **r**ight) is displayed.

6. **OPr → Retract Bolt**
   At **OPr,** Rotate the container handle to unlock the lock.

7. **Open Door**

8. **Perform Operations**
   Perform the service or bank operation.

9. **Close Door**

10. **Extend Bolt → IP?**
    Rotate the container handle to extend the bolt. When the lock is fully locked, the display will prompt **IP?** (Insert Personal Identifier ?, either 1 or 2) is displayed.

11. **IP? → Insert Personal Identifier Key → EOP**
    Insert either User's Personal Identifier **B** Key into the key reader. The lock will confirm the closure by writing the date and time of the close into the **B** key and displaying **EOP** (End of Operation).

Open/Close a Dual User Lock with Delay

Required Items: Two B Keys, Two Combinations

1. **Power Lock → EC**
   Turn the dial briskly in any direction until the letters **EC** (**E**nter **C**ombination) appear in the display window.

2. **EC → Enter Combination → IPI**
   When **EC** is displayed, key in the first bank user's combination. When the final number of the combination is keyed, the display will prompt **IPI** (**I**nsert **P**ersonal **I**dentifier).

3. **IPI → Insert First Personal Identifier Key → EC2**
   Insert the first User's Personal Identifier B Key into the key reader. **EC2** (**E**nter **C**ombination **2**) is displayed.

4. **EC2 → Enter Second Combination → IP2**

Key in the combination for the second User. **IP2** (Insert Personal Identifier 2) is displayed..

5. **IPI → Insert Second Personal Identifier Key → d**xx
   Insert the second User's Personal Identifier **B** key into the key reader. **d**xx (**d**elay xx), with xx being the time delay remaining before the lock can be opened, is displayed.

6. **d**xx → **Wait for Time Delay → IPI**
   When the programmed delay time has elapsed, the lock will prompt with **IPI** (**I**nsert **P**ersonal **I**dentifier).

> **Note**
>
> It may be necessary to power the lock again before you will get the **IPI** prompt.

7. **IPI → Insert First Personal Identifier Key → IP2**
   Insert the first User's Personal Identifier **B** key into the key reader. **IP2** (Insert Personal Identifier 2) is displayed.

8. **IPI → Insert Second Personal Identifier Key → OPr**
   Insert the second User's Personal Identifier **B** key into the key reader. **OPr** (**OP**en **r**ight) is displayed.

9. **OPr → Retract Bolt**
   At **OPr,** Rotate the container handle to unlock the lock.

> **Note**
>
> If the Window to Open expires before the lock is opened, it will reset itself and the entire open procedure must be repeated, including the delay time.

10. **Open Door**

11. **Perform Operations**
    Perform the service or bank operation.

12. **Close Door**

13. **Extend Bolt → IP?**
    Rotate the container handle to extend the bolt. When the lock is fully locked, the display will prompt **IP?** (Insert Personal Identifier ?, either 1 or 2) is displayed.

14. **IP? → Insert Personal Identifier Key → EOP**
    Insert either User's Personal Identifier **B** Key into the key reader. The lock will confirm the closure by writing the date and time of the close into the **B** key and displaying **EOP** (End of Operation).

> **Note**
>
> If you experience a lockout situation with dual user access, you should be aware that user order on a retry is important. After the lockout period expires, the lock will open if the first combination and the first key used in the current entry attempt are the same as those used during the entry attempt that caused the lockout. If the first combination and the first key used are not the same as those used when the lockout occurred, the lock will prompt with **IP2** and will then prompt with **EC2**.

4.3.14 Bank Mode - Add Users

Open/Close a Single User Lock - No Delay

Required Items: B Key, Combination, SA Key

1. **Power Lock → EC**
   Turn the dial briskly in any direction until the letters **EC** (**E**nter **C**ombination) appear in the display window.

2. **EC → Enter Combination → IPI**
   When **EC** is displayed, key in the bank user's combination. When the final number of the combination is keyed, the display will prompt IPI (Insert Personal Identifier).

3. **IPI → Insert Personal Identifier Key → OPr**
   At **IPI** insert a valid B key in the lock's key reader. **OPr** (**OP**en **r**ight) is displayed.

4. **OPr → Retract Bolt**
   At **OPr** ,Rotate the container handle to unlock the lock.

5. **Open Door**

6. **Power Lock → CLb**
   Turn the dial briskly in any direction until the letters **CLb** appear in the display window.

7. **CLb→ Enter #50 → ISA**
   Enter **#50** on the lock keypad. **ISA** (**I**nsert **S**upervisor **A**udit key) is displayed.

8. **ISA → Insert and Hold SA Key → Add**
   Insert and hold the **SA** Key in the key reader on the side of the lock. The lock will display **Add** (**A**dding) with a flashing bar over the "n" while the information is being processed.

9. **Add → EOP**
   Continue to hold the **SA** Key in the reader until **EOP** (**E**nd **o**f **O**peration) is displayed.

10. **Extend Bolt →**
    Close the door. Rotate the container handle to extend the bolt.

11. **Power Lock → IPI**
    Turn the dial briskly in any direction until the letters **IPI** (**I**nsert **P**ersonal **I**dentifier) appear in the display window.

12. **IPI → Insert Personal Identifier Key → EOP**
    Insert the User's Personal Identifier **B** Key into the key reader again. The lock will confirm the closure by writing the date and time of the close into the **B** key and displaying **EOP** (End of Operation).

Note
After adding a User you will need to change the combinations for the User that was added. All Bank User combinations are initially set to the default combination of **50-25-50** but will not open the lock until changed to a valid new combinations.

Note
If the lock is in dual mode and a bank user is forced to change their combo, the dual combo entry process is aborted. When the user's combo is successfully changed, the lock indicates the end of the operation (EOP).

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4.3.15 Bank Mode - Remove Users

Follow this procedure to delete Users from the lock at the lock after deleting them from the PC System:

Required Items: B Key, Combination, SA Key

1. **Power Lock → EC**
   Turn the dial briskly in any direction until the letters **EC** (**E**nter **C**ombination) appear in the display window.

2. **EC → Enter Combination → IPI**
   When **EC** is displayed, key in the bank user's combination. When the final number of the combination is keyed, the display will prompt IPI (Insert Personal Identifier).

3. **IPI → Insert Personal Identifier Key → OPr**
   At **IPI** insert a valid B key in the lock's key reader. **OPr** (**OP**en **r**ight) is displayed.

4. **Opr → Retract Bolt**
   At **OPr** ,Rotate the container handle to unlock the lock.

5. **Open Door**

6. **Power Lock → CLb**
   Turn the dial briskly in any direction until the letters **CLb** appear in the display window.

7. **CLb→ Enter #50 → ISA**
   Enter **#50** on the lock keypad. **ISA** (**I**nsert **S**upervisor **A**udit key) is displayed.

8. **ISA → Insert and Hold SA Key → dEL**
   Insert and hold the **SA** key in the key reader on the side of the lock. The lock will display dEL (**dEL**eting Users) while the information is being processed.

9. **dEL → EOP**
   Continue to hold the **SA** Key in the reader until **EOP** (**E**nd **o**f **P**rocess) is displayed.

10. **Extend Bolt →**
    Close the door. Rotate the container handle to extend the bolt.

11. **Power Lock → IPI**
    Turn the dial briskly in any direction until the letters **IPI** (**I**nsert **P**ersonal **I**dentifier) appear in the display window.

12. **IPI → Insert Personal Identifier Key → EOP**
    Insert the User's Personal Identifier **B** Key into the key reader again. The lock will confirm the closure by writing the date and time of the close into the **B** key and displaying **EOP** (End of Operation).

Warning
If the lock is only activated in Bank Mode, do not delete all users!

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4.3.16 Bank Users - Change Combination

The combination for a Bank User can be changed whenever desired. It is recommended that the combination be changed periodically to maintain a high level of security. To change the combination:

Required Items: B Key, Current Combination

1. **Power Lock → EC**
   Turn the dial briskly in any direction until the letters **EC** (**E**nter **C**ombination) appear in the display window.

2. **EC → Press #8 → IPI**
   Press the # button followed by 8. **IPI** (**I**nsert **P**ersonal **I**dentifier) is displayed.

3. **IPI → Insert Personal Identifier Key → EcC**
   Insert the User's Personal Identifier **B** Key into the key reader. The lock will display **EcC** (**E**nter **c**urrent **C**ombination).

4. **EcC → Enter current Combination → EnC**
   Enter the user's current combination. The display will display **EnC** (**E**nter **n**ew **C**ombination).

> **Warning**
>
> For security purposes, you should define your own values for User Combinations in your Cencon CenBank system.

5. **EnC → Enter New Combination → CnC**
   Enter the new combination on the lock's keypad. The numbers are displayed as they are entered. **CnC** (**C**onfirm **n**ew **C**ombination) will be displayed.

6. **CnC → Confirm New Combination → EOP**
   Enter the new combination again by pressing those digits on the lock's keypad. The numbers will be displayed as they are entered. **EOP** (**E**nd **OP**eration) will be displayed. The newly confirmed combination is now active for that Bank User and Personal Identifier Key.

> **Note**
>
> Note: If a flashing lightning bolt appears on the display, the combination was not confirmed properly. Reset by pressing the "*" key and rekey the operation.

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4.3.17 Set the Lock Time

An initialized DS1922 key is required to set the time in a lock (Gen2).

Required Items: Initialized DS1922 Key

1. **Power Lock → EC**
   Turn the dial briskly in any direction until the letters **EC** (**E**nter **C**ombination) appear in the display window.

2. **EC → Press #0 →-dL**
   Press the pound (#) button followed by the 0 button. **-dL** will be displayed.

   > **Note**
   >
   > If the lock has sufficient power, the **#0** will go directly to **ISA** without the **-dL** indicated in steps 2 and 3.

3. **-dL → ISA**
   Turn the dial to the left (CCW) until ISA is displayed.

4. **ISA → Insert and Hold DS1922 Key → CLS**
   Insert and hold the initialized DS1922 key in the lock's key reader. The lock will display **CLS** (**CL**ock **S**et in Progress) while the clock is being set and the daylight savings time information is being saved.

   > **Note**
   >
   > You may need to turn the dial to maintain power during this time.

5. **CLS → EOP**
   Continue to hold the key in the reader until **EOP** (**E**nd **OP**eration) is displayed.

6. **EOP → Remove Key**
   When the display prompts **EOP**, remove the DS1922 key.

   > **Note**
   >
   > The clock set key is not lock specific and may be reused to set the time on additional locks.

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4.3.18 Retrieve Bank Users From Lock

It is possible to use an initialized Supervisor Audit key to retrieve a list of the bank users from a Cencon Gen2 lock. The information is downloaded from the lock into the SA key, which is then returned to the Cencon dispatch center. The information in the key can then be viewed using the Cencon Key Report function. To retrieve the list of bank users assigned to the lock:

Required Items: Initialized Red SA Key

1. **Power Lock → EC**
   Turn the dial briskly in any direction until the letters **EC** (**E**nter **C**ombination) appear in the display window.

2. **EC → Press #0 →-dL**
   Press the pound (#) button followed by the 0 button. **-dL** will be displayed.

   > **Note**
   >
   > If the lock has sufficient power, the **#0** will go directly to **ISA** without the **-dL** indicated in steps 2 and 3.

3. **-dL → ISA**
   Turn the dial to the left (CCW) until ISA is displayed.

4. **ISA → Insert and Hold SA Key → UdP**
   Insert and hold the initialized SA key in the lock's key reader. The lock will display **UdP** (**U**ser **d**um**P** in progress) while the user retrieval is being processed.

   > **Note**
   >
   > You may need to turn the dial to maintain power during this time.

5. **UdP → EOP**
   Continue to hold the SA Key in the reader until **EOP** (**E**nd **OP**eration) is displayed.

6. **EOP → Remove SA Key**
   When the display prompts **EOP**, remove the **SA** key.

7. **Return SA Key**
   Return the SA Key to the dispatch center to be read using the Cencon **Key Report** function.

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4.3.19 Resynchronize the Database with a Lock

It is possible to use an initialized DS1963 key to retrieve the status of Cencon Gen2 lock. The lock status information is downloaded from the lock into the DS1963 key, which is then returned to the Cencon dispatch center and used to update the Cencon database.

Required Items: Initialized Grey Resynchronization Key

1. **Power Lock → EC**
   Turn the dial briskly in any direction until the letters **EC** (**E**nter **C**ombination) appear in the display window.

2. **EC → Press #0 →-dL**
   Press the pound (#) button followed by the 0 button. **-dL** will be displayed.

   > **Note**
   >
   > If the lock has sufficient power, the **#0** will go directly to **ISA** without the **-dL** indicated in steps 2 and 3.

3. **-dL → ISA**
   Turn the dial to the left (CCW) until ISA is displayed.

4. **ISA → Insert and Hold DS1963 Key → rSY**
   Insert and hold the initialized key in the lock's key reader. The lock will display **rSY** (**r**e**SY**nchronization in Progress) while the lock data retrieval is being processed.

   > **Note**
   >
   > You may need to turn the dial to maintain power during this time.

5. **rSY → EOP**
   Continue to hold the Key in the reader until **EOP** (**E**nd **OP**eration) is displayed.

6. **EOP → Remove Key**
   When the display prompts **EOP**, remove the key.

7. **Return Key**
   Return the Key to the dispatch center to be read using the **Resynchronize the Database with Lock Data** operation.

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4.3.20 Display Lock Level

It is sometimes necessary to determine the code level of the Cencon Lock with which you are working. This can be done through the keypad with the level displayed on the LCD. Use the following procedure:

1. **Power Lock → EC**
   Turn the dial briskly in any direction until the letters **EC** (**E**nter **C**ombination) appear in the display window.

2. **EC → Press #1**
   Press # followed by **1**.

All Gen 2 locks will display "LL-" , "G2", followed by 4 sets of 3 numbers, followed by "HL-" with 2 number pairs.

Note
The lock will continue repeating the Lock Level until either the * key is held down or until the dial has not been turned in 40 seconds.

4.3.21 Gen2 Lock Menu Prompts

The Gen 2 lock allows the user to gather additional information in the field simply by pressing keypad commands, sometimes presenting their user key, and then reading the LCD. For each of the commands that displays either current or historic Date and Time (#71, #72, #78, and #79), the format is the same: Starting from the largest time increment (4-digit Year) and moving down to the smallest (2-digit second). For readability, the date and the time are broken apart by the "Hr-" (hour) prompt in the middle.

All the prompts that request a user key (blue FLM, yellow Route, or green Bank) be presented will do so by displaying the "IPI" after the command is entered. The difference to note is that #73 will be reading and displaying information unique to a particular key, whereas #72, #76, #78, and #79 are reading which particular mode this key is associated with (FLM, Route, or Bank) and then displaying information for that entire mode.

As is the case with interacting with the other prompts, the information will continue to display to the user until the lock powers down or until the * is held down.

#70: Display active modes and activator identification

Without requiring a user key or an audit key, it is possible to determine the following:

- Which modes on the lock are currently active: FL (First Line Maintenance), ro (Route), or bA (Bank mode).

- Whether this mode is active in Single or Dual access, noted by either a 1 or 2 before the mode abbreviation.

If the activating company activated their mode using a USB Key Box and the 4.0 or higher software, additional security benefits are incorporated in the lock. One example is that the #70 also would display the following (rather than displaying only 0's if the customer activated the lock with a version below 4.0 or with a PCI card system.):

- A unique 4-digit code (Cn-) assigned by Kaba Mas for the company that has activated that mode, in order that vendors sharing access might know who to contact for service needs at the ATM,

- Which USB Key Box 4-digit number (bn-) assigned to that particular customer, created the activation key, in order for tracking and to deter possible security violations.

   (For example, "01-", "1FL", " Cn", " 00", " 00", " bn", " 00", " 00", "02-", "1ro", " Cn", " 00", " 00", " bn", " 00", " 00", "03-", "2bA", " Cn", " 00", " 00", " bn", " 00", " 00", where "FL" indicates FLM mode, "ro" indicates route mode, "bA" indicates bank mode, the "1" prefix indicates single mode, the "2" prefix indicates dual mode, the " Cn" prompt precedes the company code, and " bn" precedes the USB key box device ID)

#71: Display internal UTC/GMT date/time

Each Gen 2 lock is programmed to the current UTC/GMT date/time when the lock is manufactured at Kaba Mas (For example, "UtC", "Yr-", " 20", " 09", " 12", " 25", "Hr-", " 22", " 30", " 59"),

#72: Display the local date/time by user key

If a customer uses Cencon 5.0 with a USB Box with their Gen2 lock, the lock will store which the TimeZone information, for that particular company, in order that they might use Time Windows for their user keys. This also allows this customer to check the local time setting for this lock, which simply adjusts the internal GMT clock with the time zone information (For example, "LCL", "Yr-", " 20", " 09", " 12", " 25", "Hr-", " 17", " 30", " 59").

#73: Display key type and key serial number for the key presented

Each SmartKey has a unique serial number engraved on the key, which is also recorded in the Cencon software when that key is added to the customer's database. At times in the field, to troubleshoot and to ensure that the user has the appropriate key that the combination was dispatched to, it may be necessary to relay the key serial number over the phone back to the dispatcher. The #73 function of the Gen2 lock allows any user key to be presented to the lock's key reader to display the key serial number which assists the user in this serial number's legibility. The serial number typically starts with 6 zeros, and then has 6 alpha-numeric characters, including letters A-F. (For example, "CL-", "14", "27", "CS-", "00", "00", "00", "11", "d7", "EF", to display the iButton device number and 12 digit serial number.)

#74: Display door contact switch status

The Gen2 lock has a 4-pin alarm input cable to optionally use Door Contact switches and for a Remote Disable function. After installing the door contact switches, the customer will want to determine the status of these sensor, often while the lock is still in factory mode, and later when the lock is activated (For example, "OPd" for "OPened door", "CLd" for "closed door", or "nCC" for "no door contact connection" accordingly).

#76: Display software level the mode was activated with by user key

Because the Gen2 lock will incorporate many more security and functional enhancements as well as future compatibility allowances when the lock used in conjunction with the Cencon 5.0 or higher software + the USB Key Box, it is important for a customer in the field to know whether or not the mode being used has been programmed with this updated settings (For example, "SL-", " 01", where software level "01" is compatibility mode, and software level "02" indicates Cencon 5.0 or higher with a USB Key Box).

#77: Display UTC/GMT date/time on DS1994 FLM and Route keys and DS1427 Bank Keys

Even though the Gen2 lock no longer uses the internal iButton timekeeping registers on DS1994 FLM and Route keys or from DS1427 Bank keys, that time can be now be read at the Gen2 lock for diagnosing problems encountered when operating Gen1 locks. The time is displayed in UTC/GMT format since time zone information may not be available to Gen2 locks operating in compatibility mode. (For example, "PIC", "Yr-", " 20", " 09", " 10", " 31", "Hr-", " 16", " 45", " 00").

#78: Display last opening local date/time by user key

For purposes of quick minimal auditing of a lock in a field, the Gen2 lock will display the last opening date and time (in that customer's local time setting) by presenting that mode's key (For example, "LOP", "Yr-", " 20", " 09", " 10", " 31", "Hr-", " 16", " 45", " 00").

#79: Display activation local date/time by user key

For purposes of determining when a mode was activated, without the necessity of using an audit key and software, the Gen2 lock will display the date and time of the current activation by that mode if a user key from that mode's system is presented (For example, "ACt", "Yr-", " 20", " 09", " 10", " 21", "Hr-", " 13", " 30", " 05").

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Appendix A - Lock Error Codes

<table>
<tr><td style="background-color: yellow">Caution</td></tr>
<tr><td>Many times the error code for 0b is mistaken as a 06 error code. Examine the display closely to determine if the error code is the number 06, where the number 6 has a flag at the top that differentiates it from the letter b.</td></tr>
</table>

<table>
<tr><td>Note</td></tr>
<tr><td>

In Gen2, error codes are expanded from 2 digits to to 4 digits. The legacy error codes have leading zeros in the error history, and are indicated with the same lightning bolt error indication as in Gen1.

```
            Example of error 06:

              ⚡06 <beep>
                  06 <beep>
              ⚡06<beep>
                  06 <beep> etc.

         New error codes, will show the modified lightning bolt indication.
   Example of error 9003:

              ⚡90 <beep>
                  03 <beep>
                  90 <beep>
                  03 <beep>
              ⚡90 <beep>
                  03 <beep>
                  90 <beep>
                  03 <beep> etc.
```

</td></tr>
</table>

When Attempting to Open Lock

Error Code	Error	Notes
⚡02	Failed attempts/sessions	See LCO (below).
⚡03	Key/Mode Mismatch	The wrong key type has been presented for the mode(s) in which the lock is active.
⚡04 or ALS	Silent Alarm Reset	Hold-up or duress alarm.
⚡05	Dual Combination Access Error	When asked for a dual combination entry, the same combination and key were used for the 2nd entry as for the 1st.
⚡06	Wrong Key Type	The wrong key type has been presented. Make sure to use the appropriate key type for the appropriate function. Have the Supervisor display the user key information at the PC system to check the key serial number, user ID, customer # and company #. Possible bad key contact.
⚡07	Data read error.	Key data not accessible.

⚡08	Initialization	Factory initialization, CRC bad (information in key is corrupt).
⚡09	CenBank	User key is not authorized to enter lock.
⚡0C	Time window mismatch	Error in the key time data.
⚡0d	User Out of Time Window	The user is attempting to access the lock at a time that does not fall within the defined lock access time on the key. Have the Supervisor display the the user key information at the PC system to check the Window Opening Information, thus verifying when the user is able to access the lock.
⚡0F	Audit buffer	Error writing audit data
⚡ Only	*See the Notes column*	**Incorrect Combination Entered** An incorrect combination was entered. Clear the lightning bolt error display by pressing * and try the combination entry again. **Note:** If the combination is forgotten, the call into the dispatcher to retrieve the combination at the PC system. **Incorrect Lock Serial Number and Name** A call was dispatched for the wrong lock. Check at the PC to see if the call was dispatched for the correct lock. **Incorrect User ID** A call was dispatched for the wrong User ID or the wrong user key is being inserted into the key reader at the lock. Try a different user key if another user is on this call. If that is not successful, check at the PC to see if the call was dispatched for the correct User. **Audit count mismatch** The audit count in the lock does not match the lock audit count in software at the PC. If the count is higher at the lock, use the user key to get the last close seal from lock and call it in to the PC. If the audit count is higher at the PC, get the next to last combo and use it along with the appropriate user key to open and close the lock. It is not necessary to report the close seal at this point since the call has already been closed at the PC.
LCO	5 Failed Lock Entry Attempts	The combination was entered incorrectly 5 times. The lock has now gone into a "lockout" mode. Review the items in the previous section (Lightning Bolt Only) to try and determine the cause for the failed attempts. Wait at least 4.5 minutes without powering the lock and then enter a valid combination and present the appropriate key. **Gen2 Locks** If there is a problem with the battery in the Gen2 lock when a lockout occurs, the lock must have power for the full timeout period. The display will alternately flash **-dL** and **LCO** to indicate this.

When Attempting to Activate/Shelve Lock with SA Key		
Error Code	**Error**	**Notes**
⚡03	Lock Mode Mismatch	The lock is already active in the mode that you are attempting to activate.
⚡06	*See the Notes column*	**Wrong Key Type** The wrong key type has been presented. Make sure to use the appropriate key type for the appropriate function.

		Unable to Read SA Key Information There is no information in the key or the key has been bounced and the the key is corrupt. If the audit count at the lock and the PC match, use combination. Otherwise contact Kaba Mas Customer Service at 1(800) get a close seal and try operation again with a re-programmed key
⚡09	CenBank	Lock is already active in CenBank mode.
⚡0A	*See the Notes column*	**Last Audit Record not "Open"** An attempt is being made to activate or shelve the lock but the last record showing in the Audit trail is not an "Open". This might be caused by the the bolt being extended before the Change Key is inserted. If the lock is in Shelved Mode, enter the Shelved Mode combination, retract the bolt, insert the Change Key and continue with the procedure. If the lock is active in another mode, close the call and have another call dispatched to open the lock and insert the Change Key and then continue with the procedure. **Lock Mode Already Active/Shelved** The lock is already active or shelved in the mode you are trying to activate or shelve.
⚡0b	Bad Processor Reset	An internal error has occurred while trying to reset the processor in the lock. Clear the lightning bolt error display by pressing * and try the operation again (note that these failures are counted toward the five entry attempt limit). If you continue to get the error indicator, contact Kaba Mas Customer Service for assistance at 1(800) 950-4744 .

Lock Read/Write

Error Code	Error
⚡60	Eprom factory initialize.
⚡61	Drill.
⚡62	Eprom housekeeping Write.
⚡63	One mode of the lock is corrupted. Try another and and remove from service. If all modes give 63 Drill. If powers up 63 then Drill.
⚡64	Eprom Cust. Initialize.
⚡65	Eprom Error List Read.
⚡66	Eprom Error List Write.
⚡67	One mode of the lock is corrupted. Try another mode and remove from service. If all modes give 67 drill. If powers up 67 then Drill.
⚡68	Eprom SMCS Write.
⚡69	Eprom Bank User Read (Lock could not read the key to memory).
⚡6A	Eprom Bank User Write (Lock could not write the opening into memory).
⚡6b	Occurs with older model of lock. User key-different key closing lock than which opened the lock. Some are key specific some are mode specific.
	One mode of the lock is corrupted. If all modes give 6C drill. Try another mode once opened remove

Error Code	Error
⚡6C	from service. If powers up 6C then Drill.
⚡6d	One mode of the lock is corrupted. If all modes give 6C drill. Try another mode once opened remove from service. If powers up 6C then Drill.
⚡6E	Eprom Delay-Data Write.
⚡6F	Eprom Factory Initialize Read.

Key Read/Write

Error Code	Error
⚡71	Key is dead. Issue new key.
⚡72	Touch Memory – House Keeping Write
⚡73	Bad time in the key. Verify audit, lock will be one ahead. Close and issue new combo to that key for that lock and have the tech open and get close. It will correct the time in the key.
⚡74	Bad key Contact, Try again and if the error still appears clean key and key reader.
⚡75	Touch Memory – Initialize/ Shelve Rec1 Read.
⚡76	Only while supershelving, shelving or activating. Is like a 7F for a supershelve/SA key. Use supershelve key again within 6 seconds and finish.
⚡77	Touch Memory - Initialize Rec2 Read.
⚡78	Touch Memory - Initialize Rec2 Write.
⚡79	Touch Memory-Initialize RecX Read.
⚡7A	Touch Memory- Initialize Recx Write.
⚡7b	Touch Memory- Supershelve Read.
⚡7C	Touch Memory- Supershelve.
⚡7d	Touch Memory - Cannot read the key.
⚡7E	Error reading/writing Time Window record (Out of time windows).
⚡7F	Bad key Contact, try again.

Gen2 Codes

Error Code	Error
⚡9003	Time windows user denied access due to clock failed/reset condition.
⚡9005	iButton family code lookup error.

⚡9006	Audit key was not formatted for a Gen2 lock.
⚡9007	Clock failed.
⚡96nn	Memory error.
⚡97nn	iButton error
⚡9B00	Lock firmware error.

Appendix B - Lock Keypad Commands

Below is a list of the various Keypad Commands that are accessed beginning with the (#) symbol. For more detail on each of the lock operations, refer to the section Lock Operations.

Command	Function
# #	Display Mode's Audit Count (opening count) by user key.
# 0	Perform administrative operations. (audit download, resync, clock set, bank user table download, etc.)
# 1	Display lock code and hardware levels.
# 2	Display Lock Serial Number.
# 3	Display lock opening odometer (Total Audit Count)
# 4	Get last close seal, based on user key's mode
# 6	Reserved.
# 8	Change shelved-mode combination or bank user's combination.
# 9	Reserved.
# 55	Displays a list of the last 15 error codes
# 70	Gen 2: Display active modes and identification of the activating company
# 71	Gen 2: Display the base UTC/GMT date and time
# 72	Gen 2: Display the local date and time according to user key's mode
# 73	Gen 2: Display key type and key serial number for the key presented.
# 74	Gen 2: Display door contact switch status.
# 76	Gen 2: Display software level the mode was activated with by user key.
# 77	Gen 2: Display internal UTC/GMT key time on DS1994 FLM and Route and DS1427 Bank keys
# 78	Gen 2: Display last opening local date/time by user key's mode
# 79	Gen 2: Display activation local date/time by user key's mode

Details on the #55 display:

```
        In Gen 1, the display format is "Er-", "00", "00", ... , "00"
                                               |    |            |
                                             Error Error       Error
                                             Code  Code        Code
                                             #1    #2          #15
        In Gen 2, the display format is "Er-", "00", "00", ... , "00", "00"
                                               _____/        _____/
                                                    |                 |
                                                  Error             Error
                                                  Code              Code
                                                  #1                #15
```

NOTE: In Gen 2, error codes are expanded from 2 digits to to 4 digits.

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Appendix C - Lock Displays and Prompts

The Cencon front cover LCD uses a 7-segment font, displaying up to 3 characters at a time. Some prompts will show a mixture of numbers and letters. Also, since some letters are only distinguishable in their capital form and other letters in their lower-case form, the LCD will show a mixture of both types at once.
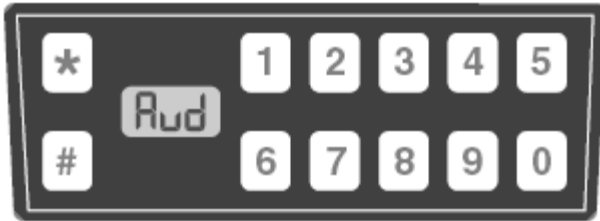
Displays while **Aud**it data is being written.

close Seal Number

Enter **C**ombination

Enter **C**ombination **2**
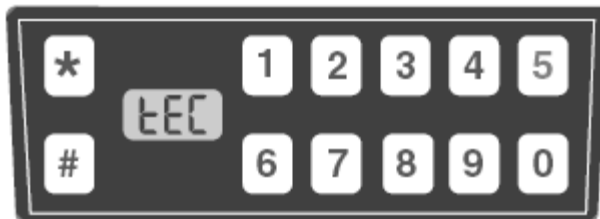
Enter **C**ombination to Change using Change Key
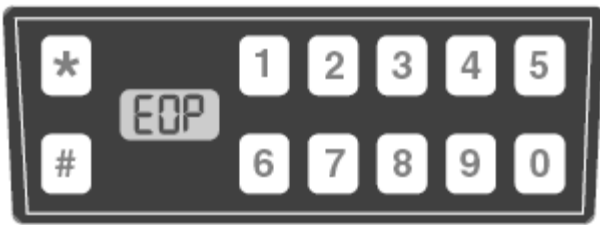
End **OP**eration
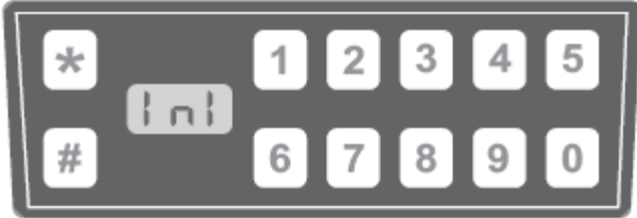
Initializing
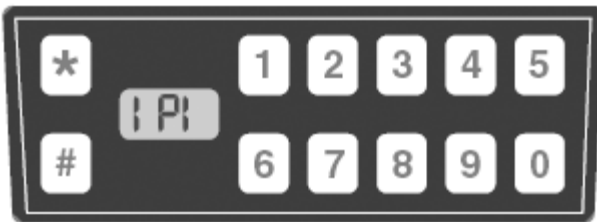
Insert **P**ersonal **I**dentifier

Insert **P**ersonal **I**dentifier 2

Insert **S**upervisor **A**udit Key

LoCk **O**ut in Effect, Lock Disabled
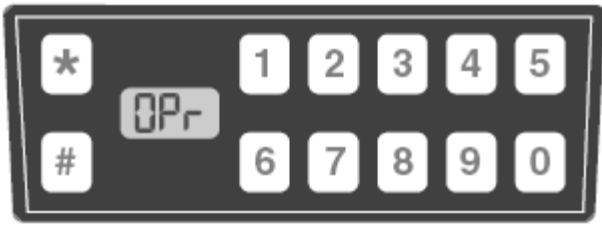
Open **r**ight
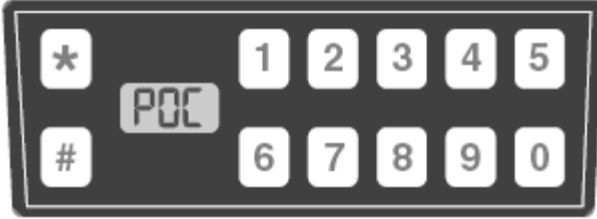
Pull **o**ut **c**hange key

replace **P**ersonal **I**dentifier (In Dual Mode - insert other key.)
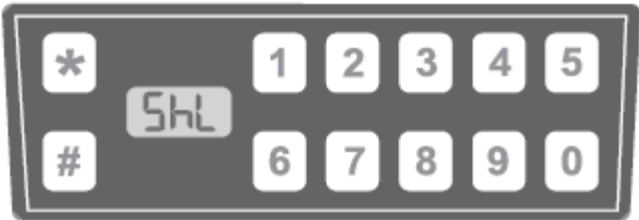
She**L**ving

Display when # has been pressed to enter a keypad command.
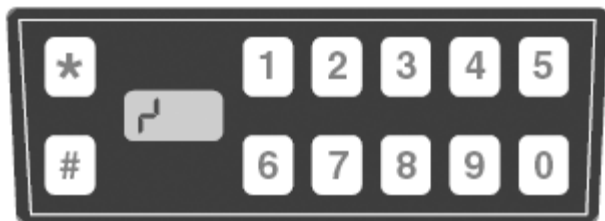
Error (Lightning Bolt)

Additional Display Prompts Used on Both Gen1 and Gen2

-dL	Dial Left to get to EC prompt after extending bolt

EcF	Enter Current combination (shelved mode)
EnF	Enter New combination (shelved mode)
CnF	Confirm New combination (shelved mode)
CC	Confirm Combination (Bank mode)
Add	Adding new user (Bank mode)
dEL	Deleting user (Bank mode)
EcC	Enter Current Combination (Bank mode)
EnC	Enter new Combination (Bank mode)
CnC	Confirm new Combination (Bank mode)
d35	Delay Time 35 minutes (Bank mode)
Sn-	Serial Number; shown after pressing #2
LL-	Lock code Level; shown after #1 pressed
HL-	Hardware Level; shown after #1 pressed
AC-	Total opening Count in All modes; shown after #3 pressed
SC-	Seal Count** for active mode by user key; after #4
SS-	Seal count** for Shelved mode by user key; after #4

**Seal count, Opening Count, and Audit Count are terms used interchangeably throughout the documentation.

Display Prompts found only on Gen 2:

G 2	indication during power-up of Gen2 lock firmware
cEC	at EC power up, alerts that Clock was reset (need clock set key
CLS	Clock Set operation is in process
rLO	Remote Lock Out; combination entry is prevented
C12 34	4-digit Close Seal
dLY	5-minute Delay because of audit restrictions
bEC	Change Battery Notification during EC prompt
IFL	Single FLM Mode activated
2FL	after #70 - Dual FLM Mode activated
Iro	after #70 - Single Route Mode activated
2ro	after #70 - Dual Route Mode activated
IbA	after #70 - Single Bank Mode activated
2bA	after #70 - Dual Bank Mode activated
Cn	after #70 - Company Identifier that activated mode
bn	after #70 - USB box number that activated mode
UtC	after #71 - UTC/GMT date and time
LCL	after #72 - local date and time, based on user key's mode
Yr	Date being displayed, starting with Year, then Month, then Day
Hr	Time being displayed, starting with Hour, then Minute, then Second
CL	after #73 -Cencon SmartKey Type
CS	after #73 - Cencon SmartKey Serial Number
OPd	after #74 - Open Door
CLd	after #74 - Closed Door
nCC	after #74 - No door Contact Connection
SL	after #76 - Software Level of user key's mode that activated this lock
LOP	after #78 - Last Opening date and time (local), based on user key
ACt	after #79 - Activation date & time (local), of user key
udP	Download bank users
uPA	Update activate

Activate Lock in FLM or Route Mode from Shelved Mode

1. PROGRAM ACTIVATION SA KEY AT PC, THUS DISPATCHING F OR R KEY
2. TAKE ROUTE OR FLM KEY, SA KEY, CHANGE KEY AND COMBINATION TO LOCK
3. OPEN LOCK WITH SHELVED MODE COMBINATION
4. ACTIVATE LOCK WITH CHANGE KEY AND SA KEY
5. OPEN LOCK WITH F OR R KEY TO VERIFY ACTIVATION WAS SUCCESSFUL
6. REPORT CLOSE SEAL TO DISPATCHER AND RETURN SA KEY

Activate Lock in Bank Mode from Shelved Mode

1. PROGRAM ACTIVATION SA KEY AT PC
2. TAKE SA KEY AND CHANGE KEY TO LOCK
3. OPEN LOCK WITH SHELVED MODE COMBINATION
4. ACTIVATE LOCK WITH CHANGE KEY AND SA KEY
5. CHANGE AND TEST COMBINATION FOR A MINIMUM OF TWO USERS

Activate Lock in Route Mode from FLM Mode

1. PROGRAM ACTIVATION SA KEY AT PC, THUS DISPATCHING ROUTE KEY
2. DISPATCH SERVICE CALL COMBINATION TO FLM AT PC
3. TAKE ROUTE KEY, FLM KEY, SA KEY, CHANGE KEY AND COMBINATIONS TO LOCK
4. OPEN LOCK WITH FLM SERVICE CALL COMBINATION
5. ACTIVATE LOCK WITH CHANGE KEY AND SA KEY
6. OPEN LOCK WITH R KEY TO VERIFY ACTIVATION WAS SUCCESSFUL
7. REPORT ROUTE AND FLM CLOSE SEALS TO DISPATCHER(S) AND RETURN SA KEY

Activate Lock in FLM Mode from Route Mode

1. PROGRAM ACTIVATION SA KEY AT PC, THUS DISPATCHING FLM KEY
2. DISPATCH SERVICE CALL COMBINATION TO ROUTE PERSON AT PC
3. TAKE ROUTE KEY, FLM KEY, SA KEY, CHANGE KEY AND COMBINATIONS TO LOCK
4. OPEN LOCK WITH ROUTE COMBINATION
5. ACTIVATE LOCK WITH CHANGE KEY AND SA KEY
6. OPEN LOCK WITH F KEY TO VERIFY ACTIVATION WAS SUCCESSFUL
7. REPORT ROUTE AND FLM CLOSE SEALS TO DISPATCHER(S) AND RETURN SA KEY

FLM/Route Service Call

1. DISPATCH SERVICE CALL COMBINATION TO FLM OR ROUTE PERSON AT PC
2. TAKE SERVICE CALL COMBINATION AND USER KEY TO LOCK
3. OPEN LOCK WITH SERVICE CALL COMBINATION
4. PERFORM SERVICE OPERATIONS
5. CLOSE LOCK AND RETRIEVE CLOSE SEAL
6. REPORT CLOSE SEAL TO DISPATCHER

Multi-Lock Route

1. DISPATCH ROUTE COMBINATIONS TO ROUTE PERSON AT PC
2. TAKE ROUTE COMBINATIONS AND ROUTE KEY TO EACH LOCK ON ROUTE
3. OPEN EACH LOCK WITH ROUTE COMBINATION
4. PERFORM ROUTE OPERATIONS ON EACH LOCK
5. CLOSE LOCK AND RETRIEVE CLOSE SEAL AT EACH LOCK
6. REPORT CLOSE SEALS OR RETURN ROUTE KEY TO DISPATCHER FOR CALLS TO BE CLOSED

Retrieve AND Report on Audit Download from Lock

1. INITIALIZE SA KEY AT PC
2. TAKE SA KEY TO LOCK
3. RETRIEVE AUDIT DATA WITH SA KEY
4. RETURN SA KEY TO PC TO READ AUDIT INFORMATION

Shelve Lock in FLM Mode

1. PROGRAM SHELVING SA KEY AT PC, THUS DISPATCHING FLM KEY
2. TAKE FLM KEY, SA KEY AND SHELVING COMBINATION TO LOCK
3. OPEN LOCK WITH F KEY
4. SHELVE LOCK WITH SA KEY
5. REPORT CLOSE SEAL TO DISPATCHER
6. RETURN SA KEY TO PC TO VERIFY SHELVING

Shelve Lock in Route Mode

1. PROGRAM SHELVING SA KEY AT PC, THUS DISPATCHING ROUTE KEY
2. TAKE ROUTE KEY, SA KEY AND SHELVING COMBINATION TO LOCK
3. OPEN LOCK WITH R KEY
4. SHELVE LOCK WITH SA KEY
5. REPORT CLOSE SEAL TO DISPATCHER
6. RETURN SA KEY TO PC TO VERIFY SHELVING

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Appendix E - System Process Detail

Activate Lock in FLM Mode (from shelved mode)

Part I:
Activate the lock at the PC

Personnel: Logon User authorized to activate FLM locks
Required items: SA Key (Red)

1. Select Lock Operations from the main window
2. Click OK on the search screen
3. Select Activate Lock from the Administration Menu
4. Select Add Lock
5. Click on the row added to the lock list to highlight it.
6. If desired, change the default name of the lock
7. Select the FLM mode you want to activate
8. Enter the lock serial number
9. Enter any of the remaining optional information
10. Click on Add Lock to add more locks to the activation key
11. Select FLM as the type of user you want to test the activation of the lock.
12. Enter the User ID of the FLM user to be assigned for the activation or press the browse button to search for a user.
13. Insert an SA key into the key reader
14. Click on Activate Locks
15. Write down the activation combinations

PART II:
ACTIVATE LOCK AT LOCK

Personnel: FLM User
Required items: F Key, SA Key, Change Key, Activation combination

1. Power lock by turning dial CCW until EC is displayed
2. Enter shelved mode combination. OPr is displayed
3. Turn dial CW to retract bolt
4. Open door
5. Insert the change key
6. Do not close the door. Turn the dial CCW to extend the bolt until EC is displayed

7. Enter the shelved mode combination ISA is displayed.
8. Insert and hold the SA key in the reader until POC is displayed
9. Pull out the change key. OPr is displayed
10. Turn the dial CW to retract the bolt
11. Do not close the door. Turn the dial CCW to extend the bolt until EC is displayed
12. Enter the activation combination. IPI is displayed
13. Insert and hold the F Key in the key reader until OPr is displayed.
14. Turn the dial CW to retract the bolt
15. Close the door
16. Turn the dial CCW to extend the bolt until IPI is displayed
17. Insert and hold the F Key in the key reader until the close seal is displayed
18. Record the close seal
19. Report the close seal to the dispatcher
20. Return the SA key to the dispatcher

<div align="center">

PART III:
Close the call at the PC

</div>

Personnel: Logon User authorized to close FLM locks

1. At the main screen, click on Close Lock
2. Enter the lock name and close seal
3. Click on Close Lock

Alternate method:

1. Select the lock in the Lock Operations report
2. Select Close from the Lock Operations menu
3. Enter the Close Seal and press Close Lock

<div align="center">

***** **END OF PROCESS** *****

</div>

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Appendix E - System Process Detail

Activate Lock in Route Mode (from shelved mode)

Part I:
Activate the lock at the PC

Personnel: Logon User authorized to activate Route locks
Required items: SA Key (Red)

1. Select Lock Operations from the main window
2. Click OK on the search screen
3. Select Activate Lock from the Administration Menu
4. Select Add Lock
5. Click on the row added to the lock list to highlight it.
6. If desired, change the default name of the lock
7. Select the Route mode you want to activate
8. Enter the lock serial number
9. Enter any of the remaining optional information
10. Click on Add Lock to add more locks to the activation key
11. Select Route as the type of user you want to test the activation.of the lock.
12. Enter the User ID of the Route user to be assigned for the activation or use the browse button to search for the user.
13. Insert an SA key in to the key reader
14. Click on Activate Locks
15. Write down the activation combinations

PART II:
ACTIVATE LOCK AT LOCK

Personnel: Route Service person
Required items: R Key, SA Key, Change Key, Activation combination

1. Power lock by turning dial CCW until EC is displayed
2. Enter shelved mode combination. OPr is displayed
3. Turn dial CW to retract bolt
4. Open door
5. Insert the change key

6. Do not close the door. Turn the dial CCW to extend the bolt until EC is displayed
7. Enter the shelved mode combination. ISA is displayed.
8. Insert and hold the SA key in the reader until POC is displayed
9. Pull out the change key. OPr is displayed
10. Turn the dial CW to retract the bolt
11. Do not close the door. Turn the dial CCW to extend the bolt until EC is displayed
12. Enter the activation combination. IPI is displayed
13. Insert and hold the R Key in the key reader until OPr is displayed.
14. Turn the dial CW to retract the bolt
15. Close the door
16. Turn the dial CCW to extend the bolt until IPI is displayed
17. Insert and hold the F Key in the key reader until the close seal is displayed
18. Record the close seal
19. Report the close seal to t he dispatcher
20. Return the SA key to the dispatcher

PART III:
CLOSE SERVICE CALL AT PC

Personnel: Logon User authorized to close Route locks

1. At the main screen, click on Close Lock
2. Enter the lock name and close seal
3. Click on Close Lock

Alternate method:

1. Select the lock in the Lock Operations report
2. Select Close from the Lock Operations menu
3. Enter the Close Seal and press Close Lock

***** END OF PROCESS *****

Cencon System Reference Manual

Appendix E - System Process Detail

Activate Lock in Bank Mode (from shelved mode)

Part I:
Activate the Lock at the PC

Personnel: Logon User authorized to activate Bank locks
Required items: SA key (Red), Lock Serial Number, Bank Branch ID

1. Select Lock Operations from the main window
2. Click OK on the search screen
3. Select Activate Lock from the Administration Menu
4. Select Add Lock
5. Click on the row added to the lock list to highlight it.
6. If desired, change the default name of the lock
7. Select the Bank mode you want to activate
8. Enter the lock serial number
9. Enter any of the remaining optional information
10. Click on Add Lock to add more locks to the activation key
11. Select Bank Mode as the Dispatch Mode
12. Select a Bank Branch Name
13. Enter optional values for the time delay and open window
14. Click on the Bank Users tab
15. Add at least two bank users to the selected users list.
16. Insert an SA key into the key reader
17. Click on Activate Locks

Part II:
Activate Lock at Lock

Personnel: Bank Supervisor
Required items: SA Key, Change Key

1. Power lock by turning dial CCW until EC is displayed
2. Enter shelved mode combination. OPr is displayed
3. Retract bolt and open door
4. Insert the change key

5. Do not close the door. Turn the dial CCW to extend the bolt until EC is displayed
6. Enter the shelved mode combination ISA is displayed.
7. Insert and hold the SA key in the reader until POC is displayed
8. Pull out the change key. OPr is displayed
9. Turn the dial CW to retract the bolt
10. Close the door, Extend the bolt

***** **END OF PROCESS** *****

Cencon System Reference Manual

Appendix E - System Process Detail

Activate Lock in Route Mode (Already in FLM Mode)

Part I:
Activate the lock at the PC

Personnel: Logon User authorized to activate Route locks and dispatch FLM calls
Required items: SA Key

1. Select Lock Operations from the main window
2. Click OK on the search screen
3. Select Activate Lock from the Administration Menu
4. Select Add Lock
5. Click on the row added to the lock list to highlight it.
6. If desired, change the default name of the lock
7. Select the Route mode you want to activate
8. Enter the lock serial number
9. Enter any of the remaining optional information
10. Click on Add Lock to add more locks to the activation key
11. Select Route as the type of user you want to dispatch to activate the lock
12. Enter the User ID of the Route user to be assigned for the activation
13. Insert an SA key in to the key reader
14. Click on Activate Locks
15. Write down the activation combinations

Issue a Service Call for the FLM User

Note: This section would be done by another company if another company has activated the lock in FLM mode.

1. At the main screen, click on Dispatch Lock
2. Enter the Lock Name
3. Enter the name of an FLM user
4. If in Dual Mode, enter the name of a second FLM user
5. Select First or Second Line Maintenance call
6. Click on Dispatch
7. Relay the combination(s) to the FLM user(s)

Part II:
Activate the Lock at the Lock

Personnel: Route Service and FLM service persons
Required Items: R Key, F Key, SA Key, Change Key, Route Activation Combination, FLM Service Call Combination

1. Power the lock by turning the dial CCW until EC is displayed
2. Enter the service call combination. IPI is displayed.
3. Insert and hold the F Key in the key reader until OPr is displayed.
4. Turn the dial CW to retract the bolt.
5. Open the door.
6. Insert the change key into the change key socket.
7. Do not close the door. Turn the dial CCW to extend the bolt until EC is displayed
8. Enter the shelved mode combination. ISA is displayed.
9. Insert and hold the SA key in the reader until POC is displayed
10. Pull out the change key. OPr is displayed
11. Turn the dial CW to retract the bolt.
12. Do not close the door. Turn the dial CCW to extend the bolt until IPI is displayed
13. Insert and hold the F key in the key reader until a close seal is displayed.
14. Record the FLM service call close seal.
15. Turn the dial CW until EC is displayed.
16. Enter the activation combination. IPI is displayed.
17. Insert and hold the R key in the key reader until OPr is displayed.
18. Turn the dial CW to retract the bolt.
19. Close the door.
20. Turn the dial CCW to extend the bolt until IPI is displayed.
21. Insert and hold the R key in the key reader until a close seal is displayed.
22. Record the route activation close seal.
23. Report the close seal to the dispatcher.
24. Return the SA key to the dispatcher.

Part III:
Close the Calls at the PC

Personnel: Logon User authorized to close Route and FLM locks

Close the FLM Service Call

Note: This section would be done by another company if another company has activated the lock in FLM mode.

1. At the main screen, click on Close Lock
2. Enter the lock name
3. Select FLM Mode
4. Enter the FLM close seal
5. Click on Close Lock

Close the Route Activation Call

1. At the main screen, click on Close Lock

2. Enter the lock name

3. Select Route Mode

4. Enter the Route close seal

5. Click on Close Lock

***** END OF PROCESS *****

Cencon System Reference Manual

Appendix E - System Process Detail

Activate Lock in FLM Mode (Already in Route Mode)

Part I:
Activate the lock at the PC

Personnel: Logon User authorized to activate FLM locks and dispatch Route Calls
Required items: SA Key

1. Select Lock Operations from the main window
2. Click OK on the search screen
3. Select Activate Lock from the Administration Menu
4. Select Add Lock
5. Click on the row added to the lock list to highlight it.
6. If desired, change the default name of the lock
7. Select the FLM mode you want to activate
8. Enter the lock serial number
9. Enter any of the remaining optional information
10. Click on Add Lock to add more locks to the activation key
11. Select FLM as the type of user you want to dispatch to activate the lock
12. Enter the User ID of the FLM user to be assigned for the activation
13. Insert an SA key in to the key reader
14. Click on Activate Locks
15. Write down the activation combinations

Issue a Service Call for the Route User

Note: This section would be done by another company if another company has activated the lock in Route mode.

1. At the main screen, click on Dispatch Lock
2. Enter the Lock Name
3. Enter the name of a Route user
4. If in Dual Mode, enter the name of a second Route user
5. Select First or Second Line Maintenance call
6. Click on Dispatch
7. Relay the combination(s) to the Route user(s)

Part II:
Activate the Lock at the Lock

Personnel: Route Service and FLM service persons
Required Items: R Key, F Key, SA Key, Change Key, FLM Activation Combination, Route Service Call Combination

1. Power the lock by turning the dial CCW until EC is displayed
2. Enter the service call combination. IPI is displayed.
3. Insert and hold the R Key in the key reader until OPr is displayed.
4. Turn the dial CW to retract the bolt.
5. Open the door.
6. Insert the change key into the change key socket.
7. Do not close the door. Turn the dial CCW to extend the bolt until EC is displayed
8. Enter the shelved mode combination. ISA is displayed.
9. Insert and hold the SA key in the reader until POC is displayed
10. Pull out the change key. OPr is displayed
11. Turn the dial CW to retract the bolt.
12. Do not close the door. Turn the dial CCW to extend the bolt until IPI is displayed
13. Insert and hold the R key in the key reader until a close seal is displayed.
14. Record the Route service call close seal.
15. Turn the dial CW until EC is displayed.
16. Enter the activation combination. IPI is displayed.
17. Insert and hold the F key in the key reader until OPr is displayed.
18. Turn the dial CW to retract the bolt.
19. Close the door.
20. Turn the dial CCW to extend the bolt until IPI is displayed.
21. Insert and hold the F key in the key reader until a close seal is displayed.
22. Record the FLM activation close seal.
23. Report the close seal to the dispatcher.
24. Return the SA key to the dispatcher.

**Part III:
Close the Calls at the PC**

Personnel: Logon User authorized to close Route and FLM locks

Close the FLM Activation Call

1. At the main screen, click on Close Lock
2. Enter the lock name
3. Select FLM Mode
4. Enter the FLM close seal
5. Click on Close Lock

Close the Route Service Call

Note: This section would be done by another company if another company has activated the lock in Route mode.

1. At the main screen, click on Close Lock

2. Enter the lock name

3. Select Route Mode

4. Enter the Route close seal

5. Click on Close Lock

***** END OF PROCESS *****

Cencon System Reference Manual

Appendix E - System Process Detail

FLM or Route Service Call

Part I:
Issue Service Call Combination

Personnel: Logon User authorized to issue FLM/Route Service Calls

Issue Service Call Combination for FLM

1. At the main screen, click on dispatch lock
2. Enter a lock name
3. Select FLM Mode
4. Enter the name of an FLM user
5. If in dual mode, enter the name of a second FLM
6. Select 2nd Line Maintenance call if you want to disable the lock open alarm for this service call.
7. Click on dispatch
8. Relay combination(s) to FLM(s)

- OR -

Issue Service Call Combination for Route Person

1. At the main screen, click on dispatch lock
2. Enter a lock name
3. Select Route Mode
4. Enter the name of a Route user
5. If in dual mode, enter the name of a second Route user
6. Select 2nd Line Maintenance call if you want to disable the lock open alarm for this service call.
7. Click on dispatch
8. Relay combination(s) to Route User(s)

PART II:
Complete Service Call at the Lock

Personnel: FLM or Route Person
Required Items: R or F KEY, Service combination

OR

1. Power lock by turning dial CCW until EC is displayed
2. Enter the service call combination.IPI is displayed.
3. Insert and hold F or R key in the key reader until OPr is displayed.
4. Turn the dial CW to retract the bolt.
5. Open the door.
6. Perform service operations.

7. Close door.
8. Turn the dial CCW to extend the bolt until IPI is displayed.
9. Insert and hold the F or R key in the key reader until a close seal is displayed.
10. Record the close seal.
11. Report the close seal to the dispatcher.

Part III:
Close the Service Call at the PC

Personnel: Logon User authorized to close Route/FLM locks

Close the FLM Service Call

1. At the main screen, click on Close Lock
2. Enter the lock name
3. Select FLM Mode
4. Enter the FLM close seal
5. Click on Close Lock

- Or -

Close the Route Service Call

1. At the main screen, click on Close Lock
2. Enter the lock name
3. Select Route Mode
4. Enter the Route close seal
5. Click on Close Lock

***** END OF PROCESS *****

Cencon System Reference Manual

Appendix E - System Process Detail

Pre-defined Routes

Part I:
Issue Route Combinations

Personnel: Logon User authorized to issue Routes

1. At the main screen, click on Route Report
2. In the Route Report, select a route and click on route lock listing.
3. Select/Enter RSP names if not already entered.
4. Click on dispatch.
5. Give the combinations to the RSP(s).

Part II:
Use combinations on Route

Personnel: Route Person

Required Items: R Key, Route Combinations

1. Power lock by turning dial CCW until EC is displayed
2. Enter the route call combination.IPI is displayed.
3. Insert and hold F or R key in the key reader until OPr is displayed.
4. Turn the dial CW to retract the bolt.
5. Open the door.
6. Perform service operations.
7. Close door.
8. Turn the dial CCW to extend the bolt until IPI is displayed.
9. Insert and hold the F or R key in the key reader until a close seal is displayed.
10. Record the close seal.
11. Report the close seal to the dispatcher or turn in the key when the route is completed.

Note
Repeat the above process for each lock visit identified in the route.

Part III:
Close Route at the PC

Personnel: Logon User authorized to close Route locks

Note
Each route lock visit can be closed as completed or the entire route can be closed with the key once the route is completed.

Close Route Visit Using Menu

1. At the main screen, click on Route Report
2. In the Route Report, select a route and click on Route Lock Listing.
3. Enter the close seal for each lock visited on the route.
4. Click on Close Route with Menu.

- OR -

Close Route Using Key

1. At the main screen, click on Route Report
2. In the Route Report, select a route and click on Route Lock Listing.
3. Insert the Route key containing the route close seals
4. Click on Close with Key

***** END OF PROCESS *****

Cencon System Reference Manual

Appendix E - System Process Detail

Retrieve and Report on Audit Download

Part I:
Retrieve Audit From Lock

Personnel: FLM or Route Person
Required Items: SA Key

1. Power lock by turning dial CCW until EC is displayed

2. Press #0 on the lock keypad. -dL is displayed. Dial Left until ISA is displayed.

3. Insert and hold the SA key in the reader while AUD is displayed.

4. Continue to hold the SA key in the reader and turn dial as necessary until EOP is displayed.

5. Return the SA key to the dispatcher for reporting.

Part II:
Report on Audit Download

Personnel: Logon user authorized to access key report
Required Items: SA Key

1. Insert an SA key containing an Audit download in the key reader.

2. From the main screen, select Key Report.

***** END OF PROCESS *****

Cencon System Reference Manual

Appendix E - System Process Detail

Shelve Lock

Part I:
Shelve Lock at the PC

Personnel: Logon user authorized to shelve locks
Required Items: SA Key

1. IN the main screen, click on lock operations.
2. Click OK on the search screen.
3. In the Lock Operations Report, select the locks to be shelved.
4. Select Shelve Locks from the Administration Menu.
5. Assign users to perform the shelve.
6. Insert an SA key into the key reader.
7. Click on
8. Write Shelve Lock Key.
9. Write down the shelve combination.

Part II:
Shelve Lock at Lock

Personnel: FLM OR Route service person
Required Items: F or R key, SA key, change key, shelve combination

1. Power lock by turning dial CCW until EC is displayed.
2. Enter the shelving combination. IPI is displayed.
3. Insert and hold F or R key in the reader until OPr is displayed.
4. Turn the dial CW to retract bolt.
5. Open the door.
6. Insert a change key in the socket.
7. DO NOT CLOSE DOOR. Turn the dial CCW to extend the bolt until tEC is displayed.
8. Enter the factory mode combination. ISA is displayed.
9. Insert and hold the SA key in the key reader until POC is displayed.
10. Pull out the change key. OPR is displayed.

11. Turn the dial CW to retract the bolt.

12. Close the door.

13. Turn the dial CCW to extend the bolt until IPI is displayed.

14. Insert and hold F or R key in the key reader until a close seal is displayed.

15. Record the close seal.

16. Report the close seal to the dispatcher.

17. Return the SA key to the dispatcher to verify shelving..

Part III:
Close the Service Call

Personnel: Logon user authorized to close locks

Close FLM Service Call

1. At the main screen, click on Close Lock.

2. Enter the lock name and close seal.

3. Select FLM mode.

4. Click on Close Lock.

- OR -

Close Route Service Call

1. At the main screen, click on Close Lock.

2. Enter the lock name and close seal.

3. Select Route mode.

4. Click on Close Lock.

Part IV:
Shelve Verification

Personnel: Logon user authorized to shelve locks

1. In the main screen, click on lock operations.

2. Click OK on the Search screen.

3. Place the SA key in the reader.

4. Select Verify Shelve Locks from the Administration Menu.

**** END OF PROCESS *****

Cencon Reference Manual

Appendix E - System Process Detail

Add Bank Users to Lock after Activation

Part I: Add users to the lock using Cencon

Personnel: Logon user authorized to add bank users

1. Insert an SA key into the key reader
2. Open a lock report and select the desired bank lock
3. From the Administration Menu, select "Add Users to a Bank Mode Lock"
4. Select users from the Available Users list and press OK
5. The SA key is initialized with the user information

Part II: Add users to the lock at the lock

Personnel: Bank supervisor

Required items: B key, SA key, change key, user's combination

1. Power Lock → EC
   Turn the dial to the left (CCW) until **EC** (**E**nter **C**ombination) is displayed.

2. EC → Enter combination → IPI
   If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. When **EC** is displayed, key in the Bank User's combination. **IPI** (**I**nsert **P**ersonal **I**dentifier) will be displayed.

3. IPI → Insert Personal Identifier Key → OPr
   Insert the User's Personal Identifier **B** Key into the key reader. **OPr** (**O**pen **r**ight) will be displayed.

4. OPr → Retract bolt and Open the Door
   Turn the Dial to the right (CW) to open the lock.

5. Insert change key and Extend the Bolt
   Insert the change key into the change key socket. Extend bolt but do not close door.

6. Power Lock → EC
   Turn the dial to the left (CCW) until **EC** (**E**nter **C**ombination) is displayed.

7. EC → Enter Default Combination → ISA
   If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. When **EC** is displayed, Enter the default factory combination of 50-25-50. **ISA**, (**I**nsert **S**upervisor **A**udit Key) will be displayed.

8. ISA → Insert and Hold SA Key → Add
Insert and hold the SA key in the key reader on the side of the lock. The lock will display **Add** (**Add**ing Users) while the information is being processed.

9. Add → POC
Continue to hold the **SA** Key in the reader until **POC** (**P**ull **O**ut **C**hange Key) is displayed.

10. POC → Remove SA Key and Pull Out Change Key → OPr
Remove the **SA** key and the change Key. **OPr** (**OP**en **r**ight) will be displayed.

11. OPr → Retract Bolt and Close the Door
Turn the dial to the right (CW) to retract the bolt. Adding Users is now complete for the Users that were programmed into the **SA** key. Close the door.

12. Extend Bolt → IPI
Extend the bolt by turning the dial to the left (CCW). **IPI** (**I**nsert **P**ersonal **I**dentifier) will be displayed.

13. IPI → Insert Personal Identifier Key → EOP
Insert the User's Personal Identifier **B** Key into the key reader again. The lock will confirm the closure by writing the date and time of the close into the **B** key and displaying **EOP** (**E**nd **of** **O**peration).

Note
After adding a User you may need to change the combinations for the User that was added. For Gen1 locks, Bank User combinations are initially set to the default combination of **50-25-50** and will not open the lock until changed to a valid new combination. However, with Gen2 locks, it is possible to have a unique combination set to a bank user from the software, and optionally force the user to change the combination or allow the user to open the lock with this combination.

Cencon System Reference Manual

Appendix E - System Process Detail

Delete Bank Users from Lock

PART I: Delete Bank Users from lock using Cencon

Personnel: Logon user authorized to delete bank users

1. Insert an SA key into the key reader
2. Open a lock report and select the desired bank lock
3. From the Administration Menu, select "Delete Bank Users From Lock"
4. Select users from the Lock Users list and press OK
5. The SA key is initialized with the user information

PART II: Delete users at the lock

Personnel: Bank supervisor
Required items: B key, SA key, change key, user's combination

1. Power Lock → EC
   Turn the dial to the left (CCW) until **EC** (**E**nter **C**ombination) is displayed.

2. EC → Enter Combination → IPI
   If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. When EC is displayed, key in the first Bank User's combination. **IPI** (**I**nsert **P**ersonal **I**dentifier) will be displayed.

3. IPI → Insert Personal Identifier Key → OPr
   Insert the User's Personal Identifier **B** Key into the key reader. **IPI** (Insert Personal Identifier) will be displayed.

4. OPr → Retract Bolt
   Turn the dial to the right (CW) to retract the bolt.

5. Open Door

6. Insert change key and Extend the Bolt
   Insert the change key into the change key socket. Extend bolt but do not close door.

7. Power Lock → EC
   Turn the dial to the left (CCW) until **EC** (**E**nter **C**ombination) is displayed.

8. EC → Enter Default Combination → ISA
   If operating a Cencon Vertical lock, position the lip of the dial to cover the red bar. When **EC** is displayed, Enter the default factory combination of 50-25-50. **ISA**, (**I**nsert **S**upervisor **A**udit Key) will be displayed.

9. ISA → Insert and Hold SA Key → dEL

Insert and hold the SA key in the key reader on the side of the lock. The lock will display **dEL** (**Del**eting Users) while the information is being processed.

10. dEL → POC
    Continue to hold the **SA** Key in the reader until **POC** (**P**ull **O**ut **C**hange Key) is displayed.

11. POC → Remove SA Key and Pull Out Change Key → OPr
    Remove the **SA** key and the change Key. **OPr** (**OP**en **r**ight) will be displayed.

12. OPr → Retract Bolt and Close the Door
    Turn the dial to the right (CW) to retract the bolt. Adding Users is now complete for the Users that were programmed into the **SA** key. Close the door.

13. Extend Bolt → IPI
    Extend the bolt by turning the dial to the left (CCW). **IPI** (**I**nsert **P**ersonal **I**dentifier) will be displayed.

14. IPI → Insert Personal Identifier Key → EOP
    Insert the User's Personal Identifier **B** Key into the key reader again. The lock will confirm the closure by writing the date and time of the close into the **B** key and displaying **EOP** (**E**nd **of** **O**peration).

Cencon Version 5 System Reference Manual

Appendix F - Determine Lock Level

It is sometimes necessary to determine the level of the Cencon Lock with which you are working. This can be done by entering a command via the keypad. The lock level will then be displayed on the LCD. Use the following procedure:

1. Power the lock by turning the dial to the left (counter clock wise) until EC is displayed.
2. Enter the # 1 keypad command.

Output from a Gen2 lock:

The lock displays a string of characters on the LCD, displaying three characters at a time.

The lock code and hardware levels are displayed in a easily readable manner (for example, "LL-", "G 2", "002", "000", "000", "789", "HL-", " 01", " 01" where Gen 2 firmware version 2.000.000789 is indicated.)

Output from a Gen1 lock:

The lock displays a string of characters on the LCD, displaying two characters at a time.

Example
LL 4C 38 54 35 39 42 HL 00 02 The LL displayed in the character string stands for Lock Level while the HL stands for Hardware Level. The numbers following the LL indicator are the hexadecimal representations of the ASCII codes for numbers and letters as we know them. These numbers and letters can be decoded using the following table. Each pair of characters represents 1 letter or number. For instance "4C" represents the letter "L" in our alphabet.

Hexadecimal Decode Table

Hex Number	Decoded Number	Hex Number	Decoded Number	Hex Number	Decoded Number
30	0	41	A	4E	N
31	1	42	B	4F	O
32	2	43	C	50	P
33	3	44	D	51	Q
34	4	45	E	52	R
35	5	46	F	53	S
36	6	47	G	54	T
37	7	48	H	55	U
38	8	49	I	56	V
39	9	4A	J	57	W
		4B	K	58	X
		4C	L	59	Y
		4D	M	5A	Z

The numbers following the HL indicator do not have to be decoded. It is simply a numerical representation as we know it.

The length of the display string will vary depending on which lock model you have. The best thing to do in analyzing the lock level is to write down the entire string and then pick out the portions of it that are significant to you, or if you are experiencing a problem with the lock, report the entire string to the Tech Support group.

The Lock Level string will consist of either 6 or 7 pair of characters and the Hardware Level will consist of 2 pair of characters. When decoded, the Lock Level will be either a 6 or 7 character representation and the Hardware Level will be 2 characters.

The most relevant characters when analyzing the string displayed are the last three sets of characters displayed before the letters HL. In the previous example, the three sets of characters are "35 39 42". These are decoded to indicate the Lock Code Level and Version is 59B.

Example
LL 4C 38 54 36 36 42 HL 00 02
This indicates a Lock Code Level of 66, Version B.

Cencon Version 5 System Reference Manual

Appendix G - Beta Expiration

The beta versions of Cencon will be assigned an initial expiration date of 180 days past the date of creation by Kaba Mas. When the expiration date is reached Cencon will cease functioning.

The customer will be notified of the number of days left until Cencon expiration via the Cencon window title. For example
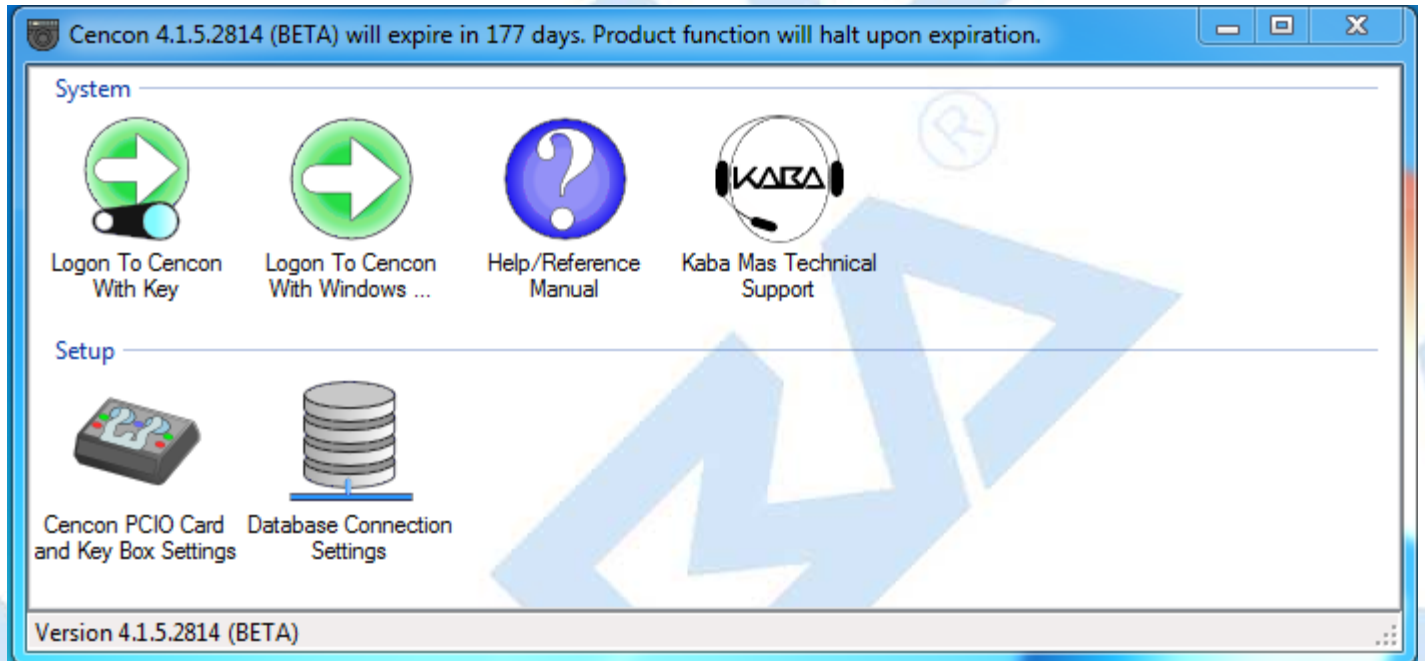
When Cencon is within 60 days of the expiration date, popup messages will be issued when the user logs into Cencon. For example
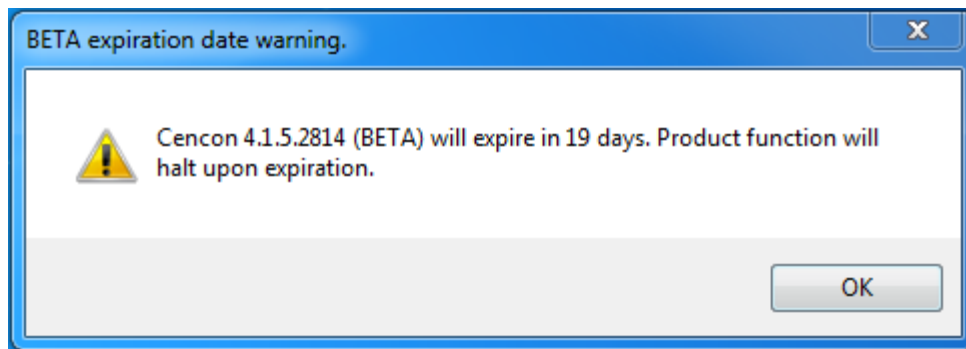
When Cencon has reached the expiration date the Cencon window title will state that the beta has expired. For example
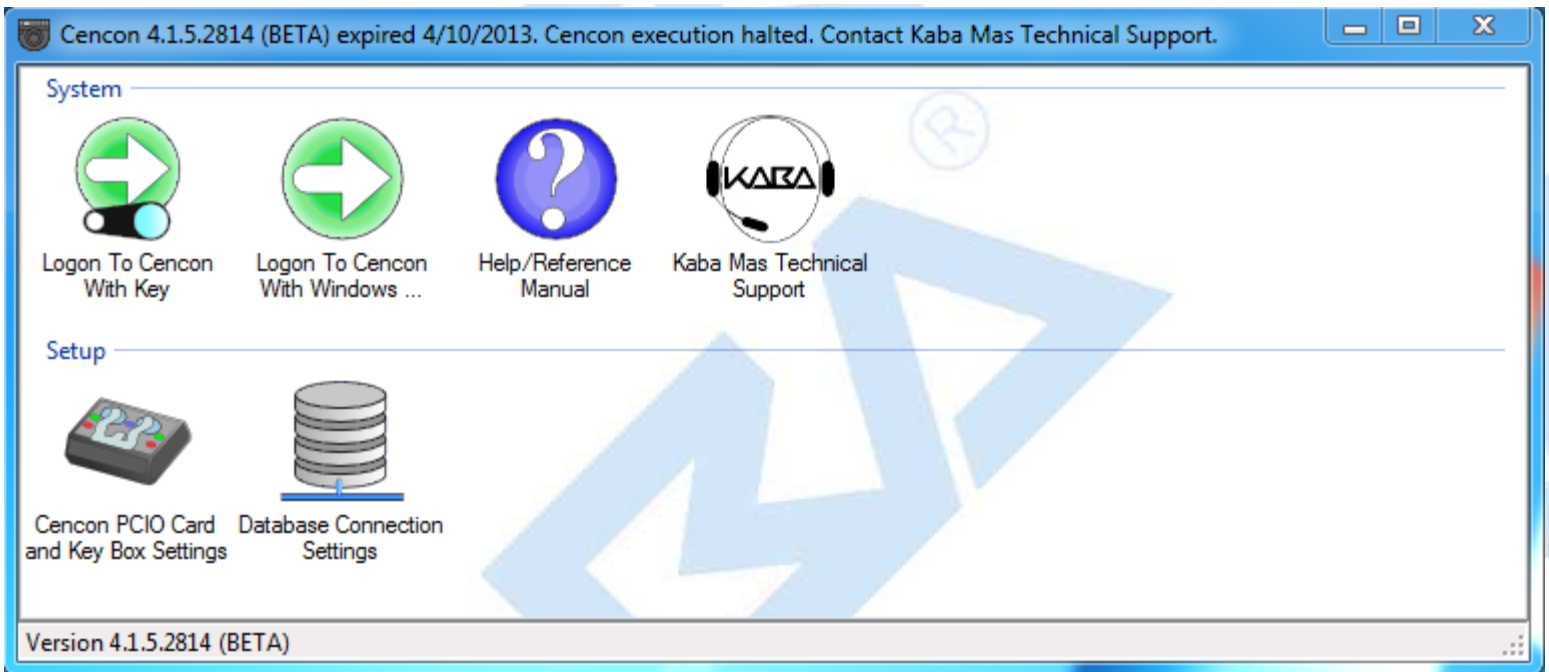
When Cencon has reached the expiration date Cencon logon will be prohibited. When the user attempts to logon to Cencon a popup message will be issued. For example
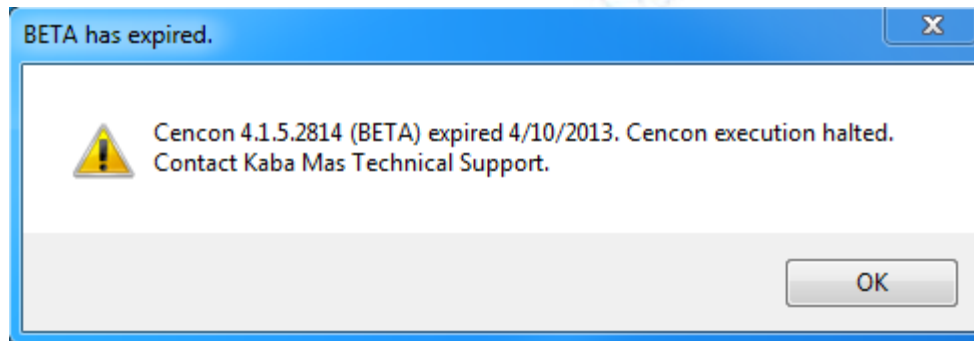
In future Beta releases the customer will be provided with the ability to reset the Cencon expiration date as well as the date on which the warnings begin with help from Kaba Mas Technical Support.

Cencon System Reference Manual

Glossary

Activity Log Table

This is the database table used to store a history of activity and operations for the Cencon System. See section 3.4.1 List Activity Log.

Archive Activity Log Table

This is the database table used to store a older records from the Activity Log Table. See section 3.4.2 Archived Activity Log.

Archive User ID History Log Table

This is the database table used to store older records from the User ID History Log Table in case that table becomes very large. See section 3.4.7 Archived User History Log.

Bank Branch ID

A numeric code that identifies the Bank Branch that manages the locks being controlled by this system. For a bank branch associated with a Gen 1 lock, the branch ID can have a value from 1 to 9999. For a bank branch associated with a Gen 2 lock, the branch ID can have a value from 1 to 2147483647.

Bank Mode

An operating mode normally used by Bank employees. The lock will open using Repeating Access Code(s) + the Bank key(s), and close seals are not used.

CCW

Counterclockwise rotation to the left. This is used in referring to the direction that the lock dial should be turned at certain times when performing lock operations.

Change Key

A two pronged, non programmable, key that is inserted into the back of the lock for activating and shelving locks, changing the shelved-mode combination, and adding and deleting Bank mode users.

Company ID

The value entered for this field can be any four-digit number you wish to identify your company. You should choose a number that is, in some way, meaningful to your company. Once this ID is set, you cannot change it. If you are a branch of a larger company, you must enter the Company ID that has already been chosen for your company. If you are planning to activate locks from a remote PC, the Company ID must be the same on all systems involved in the process.

Customer ID

The Customer ID is value used to associate a customer with locks or a route. Information on customers is stored in the Customer Table.   This is especially useful when a single company is servicing locks for multiple customers. See section 3.3 Customers.

CW

Clockwise rotation to the right. This is used in referring to the direction that the lock dial should be turned at certain times when performing lock operations, such as retracting the bolt when "OPr" displays. You can also dial clockwise to bypass the change key symbol in order to open the lock when the change key was accidentally left inserted and the door was shut.

Dispatcher

The dispatcher is the person who works directly with the Cencon computer system to direct the operations of the First Line Maintenance and Route Personnel. As a part of this process, the dispatcher uses the computer system to generate lock combinations for issue to First Line Maintenance and Route Personnel so that they may access the locks at the ATM's that they are servicing or replenishing. See section 3.6 Define Function Authorization Levels.

D Key

The black Dispatcher Personal Identifier Key that is used by the Dispatchers to allow access to the certain functions in the Cencon program.

Dual User Access Mode

A setting in the lock activation process that causes the lock to require two users to open the lock.

Electronic Key

This is the key reader that is attached to the PC as a peripheral item. It is used to write and read data to and from, respectively, the Smart Keys.

F Key

The blue FLM Personal Identifier Key that is programmed at the PC to authorize an FLM to open locks using the supplied One Time Combination.

First Line Maintenance (FLM) Personnel

Those personnel who will be accessing ATM's on a call by call basis. An FLM person is typically set up to only have one lock combination issued at a time.

Fob

A metal or plastic molding into which an electronic chip can be imbedded to form a Smart Key.

GMT

The acronym for **G**reenwich **M**ean **T**ime. This is the zero line for all time zones. Each time zone is offset from the zero line by a specific number of hours. The number of hours to be used for offset correlates to the number of time zones that you are away from the zero line. With the induction of daylight savings time, this offset decreases by one hour. (See also **UTC**.)

iButton

The trademarked Dallas Semiconductor name for the electronic keys used with the Cencon System.

Lock Table

This is the database table used to store the locks defined in the Cencon system. See section 3.1.1 List Locks.

Lock Log Archive Table

This is the database table used to store older records from the Lock Log History table. This is used to reduce the size of the Lock Log History Table when it becomes very large. See section 3.4.3 Lock Log History, and section 3.4.4 Archived Lock Log History.

Lock Log History Table

This is the database table used to store a history of dispatches to locks in the Cencon system. See section 3.4.3 Lock Log History.

One Time Combination (OTC)

A unique combination that will allow a lock to opened one time by an authorized user with the correct Smart Key.

Open Lock Log Table

This is the database table used to store a log of the currently open locks in the Cencon system. See section 3.4.1 List Open Locks.

PowerStar^{TM} technology

The technology that allows the Cencon lock to operate using internally generated power. No batteries or external power are required.

R Key

The yellow Route Personal Identifier Key that is programmed at the PC to authorize a Route user to open locks using the supplied One Time Combination.

Region

Region control is a method of controlling which locks and Lock Users can be viewed and managed by different Cencon Logon Users.

Route

This is a series of route locks that have been dispatched as a group. This is generally used to allow Route Service Personnel to get the combinations for all the locks on a route prior to leaving. See section 3.1.3 Route Report.

Route Table

This is the database table used by the Cencon system to store a record of the different defined routes. This table defines what routes have been created. See section 3.1.3 Route Report.

Route Lock Table

This is the database table used by the Cencon system to store what locks are on each route. See section 3.1.3.1 Route Lock Listing Report.

Route Service Personnel (RSP)

Those personnel who will be accessing specified ATM's on a given route, usually to replenish currency. They can have combinations issued for multiple locks at one time. Route personnel can also be dispatched by the Dispatcher on a one time basis to perform service at an Lock.

Shelved Mode

This is the default mode of a Cencon lock when it is shipped from the factory. It is also the mode that a Cencon lock is put in when it is not actively being used; i.e., "shelved from service".

S Key

The black Supervisor Personal Identifier Key that is used by the Supervisor to access the certain menus of the Cencon program.

SA Key

The red Supervisor Audit key which is initialized at the PC with information needed to activate or shelve locks. It is also used to retrieve audit records, Add and Delete Bank mode users, download a Bank Mode User Table, etc.

Single User Access Mode

A setting in the lock activation process that causes the lock to require only one user to open the lock.

Smart Key

This is a Dallas Semiconductor electronic chip imbedded in a fob.

Smart Key Reader

This is the key reader that is attached to the PC as a peripheral item. It is used to write and read data to and from, respectively, the Smart Keys.

Special Supervisor

A type of Cencon logon key, that allows access to special supervisor level functions. This is the highest level of authorization for a Cencon logon key. This is controlled by the authorizations defined for access to different functions. See section 3.6 Define Function Authorization Levels.

SS Key

The black Special Supervisor Personal Identifier Key that is used by the Special Supervisor to access all menus in the Cencon program.

Supervisor

A type of Cencon logon key, that allows access to supervisor level functions. This is controlled by the authorizations defined for access to different functions. See section 3.6 User Authorization.

Two Person Integrity (TPI)

When a lock is activated in FLM, Route, or Bank mode with the Dual Access requirement, two individuals, each with their own combination and their own Smart Key, would be required to open the lock.

User ID Table

This is the database table used to store the users defined for the Cencon system. This contains information for FLM and RSP keys for access to locks, as well as information on Dispatcher, Supervisor, and Special Supervisor keys for logging onto Cencon.

User ID History Log Table

This is the database table used to store information on previous users assigned to keys for the Cencon system. This table is

used to look up information on users from lock audit reports where that user may have been deleted from the system, or the key user ID may have been renamed for assignment to another user.

UTC

An abbreviation for **C**oordinated **U**niversal **T**ime. This is the zero line for all time zones. Each time zone is offset from the zero line by a specific number of hours. The number of hours to be used for offset correlates to the number of time zones that you are away from the zero line. With the induction of daylight savings time, this offset decreases by one hour. Also known as "**GMT**" (Greenwich Mean Time.)

2.5 Lock Operation in Shelved Mode

Note

If you are operating a Cencon lock and **-dL** appears on the display during an operation, it indicates that you should **d**ial **L**eft (Counter Clockwise). The purpose is both to give the lock additional power and to ensure the lock bolt is fully extended.
CW= Clockwise; CCW = Counter Clockwise
Special Note: Please refer to section 4.3 for Cencon Swing Bolt Operations.

2.5.1 Open Lock in Shelved Mode

Each Cencon Lock is shipped from the factory in Shelved Mode. The One Time Combination feature which requires a Smart Key is not available when the lock is shelved. Instead, the Shelved Mode combination is used to open the lock without any Smart Key. The default Factory Combination is set to **50-25-50**. Practice opening the lock in shelved mode with the default factory combination until you are comfortable with its operation. The default combination may be changed, in which case the new combination would be used to open the lock while in Shelved Mode. The correct opening procedure for a shelved lock is:

1. **Power Lock → EC**
   Turn the dial to the left (CCW) until the letters **EC** (**E**nter **C**ombination) appear in the display window.

2. **EC → Enter Shelved Mode Combination → OPr**
   Enter the current Shelved Mode combination, whether it be the Factory Combination of 50-25-50 or a newly set Shelved Mode combination, by sequentially pressing those digits on the lock keypad. The LCD will display the numbers as the combination is entered. When the combination has been correctly entered, **OPr** will be displayed, meaning "**OP**en **r**ight".

3. **Opr → Retract Bolt**
   Turn the dial to the right (CW) to retract the bolt.

4. **Open Door**

5. **Close Door**

6. **Extend Bolt**
   Turn the dial a minimum of one complete rotation to the left (CCW) to extend the bolt.

Note

After opening and closing any lock, you should always check to ensure that the lock is physically relocked (i.e., bolt fully extended and locked in place) by turning the dial to the right. If the bolt does not retract, you can be assured the lock is secured.

Helpful Hint

At any point while entering the combination during an opening sequence, if you notice that an incorrect number was pressed on the keypad, you may clear the entire operation and start again by pressing the star (*) key. This allows you to return to the EC prompt without getting a wrong try error (lightning bolt).

Caution - Lock Out (LCO)

When the combination is incorrectly entered, a lightning bolt error will flash on the display (with no other numbers following it). To clear this error and start again, press and hold the star (*) key. Even in Shelved Mode, it is important to avoid getting 5 wrong combination attempts in a row without a successful opening in between because the lock will be put into Lock-Out condition, displaying, "LCO." Clearing the LCO condition in Shelved Mode requires waiting 5 minutes and then entering the correct combination.

Gen2 Locks
If there is a problem with the battery in the Gen2 lock when a lockout occurs, the lock must have power for the full timeout period. The display will alternately flash **-dL** and **LCO** to indicate this.

Required Items: Change Key

For Cencon Locks with a code level of 71, or greater, you may change the Shelved Mode combination. You may change the default Factory Combination of 50-25-50 to a new combination to be used while the lock is still in Shelved Mode.

You can find how to determine the lock code level of a Cencon lock in Appendix E - Determine Lock Level.

This is an option that is only available while the lock is in Shelved Mode and is intended only for temporary use after the ATM is deployed but before the lock is activated. It is not recommended to keep the Cencon lock in this Shelved Mode condition, due to lack of security and control.

> **Warning**
>
> If this combination is lost or forgotten, there is no alternate way to open the lock. Also, while in Shelved Mode, the Gen1 lock records no audits of lock openings. A Gen2 lock records data and time of openings; however, of course, there is no user recorded in the audit for these openings.

Once you have changed the combination for the first time, you have the ability to change the combination again to a different Shelved Mode combination or back to the Factory combination of 50-25-50.

> **Note**
>
> Once a lock is "activated" in any mode, the Shelved Mode combination returns to the Factory Default of 50-25-50.

1. **Power Lock → EC**
   Turn the dial to the left (CCW) until **EC** (**E**nter **C**ombination) is displayed.

2. **EC → Enter Shelved Mode Combination → OPr**
   Enter the current shelved mode combination (either 50-25-50 or a changed Shelved Mode combination) by pressing those digits on the lock's keypad. The numbers will be displayed on the LCD as they are entered.

3. **OPr → Retract Bolt**
   Turn the dial to the right (CW) to retract the bolt.

4. **Open Door**

5. **Insert Change Key**

   Insert the change key into the change key socket on the back of the lock.

   > **Warning**
   >
   > **Do not close the door.** Leave the door open during this process until you are comfortable opening the lock with the new combination.

6. **Extend Bolt**
   Turn the Dial to the left (CCW) to extend the bolt.

7. **Power Lock →** tEC

   Turn the dial to the left (CCW) until tEC (Change Key symbol along with **E**nter **C**ombination) is displayed.

8. tEC **→ Press #8 → EcF**

   Press the # button followed by 8. **EcF** (**E**nter **c**ombination, **F**actory) will be displayed.

9. **EcF → Enter Current Shelved Mode Combination → EnF**
   Enter the current shelved mode combination, **EnF** (**E**nter **n**ew **F**actory combination) will be displayed.

10. **EnF → Enter New Combination → CnF**
    Select and enter the new combination. **CnF** (**C**onfirm **n**ew **F**actory combination) will be displayed.

11. **CnF → Enter New Combination → POC**
    Enter new combination again to confirm. **POC** (**P**ull **O**ut **C**hange key) will be displayed.

> **Warning**
>
> Record the new combination and store it in a secure place. If this combination is lost or forgotten, there is no alternate way to open the lock.

12. **POC → Remove Change Key → EOP**
    Remove the change key. EOP (End OPeration) is displayed.

13. **Power Lock → EC**
    Turn the dial to the left (CCW) until **EC** (**E**nter **C**ombination) is displayed.

14. **EC → Enter New Shelved Mode Combination → OPr**
    Enter the shelved mode combination by pressing those digits on the lock's keypad.
    The numbers will be displayed as they are entered.

15. **OPr → Retract Bolt**
    Turn the dial to the right (CW) to retract the bolt.

16. **Close Door**

17. **Extend Bolt**
    Turn the dial to the left (CCW) to extend the bolt.

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1.7.2 Activate a Lock in Bank Mode from Shelved Mode

<div>

1. Prepare SA key and activate lock at PC

2. Take SA key and change key to lock

3. Open lock with shelved mode combination

4. Activate lock with change key and SA key

5. Change and test combination for a minimum of one user

6. Return SA key

</div>

A lock's default mode is Shelved Mode. A lock must be activated before it can become a functional security device. The lock must first be activated at the PC. The activation process at the PC includes identification of users who will have access to the lock and preparation of the SA key used to transfer the activation information to the lock. This activity is usually performed by the Bank Supervisor. The Bank Supervisor (or equivalent personnel) must then take the SA Key and Change Key to the lock being activated. The lock can be opened at this time using the factory or "shelved" combination of 50-25-50. During the activation process, the ATM/Lock door is left open while the lock bolt is moved to the closed position. The Bank Supervisor then activates the lock using the Change Key and the Supervisor Audit Key initialized to activate this lock. Once the lock activation is complete, you must change the combination for a minimum of one user who was authorized for access to the lock. When the user combination has been changed and tested, the ATM door and the lock bolt can be closed and the new user's Bank Key is used to confirm the closing and complete the lock operation.

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3.1.1.2 Add Lock to a Collection

Cencon 5 provides the ability to create a named collection of locks. Each lock report provides an operational function named "Add to Collection" which is enabled when one or more locks are selected (also available from the popup menu which appears when you right-click on a lock in the report).

If a **Lock Collection Listing** report is open, Cencon asks if you want to add the selected lock or locks to the open collection lock list. If you click on Yes, the selection is automatically added to the open collection.

If a **Lock Collection Listing** report is not open (or if you select to not add the selection to the open collection lock list), the following form is displayed:

To add the selected locks to a collection, click on a collection name to select it and press **Add Locks**. The dialog also allows for the creation of a new collection and the display of the locks in an existing collection.

See Section 3.1.4 for more information on Lock Collections.

Cencon Version 5 System Reference Manual

Chapter 1 - Introducing Cencon 5

1.1 Cencon ATM Cash Vault Security System Product Overview

The Challenge

While the front of ATMs are accessed by customers with individual cards and PINs, the back of the ATM is often accessed by service personnel from multiple companies all using the same lock combination. Bank employees, cash replenishers, technical service reps, repair personnel all using the same combination to open an ATM safe poses a significant security risk.

The Solution

The Cencon ATM Cash Vault Security System from Kaba Mas is designed to combat insider theft from ATMs through the combined use of lock hardware, systems software and Smart Keys. The Cencon system offers total access control and accountability with its One Time Combination feature. The One Time Combination is dispatched from a central location and cannot be reused at a later date, thus eliminating temptation.

The Cencon ATM Cash Vault Security System allows locks located anywhere in the world to be controlled and monitored from one central location.

The central location consists of

- A database describing locks, lock administration personnel, lock service personnel, lock access details and history.
- Kaba Mas software that
    - Manages the creation and distribution of One Time Combinations(OTC).
    - Tracks the status of each lock and user.
    - Provides audit capability.
    - Can be used interactively by a human Dispatcher or programmatically by customer applications such as IVR or Web base interfaces.

The software provided by Kaba Mas consists of

- Cencon Interactive Application: Interactive Central Point of Control
    - Used to create, distribute, manage One Time Combinations (OTC).
- CenTran Service: Background Central Point of Control
    - Used by customer, 3rd party applications to create, distribute and manage OTCs.
- CenTran Web Services: Used by customer web applications to communicate with CenTran Service.
- CenTran Agent
    - Remote lock management: Allows CenTran Service to communicate with ATM lock, streamlining lock administration.
- Key Box Agent
    - Remote key management: Allows CenTran Service to communicate with remote key boxes, supporting decentralized lock personnel.

The Cencon ATM Cash Vault Security System supports three Modes of Operation:

FLM Mode

Designed for First Line Maintenance (FLM) personnel such as cash replenishers, technical service reps, repair personnel, the FLM mode of the Cencon lock permits the dispatch center to give a One Time Combination (OTC) for ATM lock access to a technician "on the fly." FLM personnel are each issued a Smart Key and call their dispatch center to request a One Time Combination. Once used, this combination will not function again, thus ensuring absolute access control. Once the Cencon unit is locked, a Close Seal code is displayed on the lock's LCD. Entering this Close Seal into the dispatch center's computer documents that the Cencon lock is locked and secure.

Route Mode

While permitting the same access control as FLM Mode, Route Mode additionally permits pre-defined routes for armored cash replenishers. Route personnel are each issued a Smart Key. A route of locks, along with an OTC for each lock on the route, may be assigned by a dispatch center permitting route personnel to access a series of locks without contacting their dispatch center at each

individual lock. Route personnel can either call their dispatch center at the end of the shift to report the Close Seals, or the Close Seals can be read from the Smart Key by the Cencon software.

Bank Mode

Bank Mode is designed for bank personnel who may need access to the Cencon system lock but do not wish to operate through a dispatch center. Smart Keys and combinations are issued to bank personnel who may unlock the Cencon lock at any time. An internal audit trail tracks all activity of bank personnel just as it does for FLM and Route personnel. Kaba Mas Cencon software permits bank administrators to manage Bank Mode on site. Bank users may be added or deleted and audit trails may be downloaded from the lock.

High Level Overview of Cencon ATM Cash Vault Security System Component Architecture

The Cencon ATM Cash Vault Security System consists of several components whose method of use will vary depending on the business model of the supported enterprise. Presented here is a brief high level overview of the Cencon ATM Cash Vault Security System components.

Cencon Database:

- Defines locks to be controlled, monitored and audited.
- Defines personnel allowed to access locks.
- Defines Personnel allowed to control access to locks.
- Contains access history for each lock.

Cencon Application:

- Interactive, graphical Windows application used to manage the Cencon Database contents.
- Requires a Cencon Key Box be attached to a USB port of the same computer.

CenTran Service:

- Available for use by customer applications to manage the Cencon Database contents.
- Applications communicate with the service via files or HTTP / Web Services.
- Runs in background as a Windows Service.

CenTran Web Services:

- Available for use by web applications to manage Cencon Database contents.

Customer Application Using CenTran Service Command File:

- The CenTran Service performs actions against the Cencon Database per commands imbedded in files.
- Results of those actions are reported in output files created by the CenTran Service.

Customer Application Using CenTran Web Services:

- The CenTran Service performs actions against the Cencon database per commands received via the CenTran Web Services.
- Results of those actions are reported to the customer application via the CenTran Web Services.

CenTran Agent:

- Allows CenTran Service to monitor lock in a real time manner.

- Runs on the ATM in the background as a Windows Service.

Key Box Agent:

- Allows CenTran Service access to Cencon Key Boxes on remote systems.
- Runs on remote Web Client systems in background as a Windows Service.

Customer Web Client:

- Customer developed web browser based user interface used to manage Cencon Database contents as well as Cencon Smart Keys via the CenTran Web Services.
- Can be located remotely.

Cencon ATM Cash Vault Security System Components and Business Processes

Examples of Business Processes Supported by Cencon ATM Cash Vault Security System Components:

1. FLM (First Line Maintenance) Operations with human Dispatcher:
    1. FLM personnel reaches ATM and contacts Dispatcher requesting OTC.
    2. Dispatcher generates OTC via Cencon interactive application, gives OTC to FLM personnel.
    3. FLM personnel opens and closes lock, recording the Close Seal.
    4. FLM personnel gives Close Seal to Dispatcher who enters it into Cencon database via Cencon interactive application.
2. Route Operations with human Dispatcher:
    1. Before starting route, Route personnel contacts Dispatcher and requests OTCs for each lock on route.
    2. Dispatcher generates OTCs via Cencon interactive application, gives OTCs to Route personnel.
    3. Route personnel opens and closes each lock on route, recording Close Seals.
    4. When the Route has been completed, the Close Seals are given to the Dispatcher who enters them into the Cencon database via Cencon interactive application.
3. FLM Operations with IVR (Interactive Voice Response) system:
    1. FLM personnel reaches ATM, calls IVR system and requests OTC.
    2. IVR system generates OTC via CenTran Command File interface and reports OTC to FLM person.
    3. FLM personnel opens and closes lock, recording the Close Seal.
    4. FLM personnel calls IVR system and enters Close Seal.
    5. IVR system records Close Seal in Cencon database via CenTran Command File interface.

Though business processes will vary between companies there are core lock management tasks that will be used in every enterprise such as:

- Create User and Initialize Smart Key
- Delete User
- Dispatch Lock
- Open / Close physical lock
- Close Lock in Cencon database
- Reassign Lock
- Audit Lock
- Audit Key
- Audit Cencon Database

The following lists describe for a few of the core lock management tasks one possible flow of control through the Cencon ATM Cash Vault Security System components.

Create User and Initialize Smart Key:

- Dispatcher ->
- Customer Web Client ->
- CenTran Web Services ->
- CenTran Service ->
- CenTran Web Services ->
- Key Box Agent (writes KEY) ->
- CenTran Service ->
- CenTran Web Services ->
- Customer Web Client

    Note:

    - Customer Web Client & Key Box Agent will probably be on same location but do not have to be
    - Customer Web Client does NOT require a Keybox on the same system

Dispatch Lock(s):

- Dispatcher ->
- Customer Web Client ->
- CenTran Web Services ->
- CenTran Service ->
- Cencon Database ->
- CenTran Service ->
- CenTran Web Services ->
- Customer Web Client ->
- Dispatcher receives OTC
- Dispatcher transmits OTC to FLM/Route personnel

Lock is physically opened and closed:

- Service personnel calls Close Seal in to the Dispatcher who "Closes Lock" in the Cencon Database. The component flow is the same as that described for Dispatch Lock(s).

    - OR

- CenTran Agent Service on ATM uses CenTran Web Services to report Closure to CenTran Service and "Closes Lock" in the Cencon Database programmatically:
    - Lock is closed ->
    - CenTran Agent ->
    - CenTran Web Services ->
    - CenTran Service ->

- Cencon Database ->
- CenTran Service ->
- CenTran Web Services ->
- CenTran Agent

1.2 The Cencon 5 Software Package

The following items are required to implement the Cencon 5 Software:

- **Cencon 5 Server License Kit: (Single Server Option - p/n 201190)**
    - **Install CD (Includes Cencon 5 Software, Cencon Database Setup Utility, Software Reference Manual, and Adobe Reader)**
    - **Cencon 5 Single Server License Certificate**
    - **Software Getting Started Guide**
    - **Quick Reference Cards (1 set)**
    - **Cencon Software Maintenance & Support (CSM&S) Agreement Form**
    - **1 Change Key**
    - **7 Cencon Smart Keys:**
        - **2 red SA Keys**
        - **3 black Logon Keys**
        - **1 white Clock Set Key (for Gen2 locks)**
        - **1 grey ReSync Key (for Gen2 locks)**
- **Mode Authorization License(s)** (One or more)
    - Bank Mode (p/n 201191). Includes 2 green B keys.
    - FLM Mode (p/n 201192). Includes 2 blue F keys.
    - Route Mode (p/n 201193). Includes 2 yellow R keys.
- **Cencon 5 orange Installation Key** (p/n 202202) - Required to install Cencon 5 in conjunction with a USB Key Box on a new PC. Uniquely coded and tagged per company according to the mode licenses ordered. Packaged and shipped separately for security reasons.
- **Cencon 5 Dispatch Kit:** (p/n 201181)
    - Cencon USB Key Box - Uniquely coded per company.
    - USB cable

An **Enterprise / Multi-Server License Kit** also is available - p/n 201194. This kit option includes all items in the Single Server Option and all 3 Mode Authorization Licenses shown above. A Cencon 5 Enterprise / Multi-Server License Certificate is provided instead of the Single Server License Certificate. The Installation Key and Dispatch Kits are still required for implementation and are still ordered separately.

If you are missing any of the above items, contact Kaba Mas Technical Support at 1 (800) 950-4744.

Optional Order Items:

- Cencon 5 Software Maintenance & Support (CSM&S) Agreement
- Cencon On-Site Training for hands-on lock installation and complete lock and software operation. (2-day class required for new users.)
- CenTran 4 (XML) Software (p/n 201196)
- Cencon Key Maintenance Utility (KMU) Software Kit (p/n 201126)

(See www.kaba-mas.com/kaba-brand/products/cencon/366142/cencon-software.html for more information.)

1.3 System Overview

Cencon 5 is a security program designed to control access to containers. It is capable of allowing one central location to monitor and control exactly who may access a particular lock and at what time (i.e., central control = Cencon.). Any number of locks may be controlled using Cencon, which is particularly well suited for companies that service Automated Teller Machines (ATMs). Through a

combination of intelligent design and advanced technology, the Cencon system can achieve this control with no physical connection between the locks and the monitoring system.

Cencon 5 consists of three basic components:

1. PC-Based Computer Program
2. High-Security Locks
3. Smart Keys

The Cencon software controls access to Cencon locks in either or both of the following methods:

One Time Combination or "OTC" Method (FLM and Route Modes)
> Locks utilizing this access method will change their combination each time they are opened. The monitoring computer is able to anticipate what the next combination will be through a secure software algorithm that is built into both the locks and the central monitoring unit. It is impossible for either field service or monitoring personnel to know what combination will open a given safe next without first dispatching that combination to a particular key. A record of all security activity, including dates, times, and persons involved, is automatically maintained in the software, in the locks, and to a lesser degree in the keys themselves.

Repeating Access Code or "RAC" Method (Bank Mode)
> Locks utilizing this access method will open on a chosen combination for each key. The code chosen for a particular key can be reused to open the lock on a repeated basis, according to the access parameters established for this key, without requiring interaction with the software each time. Audit records of all lock activity, including dates, times and the persons involved, are automatically maintained in the locks and keys. This information may be reviewed through the Cencon computer program.

Access is further controlled by the advanced-design electronic keys known as Smart Keys. Once the lock is active in any of the modes, an opening can only occur with an OTC or RAC + the corresponding Smart Key. This dual token requirement of a physical device plus that user's known 6-digit number for opening the lock ensures security. If one of the two access tokens are compromised or lost, either the key or the combination, the lock remains secure. Audit information on locks, keys, and software may only be accessed by administrative personnel using the highest level of security safeguards. These audit records cannot be altered by anyone, not even those people who are granted the highest level of security in the system.

It is important that you understand how the entire system operates, even though many of the operations will be carried out by other personnel. Before you start using the program, be sure to read the next few pages. They tell you what this package includes, the equipment you need to use the software, and they identify the components of the system and describe the people who will be working with them.

1.4 Personnel Classifications

There are two primary categories of people who can interact with the Cencon System: Lock Users, who open and close the lock in a particular mode, and Software Logon Users, who perform operations at the PC. For those who work with the PC system, authorization to system functions is defined through the Cencon PC software itself. The Personnel Classifications as designated in the system are as follows:

1.4.1 Lock Users

When a Lock User has a Smart Key programmed under their name, they typically keep that key with them at all times, and do not share the key with any other person. A particular Lock User's key can be initialized for any 1 of the 3 modes. The Lock User key cannot be used to logon to the Cencon software.

1.4.1.1 First Line Maintenance (FLM)

> These are the field technicians whose duties include ATM repair work and lock installation. Due to the nature of their work, FLM techs are typically unaware of exactly where they may be dispatched on any given day. Each FLM tech carries a specially encoded Personal Identifier (Blue FLM Key) that, along with a dispatched combination, is required to access the lock.

1.4.1.2 Route Service Personnel (RSP)

> Route personnel are field service people whose duties primarily consist of removing deposits from ATMs and replenishing currency for customer withdrawal. In some regions of the world, these users who drive Armored Cars / Armored Trucks are said to work for CIT (Cash In Transit) companies. Typically they service established routes with little variation, following a predetermined schedule. Route personnel carry specially encoded Personal Identifiers (Yellow Route Keys) that, along with a dispatched combination, are required to access the lock.

1.4.1.3 Bank Users

Bank Users are people whose duties include removing deposits from ATMs and replenishing currency for customer withdrawal. Typically, they service the ATMs or safes only at the branch where they work. Bank Users carry specially encoded Smart Keys (green Bank keys), that identify them to the lock and are used along with a unique combination to access the safe. The access combination for a bank user is fixed until changed by that user.

1.4.2 Software Logon Users

The Cencon 5 software allows an unlimited number of unique Software Logon User types, called Roles, depending on what group of menu options the user should be given access to. Prior to Cencon 5 software, there have been only 3 different levels of access (Dispatcher, Supervisor, and Special Supervisor), which are described below as examples. The software has several other default Roles, such as Reporting and Bank Mode Only, for example. The use of some of these default roles allows functions that were previously unique to auxiliary programs used with the Cencon locks (CenBank, CenDemo, Key Maintenance Utility, Activation Only) to be incorporated into the Cencon software, yet controlled to certain personnel. Although the default Roles are not changeable, any type of Logon User can be uniquely customized by copying the default role and renaming it as a new role. Each Logon Users can either use an initialized black Smart Key + his or her chosen password to access the software, or access can be allowed when the user is logged into the Windows Operating System using Windows Authorization. At least one Special Supervisor logon key is required to be created in the system, though all other software logon users can choose to use Windows Authorization or a black Logon key. The software logon keys cannot be used at the Cencon lock to open it. Below, the 3 Logon User types that were used in previous Cencon versions are described, as an example of what each role may have with the software. For more information on creating and using Roles see sect. 3.6.1 on Authorization Definitions.

1.4.2.1 Dispatcher

The Dispatcher works directly with the Cencon software to issue lock combinations and direct the operations of the FLM and Route personnel (Bank users are not dispatched). Locks are opened and secured through a coordinated effort between the Dispatcher and an FLM or Route person. Each Dispatcher is permitted access to only certain sections of the Cencon program, depending on how the authorization levels are defined for certain activities.

1.4.2.2 Supervisor

The Supervisor directs the operations of the Dispatchers. The Supervisor normally has access to levels in the Cencon software that are not available to Dispatchers, including the viewing of activity records and the creation of service routes. Each Supervisor is permitted access to only certain sections of the Cencon software, depending on how the authorization levels are defined for certain activities.

1.4.2.3 Special Supervisor

The Special Supervisor always has unrestricted access to all levels of the Cencon program, so tight control should be taken over which personnel has been given this role or has access to this key. Since the system is required to have at least one Special Supervisor user, many customers will choose to lock this key in a secure location and not use it for daily operation, but instead only bring it out to log in during special situations.

1.5 System Components

The three basic components of the system are as follows:

1.5.1 PC-Based Computer System

The PC-Based Computer System is actually comprised of hardware and software components. Cencon 5 supports both the Cencon PCI Adapter Card and the Cencon Key Box. The Cencon PCI Adapter Card is installed into an open PCI adapter slot inside the PC. The Cencon Key Box is installed by attaching its cable to any USB port on your computer. These devices contain information which serves as unique identification for a specific company's system.

> **Note**
>
> If a single company needs multiple stand-alone PC systems set up or multiple Cencon dispatching clients on the same network, multiple PCI Adapter Cards or Key Boxes can be issued to the same company with the same unique security code for that company burned into the device.

The **Cencon PCI Adapter Card** includes a second piece of hardware called the **Smart Key Reader**, consisting of 4 Smart Key ports. The key reader connects to the Cencon Adapter Card. Ports 0, 1 and 2 are configured as "read only" ports and are used for reading software logon keys only. Port 3 is used to create new keys and read audit keys. Because there are 2 versions of the Smart Key Reader, the location of Port 3 is described in 2 different ways: if the reader is the grey-colored, non-RoHS version (p/n 202019), Port 3 is the farthest from the key reader's cable. If the reader is the enclosed, black, RoHS-version (p/n 202212), Port 3 is the port on the far right-hand side.

> **Note**

The non-RoHS version of the 4-port key reader (shown below on the left) is compatible with both older, plastic-fob keys and newer, metal fob keys. The RoHS version of the 4-port key reader (shown below on the right) is only compatible with the metal fob keys. The 2-port Cencon Key Box allows use of both metal and plastic-fob keys.

| Shown above: P/N 202019. Non-RoHS-version Key Reader | Shown Above: P/N 202212. RoHS-version Key Reader |

The **Cencon Key Box** has two Smart Key ports, each having a green and a red status light. The blue LED in the middle is a power indicator when the unit is plugged in via the USB cable. A flashing green light indicates the port where the key needs to be inserted. Typically, the left-side port is used for reading an install key or a software logon key. The right-side port is used for creating or reading the audits from user keys or red SA keys. If there is an error reading the key, the red light is illuminated.

Shown above: P/N 202201. Cencon Key Box

FCC Notice

CENCON KEY BOX
MODEL 202201
The Cencon Key Box is manufactured by Kaba Mas LLC, 749 W. Short Street, Lexington, KY, 40508, U.S.A., 859-253-4744, HTTP://www.kaba-mas.com. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The software component is the PC-based Cencon 5 software. The software is designed to align itself with the internal software of the locks in generating unique One Time Combinations. Software functions also include the following:

- User Management
- Lock Management
- Lock Activation/Shelving
- Reports and Auditing

In order to logon to the system, an authorized Logon User's Smart Key would be inserted into the Key Reader, and the authorized user's password must be entered. Instead of using a software logon key, a Windows user can be set up in the Cencon 5 software and be

validated by Windows Authentication. Any user who is given Cencon software logon authority can logon and use the Cencon program.

1.5.2 High Security Locks

The Cencon locks are highly-secured, advanced-design locks. The original design was first developed for use on United States Government safes containing classified material. There are currently 2 different models of the Cencon lock series that will operate in conjunction with the Cencon 5 Software. They are as follows:

- Cencon Gen2
- Cencon Gen1 (previously known simply as Cencon S2000)

Even though the locks are electromechanical, they require no wiring or batteries for opening the lock because they are self-powered. Power is generated by turning the dial knob on the lock to the left (counter-clockwise). After several turns of the knob, enough power is generated to allow the microprocessor in the lock to function. Combinations are then entered by pressing the numeric keys on the lock keypad, and a Smart Key is then presented to the lock's key reader. The software in the lock aligns itself with the PC software in generating unique One-Time-Combinations from the moment the lock is activated in FLM or Route mode.

Those users who are familiar with the operation of the Gen1 lock will notice few differences if operating the Gen2 lock as they did the Gen1 lock. However, many product enhancements exist with the Gen2 lock that are dependent on the type of PC equipment used to activate the lock.

See Chapter 4 - Cencon Locks for detailed information on the Cencon lock hardware.

1.5.2.1 Lock Operating Modes

Cencon locks may be set to operate in any of several different modes.

> **Note**
>
> It is important to note that any lock may be activated in two or more modes simultaneously (of the 3 modes not including shelved mode). These different modes in a lock can either all be controlled by the same company or by 2 or 3 different companies. Also note, once a certain company has activated one of the modes from their software, no other company can be in control of that particular mode until that mode's current controller deactivates (shelves) their control of that mode.

Shelved Mode

The Cencon lock opens on the fixed combination of 50-25-50 and does not require a key of any kind. This is the default factory mode that all new locks are in when they are shipped from Kaba Mas. It is also the mode that locks are placed in when they are completely shelved (i.e., all active modes) from service, i.e., they are not being used operationally as a security device.

> **Note**
>
> The Shelved Mode Combination can be changed to something other than 50-25-50. See "Change Shelved Mode Combination" in the System Start-Up section of this manual.

Route Mode

The Cencon lock requires the correct Route key and the correct OTC to open. After access is gained, the door closed, and the lock bolt extended, the Route key is presented to the lock to receive a Close Seal number. The Route mode user records and later relays the Close Seal to a Software Logon User. Multiple combinations may be issued to a Route Key as needed. In addition, the combinations to a predetermined list of locks (a route) may be issued to the Route person at the start of the work period. In this case the Close Seal numbers are automatically recorded in the Route person's Personal Identifier key when each lock is closed. At the end of the route the Close Seal numbers can be downloaded from the key into the Cencon computer or can be entered manually one by one, from a menu. If Two Person Integrity (TPI) is required, Route Mode may be set to require two different keys and combinations to open the lock (Route Mode with Dual Access).

FLM Mode

FLM Mode is similar to Route Mode, but typically each FLM user is only dispatched a single one-time-combination at a time. When the FLM user receives the Close Seal, a call is made to the Software Logon User, who enters the Close Seal into the Cencon software, freeing the FLM key to be dispatched to the next site which needs service. This mode is useful where the containers or locks may require periodic unscheduled maintenance. By default it is not possible to give more than one combination at a time to a particular FLM user, though this can be modified. This mode may also be set to require Two Person Integrity (FLM Mode with Dual Access).

Bank Mode

This is a special mode which allows the lock to be accessed by persons other than regular service personnel (typically bank employees) when the container is located at a bank. In Bank Mode, the lock will open repeatedly when using the confidential combination each unique to different authorized Bank user key, and will not issue a close seal number. Rather than receiving a

close seal number, after the door is closed and the lock is secure, the Bank Mode User's key is presented to the lock to write a close audit record to the lock and the key. The bank personnel may change their combinations when desired by a simple procedure. Again, Two Person Integrity is an option (Bank Mode with Dual Access).

Bank locks may be set to operate with Time Delay when they are activated. If a lock is activated with Time Delay, the lock will only open after the Time Delay has expired and before the Window to Open (the time allowed after the Delay time to Open the lock before the lock resets) expires. When a lock is activated in Time Delay mode, the time delay applies to all Bank mode users.

1.5.2.2 Lock Storage Capacity

The maximum number of audit record lines that can be stored in a Cencon lock is around 500, depending on the access modes used, the type of lock and the type of audit records. After that limit is reached, the audit file will wrap around and begin overwriting the oldest records. Because the audit storage capacity in the Gen2 lock exceeds the storage capacity of the SA key, in order to view the oldest audit records, it may be necessary to directly connect the lock to a Cencon software PC using a special cable. However, typically an auditor is most concerned about the most recent set of records, so the SA key audit proves to be more than sufficient.

> **Note**
>
> An open and a corresponding close operation are recorded in 1 audit record line if performed by the same key, when used with a lock in Single Mode; therefore, the maximum number of opens and closes in the Cencon lock could be twice the number of audit lines; therefore it could be more than 1000 audit records.

1.5.3 Smart Keys

Smart Keys are used by people who work with the Cencon system, whether it be at the PC using the software program or at the lock. A Smart Key is actually a Dallas Semiconductor electronic device imbedded in a plastic or metal fob. The keys are designed to be carried on a key ring like a traditional key. The keys are placed in the key reader attached to the PC and are initialized with unique data. The lock also has a key reader, where the Smart Key is presented, resulting in data verification and the writing of programming or audit records. These sophisticated electronic keys can securely hold large amounts of both temporary and permanent information.

1.5.3.1 Key Types

There are many key type designations, shown in the chart below, which can be classified into 3 different categories: Lock Users, Software Users, or Data Transfer Keys.

The Lock User and Software User keys are sometimes known as **Personal Identifier (PI) Keys**. They are called Personal Identifier Keys because they uniquely identify the owner of the key once they have been added to the system. The PI keys are meant to be programmed to 1 individual for audit purposes and are not meant to be shared, or else security will be compromised.

The Data Transfer keys are programmed at the Cencon software to be used at the lock for a particular function, and then brought back to the Cencon software. Although the Data Transfer keys are usually loaned to a particular employee who already has a Lock User key, the Data Transfer keys are not programmed with any restriction that requires any certain Lock User to only be able to use them.

Kaba Part	Abbreviation	Description	Category	Compatibility	Color	Shape	Button Type
202020	F	FLM mode personnel	Lock User	Gen1 & Gen2	Blue	teardrop (bent)	DS1994
202022	R	Route mode personnel	Lock User	Gen1 & Gen2	Yellow	teardrop (bent)	DS1994
202023	B	Bank mode personnel	Lock User	Gen1 & Gen2	Green (Teal)	teardrop (bent)	DS1427
202024	L	Logon to Cencon (Ex: D, S, SS)	Software User	all Cencon S/W versions	Black	teardrop (bent)	DS1991
212030	A	Additional logon to KMU	Software User	KMU software only	Orange	teardrop (bent)	DS1429
202021	SA	Supervisor Audit	Data Transfer	Gen1 & Gen2	Red	teardrop (bent)	DS1996
202202	IS	Install Cencon 5 Software	Data Transfer	Cencon 5 & above only	Orange	hourglass (flat)	DS1963S
202226	CS	Clock Set	Data Transfer	Gen2 + Cencon 5 only	White	hourglass (flat)	DS1922L
202224	RS	Re-Sync	Data Transfer	Gen2 + Cencon 5 only	Dark Grey	hourglass (flat)	DS1963S
202220	F*	FLM mode personnel	Lock User	Gen2 + Cencon 5 only	Blue	hourglass (flat)	DS1963S
202222	R*	Route mode personnel	Lock User	Gen2 + Cencon 5 only	Yellow	hourglass (flat)	DS1963S

202223	B*	Bank mode personnel	Lock User	Gen2 + Cencon 5 only	Green	hourglass (flat)	DS1963S

Customers should tag and label the keys with the type of key and the user name that is defined in the system.

Lock User Keys:

The Lock User keys maintain internal audit trails which record opening and closing times. The DS1994 and DS1427 keys contain internal clocks which are set at the PC when the key is initialized for a specific user and when the **Initialize Lock User Key Clock** operation is performed. The DS1963 key audits are time-stamped using the clock found in the Gen2 lock.

FLM (F) Key

This **blue** PI key is used by FLMs by touching it to the key reader on the side of a Cencon lock. This key lets the lock know that the FLM is authorized to open that particular lock. It is also used to get audit counts from locks in FLM Mode. A report may be generated from this key at the PC system, showing the user's activity.

Route (R) Key

The **yellow** Route PI key is used very much like an FLM PI, but by Route Personnel. It uses the same electronic device used in the F key and therefore has the same characteristics and capabilities. A report may be generated from this key just the same as with the F key.

Bank (B) Key

The **green** (teal) Bank PI key is used very much like the FLM and Route keys except that the combination does not change between uses. A report may be generated from this key just the same as with the F key.

Software User Keys:
Logon (L) Key

This **black** PI key is used by an employee that has been given access to the Cencon software. The type of access the logon key has been assigned will depend on the authorization role given when it was initialized (Dispatcher, Supervisor, Bank Mode Only, etc.) This key must be inserted into the key reader at the Cencon PC client when the user is logging on to Cencon and may then be removed and secured. Users should log off during breaks and at the end of a work shift.

Note

In the Cencon 5 software, the logon key is *only* accessed during the logon process. To change the effective user, and/or region, one must log out of Cencon and log back in with the desired key in the reader.

Data Transfer Keys:

Supervisor Audit (SA) Key

The **red** Supervisor Audit key is initialized at the PC key reader with the information needed to take it into the field to activate locks, shelve locks, or audit a lock. A single SA key can be initialized to activate or shelve multiple locks. This key can also be used to retrieve audit records from locks, and to add and delete bank mode users from a lock. For Gen2 locks only, an SA key can be programmed to retrieve the list of bank users from a bank mode lock.

Install (IS) Key

The **orange** Install key is initialized by Kaba Mas with the information needed to identify the Cencon Customer and install Cencon on a computer. This unique key must be used during installations of Cencon 5 to allow a particular company's Key Box to be used on a particular PC. The company's unique security number programmed to the install key must also match the security number for that company programmed to all of their Key Boxes and PCI cards. The key and the tag attached to the key should be kept in a secure location after the installation process.

Clock Set (CS) Key

The **white** Clock Set key is initialized by Cencon 4 software and used to set the clock and the daylight savings time information in Gen2 locks.

Lock ReSynchronization (RS) Key

The **dark grey** Lock ReSync key is initialized by Cencon 4 software and used to resynchronize the data in the Cencon database with the data in a Gen2 lock.

1.5.3.2 Smart Key Operation

The Smart Keys used with Cencon provide a two-tiered approach to system security by requiring not only that anyone who opens a lock, or accesses system data on the computer has a key, but also that it is the correct type and has been properly initialized. For Lock User keys, the key is also used to provide a communications link between the central computer and the locks it controls. An audit trail of the Lock User key's activity is maintained inside the key itself.

The device that makes this possible is the Dallas Semiconductor iButton™ electronic device. This is the device in the key that looks like a watch battery. Yet, it is much more. Inside the stainless steel container there is a battery, and, in some models, a quartz crystal driven timekeeping system that provides real-time clock capabilities. Each key also has a unique serial number built into it that can be read but never changed. For more detailed information about the iButton™, you can refer to the Dallas Semiconductor web site at **www.maxim-ic.com**.

The iButton™ device is mounted in a convenient plastic or metal housing that allows it to be carried on a key chain and also provides a handle for inserting the key into the key reader at the PC or on the lock. When the key is inserted into the key reader, electrical connection is established between the internal electronics and the lock. Once the data communication is established, the lock can read data from the key and save the time and other data into the key's memory. Which function the lock performs depends partially on which type of key is inserted and what mode the lock is in.

The memory in the key is used to transfer data from the computer to the lock and from the lock to the computer. The data read from the key by the lock is used to assure that the key's user is authorized to perform the requested function. Data is also stored in the key by the lock, such as the data from a lock audit download to an SA key. The key can then be read by the computer to provide a record of lock activity.

Another function of some of the keys is to provide a time stamped record of activities performed at the lock. For Gen1 locks, this is done by using the real-time clock capability of the key. Power for the key is from a lithium battery inside the key which can last up to ten years, depending on frequency of use and temperature variations. The battery is used to run the quartz crystal that provides the time base for the real-time clock but is not necessary for the memory functions. For Gen2 locks, the audit times and dates recorded to the lock and the keys come from the real-time clock in the lock, no matter what type of Lock User Key is used.

1.5.3.3 Key Storage Capacity

The Smart Keys used with Cencon also have limits on the number of records that can be stored in them. The maximum for each key is determined by the amount of memory in the key and the type of records stored. For example, the SA key can hold several hundred audit record lines, depending on how the lock was configured and the types of audits. (Note that the SA key can only hold the records for a single lock at a time). Lock User Keys will also hold between 15-30 audit record lines of information, depending on the access modes used, the type of lock and the type of audit records. After that limit is reached, the audit file will wrap around and begin overwriting the oldest records. Because each audit record line could contain both an open time and a close time if opened by the same key in single access mode, this equates to a maximum number of open and close records on a Lock User Key between 30-60 event records.

1.6 System Data Definitions

It is very important to understand the definition and usage of the data fields that are set in the Cencon PC software.

Note
Date and Time Values
All dates displayed by the Cencon software are in the international standard format defined by ISO (ISO 8601).
Dates in this standard appear as follows: **YYYY-MM-DD**, where:
• YYYY is the year [all the digits, i.e. 2012]

- MM is the month [01 (January) to 12 (December)]
- DD is the day [01 to 31].

For example, "29th of December 2009", in this international format is displayed as 2009-12-29.

The international standard notation for the time of day is **hh:mm:ss** where:

- **hh** is the number of complete hours that have passed since midnight (00-23)
- **mm** is the number of complete minutes that have passed since the start of the hour (00-59)
- **ss** is the number of complete seconds since the start of the minute (00-59).

Midnight is represented by **hh** = "00".

Region

Region Data Access Control is a security option available within the Cencon software. Region Control is active when the checkbox displayed in the 'Change Configuration Settings' screen has been selected.   If the Region Control option is turned Off, then the Region field is optional data for locks, users, and routes, and lock users are not restricted from being dispatched to certain locks based on the region, nor are Logon users restricted to what data they can see and manage based on the region. If Region Control is turned On, it gives Cencon the ability to group users, locks, and routes into specific regions and then limit each user's access to only the users, locks and routes in their region. Every Cencon logon user would be assigned to either a Global region or Local region. The classification of a Global region or Local region does not alter the restriction that a lock user assigned to a region can never be dispatched to a lock assigned to a different region. Assignment to a Global region vs. a Local region affects what a Cencon logon user (i.e. Dispatcher, Supervisor, etc.) can see and manage within the Cencon System. Special Supervisors are always assigned to a global region, by default.

Local region logon users

- Only have access to users, locks and routes in their own region.
- Do not have access to the region maintenance functions.
- May only create users, locks, and routes in their region.
- Can never dispatch a lock user to a lock in a different region.

Global region logon users

- Have access to all users, locks and routes, regardless of the region.
- Can never dispatch or reassign a lock user in 1 local region to a lock in a different region.
- Even lock user that is designated as Global can only be dispatched to locks that are designated as Global, not to locks with any local region.
- A global logon user is required to select the region to be used for activating or shelving locks before the locks to be activated or shelved are specified. FLM/RSPs to be used in the activate or shelve process must belong to the region selected by the dispatcher.
- A global logon user can change the region assigned to any user, lock, or route.

Database Preparation

- A common example of how region control can be used is that several existing regional databases within a particular company, all using the same PCI security code and Company ID, could be merged to form a single common database accessed by all users. The logon users at the various branches could be given local regional access, which would allow them to only see, manage, and add locks and users within their local region. The IT managers would only have 1 central database to manage and support rather than multiple regional databases. Customers should contact Kaba Mas for assistance or advice on this process.

See Region Maintenance for more information on Region Control.

Company ID

The value entered for this field is set during the original software installation and can be any four-digit number you wish to identify your company. You should choose a number that is, in some way, meaningful to your company, and yet complex. Once this ID is set, you cannot change it. You should also record this number, and keep it in a secure location, since the number is no longer visible during or after logging in to the Cencon 5 software. If you are a branch of a larger company, or you are upgrading, you must enter the Company ID that has already been chosen for your company. If you are planning to activate locks from Cencon

running on a networked PC, the Company ID must be the same on all systems involved in the process.

Customer Names

The Customer Name is a unique identifier that allows optional grouping of locks, users, and routes (usually for specific customers). This is especially useful when a single company is servicing locks for multiple customers. Customer Names can also provide a way of grouping Locks that have similar characteristics, such as belonging to a branch bank, or being located in a certain geographical area, or any grouping that the organization controlling the locks finds useful.

1.7 System Precautions

Although the Cencon locks, the PCI cards, and the Cencon Key Box are designed to be easy to install and use, there are a few areas where caution needs to be exercised.

<table>
<tr><td style="background:yellow">**Caution**</td></tr>
<tr><td>

Electrostatic Discharge (ESD): Kaba Mas locks and PCI cards are well protected from ESD damage once they are installed, but can be damaged during the installation process if proper precautions are not observed. When handling the locks, follow these precautions:

- Everything on and around work stations which might come into contact with ESD sensitive devices should be conductive and connected to earth ground through a resistor. The purpose of the resistor is to prevent electrical shock in case something should come in contact with a voltage source.
- The technicians installing the locks and PCI cards should also be "grounded." Technicians can wear conductive wrist bands with "alligator" clips connected to a convenient source for earth ground. The stainless steel plate on the wrist band should directly contact the technician's skin.
- When handling the back covers of Cencon locks and the PCI cards, do not directly touch the electronic components.
- Handle the covers by the edges, being careful not to touch the connectors. Eliminate the use of all unnecessary plastics, paper, and synthetics during installation.
- In addition, all locks and PCI cards are shipped with static shielding material (that do not generate static charges) and an antistatic sleeve covering the cable end.
- Do not install the back cover assembly until the flex cable connectors have been seated into their proper positions. Touching these cables transmits ESD from the technician's body through the cables to the electronic components of the back cover.

The Cencon Key Box

Operators may become statically charged in a normal working environment. Inserting keys or just touching the Key Readers on the Cencon Key Box may cause the computer's Operating System (OS) to disconnect from the Cencon Key Box. In this instance, un-plug and re-plug the USB cable between the computer and the Cencon Key Box. In addition, an ESD strike may cause the Cencon 5 software to malfunction. In this case, re-start the Cencon 5 software and continue your operation.

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1.8 System Processes

There are numerous system processes that involve integrating activity at the PC software with activity at the lock. It is important that these processes be completed in their entirety. The following is an overview of each of these processes with links to the detailed "How To..." section of this document.

1.8.1 Activate Lock from Shelved Mode

A lock's default mode is Shelved Mode. A key must first be programmed for "activation" and then used at the lock before it can become a functional security device. From the Cencon software a lock can be activated in FLM Mode, Route Mode, Bank Mode, or any combination of these modes at the same time. The lock activation key (SA key) must first be programmed at the PC. Depending on which mode(s) are to be activated, the appropriate lock user key(s) are also prepared at the PC. Then, these keys are taken to the lock, along with a standard Cencon change key, in order to perform the activation procedure.

Details:
Activate Lock in FLM Mode
Activate Lock in Route Mode

1.8.2 FLM/Route Service Call

A lock will need to be opened periodically by either an FLM Technician or a Route Person. First a combination must be dispatched from the Cencon PC System. The FLM or Route Person then takes the combination that was issued and their respective Personal Identifier Key to the lock. The lock is opened with the dispatched FLM or Route service combination, and the necessary service operations are performed. The lock is then closed and the Personal Identifier Key (F or R) is used to retrieve the Close Seal. The Close Seal is reported to the Cencon dispatcher to close the call.

Details:
FLM/Route Service Call

1.8.3 Route Call

When a Route is dispatched from the Cencon PC System, it may involve one or multiple locks and one or multiple visits to each lock. This involves using the Cencon software to first define a multi-lock route before the combinations for this route are ever dispatched. Once the combinations are issued, the Route Person takes those route combinations and the R Key to each of the respective locks in the route. A route may occur in a single day or can be spread over multiple days. Each lock is opened with the dispatched Route combination for that lock and the specific sequence of visitation to the lock. A single lock may be visited up to 3 times within a single route. Once the lock is open, the appropriate route activities are performed. The R key is then used to close the lock and obtain the close seal which is returned to the Cencon dispatcher to close the call. The close seal can be called in to the Dispatch center at the time a Lock is closed as with a single service call, or the Route person can wait until the route has been completed and can then turn in the R key to close the calls in the PC System with the key.

Details:
Route Call

1.8.4 Retrieve and Report on Audit Download from Lock

The audit records recorded in a lock may be written to an SA key which is then taken to the PC to be printed. The procedure is to use the Cencon software to initialize an SA key for the retrieval of the audit data. The key is then taken to the lock. The lock is powered up and the retrieve audit command is entered. The key is held to the key reader on the lock while the data is written into its memory. The key with the data now written in it is taken to the PC where the data is read and a report is either printed or displayed. No PI key is required and the lock does not have to be opened.

Details:
Retrieve and Report on Audit Download from Lock

1.8.5 Shelve Lock

A lock may be temporarily removed from active service by shelving it. This involves using the Cencon software to prepare an SA for the shelving and performing the shelve operation at the lock. The process is slightly different depending on the lock mode. Note that a lock can be shelved in multiple modes (FLM, Route, Bank) with the same key at the same time if the modes were activated on the same Cencon database.

Details:
Shelve Lock in FLM Mode

1.8.6 Add Bank User(s) To Lock After Activation

When a bank mode lock is activated, the users that are selected when the SA was programmed are added to the lock's authorization table. Additional users can be added at any time. The new users must first be added to Cencon if they do not already exist. Then the users must be given authorization to access the lock and the SA key is prepared at the PC to transfer the user data to the lock. This activity must be performed by an authorized Bank mode lock user because it requires that the lock be opened. This user must then take the SA Key and Change Key to the lock where users are going to be added.

Details:
Add Bank Users To Lock After Activation

1.8.7 Delete Bank User(s) from Lock

Part of maintaining the security of Bank Mode means deleting users from the lock when they no longer need access. This operation involves initializing an SA key with the information necessary to delete the users from the lock. A Bank mode lock user with opening authorization must then take the SA Key and Change Key to the lock where user(s) are going to be deleted, and open the lock to perform the Delete Users operation.

Details:
Delete Bank Users from Lock