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RR-PM1200PAK INSTALLATION & PROGRAMMING INSTRUCTIONS

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GENERAL DESCRIPTION

The Alarm Lock Remote Release PowerMag is an innovative 1200 lb. electromagnetic locking system with infrared remote control(s). The Alarm Lock System (model RRPM1200PAK) offers the security of a mag and the convenience of pocket-size infrared keyfobs for management, staff or receptionists--up to 100 individual remote controls (part no. AL-REMOTE) are supported! These lithium-battery powered remote controls can release the mag from either side of the door and feature easy single button operation.



SYSTEM FEATURES

- Advanced 1200 Lb. Electromagnetic Lock with Innovative Infrared Remote Release
- The power of a Magnetic Lock with the convenience of pocket-size remote controls for reception or staff..
- Unique patented feature allow the Power Mag to sense the door status and provide high end options such as door chime, door held open alarm, relay output follows door position, etc..
- Complete RR-PM1200PAK turnkey system includes: Advanced 1200 Lb. Power Mag, one AL-REMOTE KeyFob remote control, and plug-in AC transformer.
- Plug-in 12 V AC transformer eliminates the requirement for running wires or employing an electrician's services.
- Supports up to 100 individual KeyFobs (model no. AL-REMOTE).
- KeyFobs release Power Mag from either side of door.
- KeyFobs feature single button operation with positive "click" response.
- KeyFobs are automatically-enrolled by system in easy programming mode and each is audibly and visually confirmed.
- Can optionally be powered by Alarm Lock Regulated Power Supplies (AL-P1A, AL-P3A, or AL-P6A).

- Programmable remote switch functions.
- All programming stored in non-volatile memory will not be lost on loss of power.
- UL Listed; CE

SPECIFICATIONS

Input Power (AC)	12 Volt AC Plug In, Class 2 Transformer, 8.5 to 20 VA.			
Input Power (DC)	optional 12V, 500 mA DC power supply required per Maglock.			
1200PM Dimensions:	2.875" x 10.5" x 1.5" / 7.3cm x 26.8cm x 3.8cm (HxWxD)			
AL-REMOTE Range:	Protected Side (inside): 35 feet (min.) Unprotected Side (outside): 10 feet (min)			
AL-REMOTE	additonal IR KeyFob for PM1200 system.			
PM1200	1200lb MagLock (w/o transformer or			

AL-REMOTE)

Mounting the PM1200 POWER MAG

- 1 Fold template where indicated to form a 90° angle. For a swinging door place template against door header and door opposite hinge side of door jamb. For a pair of swinging doors place template against door and door header at center of door opening. Transfer ARMATURE PLATE MOUNTING hole locations to door. If outside access is required, the "LIGHT PIPE HOLE" location should also be transferred at this time. DO NOT transfer door frame hole locations to header at this time.
- 2 Follow template instructions for hole sizes. Use the illustrations below to determine proper armature mounting hole



3 Note type of door frame header and install filler plate or angle bracket as required to provide a flat surface on the header over the entire depth of the lock.



View of Mounting Plate Under the Header



- 5 Install mounting plate to header by drilling pilot holes at slot locations (see item 1 in above drawing), then secure plate with 2 flat head screws. These two (2) screws are installed in the slotted holes to allow for adjustment before drilling and installing the (4) remaining outer screws (item 3 in above drawing).
- 6 Adjust the mounting plate so that it and the armature plate form a right angle.
- 7 Using the mounting plate as a template, drill the wire hole and pilot holes for the four (4) outer flat head screw positions.
- 8 Install the four (4) #10 flathead screws provided.
- **9** Fasten the lock to mounting plate with the two (2) 1/4-20 socket screws provided. Compensate for any misalignment by adding or subtracting washers at armature mounting screw.
- **10** Firmly tighten all screws. Install anti-tamper plugs into holes over each socket head mounting screw. Use soft hammer to avoid damaging lock case.
- 11 Rubber on armature screw head must not be trimmed or modified for correct operation.

NOTE: For steel door frame use self tapping flat head screws supplied; for wood door frames use the supplied wood screws.

Installing the Infrared Light Pipe.





- **1** Drill 25/64" hole through door at position marked "LIGHT PIPE HOLE" on template.
- **2** From outside of door slide light pipe through hole.



3 Firmly press supplied kepnut over the shaft of the light pipe until it is held securely against door.

Wiring the PM1200 POWER MAG

- 1 Open wiring bay cover by removing Phillips head screw.
- 2 Bring outside wires into wiring bay through wire access hole at top of bay.
- 3 Cut wire down to appropriate length and make connections using supplied wire nuts.
- 4 Carefully tuck wires back into the wiring bay.

5 Close cover.

Note: Only the Black AC power wires are mandatory connections. All others are optional.

Power Connections



Connect to the supplied 12V AC 10 VA Plug in transformer, or to an optional 12V DC 500 mA Power supply.(DC input is non polarized)

Remote Switch Input



Auxiliary Relay Output



Connect to a normally open door bell push-button, momentary remote release push-button or latched passage mode switch. (See Remote Switch Input options in System Option Programming Commands)

Wire the Auxiliary Relay Output to an optional peripheral device. (See Auxiliary Relay Output options in System Option Programming Commands)

Relay Contact rated for 12 V DC, 1 Amp Max.

The AL-REMOTE KeyFob

The AL-REMOTE KeyFob is a dual infrared element device which transmits a digitally encoded infrared signal to the Power Mag. The operational range of the KeyFob is a minimum of 35 feet from the Power Mag. When used from the protected side of the door (inside), aiming the KeyFob in the general direction of the Power Mag is sufficient. However, if using the supplied light pipe to allow access from the outside, the KeyFob must be aimed at the light pipe in order to activate the Power Mag.

An indication that the batteries inside the KeyFob are low and must be replaced will be a noticeable decrease in the effective range of the KeyFob. For example, if the KeyFob range is typically 35 feet and it falls to 20 feet, this is an indication that the batteries should be replaced.

The KeyFob should not be exposed to extreme temperatures and should not be submersed in water.

Replacing the AL-REMOTE KeyFob batteries

Following is the procedure for replacing the KeyFob batteries. The replacement battery is a Duracell model DL2032. (2 required). *Warning: Replace batteries only with the same type as specified above. Use of another battery may present a risk of fire or explosion. Do not recharge or disassemble battery, or dispose of in fire.*



3 Remove old batteries. Observing polarity (+ / -), insert new batteries

4



4 Place circuit board back into base over new batteries.



board from

2 Gently lift circuit

expose the battery

KeyFob base to

compartment.

5 Align top of housing to base and snap together.

0



Insure that wiring does not block the Infrared sensor.

Programming the RR-PM1200

There are 2 modes of programming KeyFobs into the PM1200 data base. First, on initial power up the system automatically enters the Initial KeyFob Programming mode and will sequentially enroll any activated KeyFobs into the KeyFob database. The first KeyFob will be stored as 00 and the second as 01, up to the maximum of 99. The second method, Advanced Programming, is used for enrolling and deleting KeyFobs from an existing lock data base. A 16 position rotary switch and a push button located on the circuit board in the wiring bay of the Power Mag are used for advanced programming.

Initial KeyFob Programming

	Action	LED Response	Sounder Response	Comments	
1	Power Up new Lock	Slow Flash	BEEP	Auto program mode entered.	
2	Wait a few seconds	Rapid Flash		Ready to enroll first KeyFob.	
3	Aim KeyFob at Mag lock and press and hold button.	Solid light	3 BEEPS	KeyFob enrolled as KeyFob 00	
4	Release button.	Rapid Flash		Ready to enroll next KeyFob	
	Repeat steps 3 and 4 to enroll additional KeyFobs which will be sequentially stored in database (01, 02, 03, 04)				
When done, press and hold PGM button for 5 seconds.Solid light if door is closed & locked		BEEPLONG BEEP	Exit Program Mode.		

You MUST program at least one KeyFob into the Power Mag database in order for the lock to function properly. The PM1200 will NOT function as a stand-alone Power Mag if not programmed.

- At any time the complete KeyFob database and option programming may be erased by holding down the push button on the Mag lock PCB for 12 seconds (at the 3rd beep). This will completely erase the KeyFob database and then place the unit into the Auto Enrollment mode described above.
- 😰 5 steady beeps indicate that you are about to program a KeyFob over a KeyFob which is currently enrolled.
- 13 5 beeps ending with a low note indicate that a programming error has occurred.

Advanced Programming

Once the Initial KeyFob enrollment has been completed, the Advanced Program Mode is used for subsequent programming of KeyFobs into the system. Advanced Programming is accomplished through a 16 position Rotary Dial Switch and a push button mounted in the Power Mag wiring compartment. The Rotary Dial and Push Button are used to set the User Number to which the keyfob is to be assigned.

- Unlock Power Mag with valid KeyFob
- Open Door
- Remove Cover from Power Mag Wiring Bay
- Locate the Rotary Dial and Push Button on the Power Mag circuit board.
- Press and Hold Power Mag push button until 1st beep.
- 1 Turn Switch to the number representing the 1st digit of the User Number to be learned.
- 2 Press the circuit board Push Button (the sounder will beep)
- 3 Turn Switch to the number representing the 2nd digit of the User Number to be learned.
- 4 Press the circuit board Push Button (the sounder will be-bop)
- 5 Aim the KeyFob to be programmed at the Power Mag and press the KeyFob button.
- The sounder will beep 3 times when accepted and the LED will light and stay lit.
- 6 Release the KeyFob button
 - The LED will flash rapidly if next consecutive location in database is available for next KeyFob to be enrolled, or slowly if next address is already taken.
- 7 When programming is complete, hold PGM Push button for 5 seconds to exit program mode.

Example: Enroll a KeyFob into location 92:



Sequentially Programming Additional KeyFobs

Once a KeyFob is programmed, using the advanced programming procedure described above, additional KeyFobs may be enrolled sequentially by repeating step 5 (aim additional KeyFobs at the Power Mag and press the KeyFob button) to enroll it into the next sequential location. For example, if you had just enrolled KeyFob number 42, the next one would be enrolled as 43 and the next as 44 and so on. The sounder will acknowledge each additional KeyFob as described above. To program additional KeyFobs which are not sequential, repeat steps 1 - 6 above for each KeyFob.





System Option Programming

The RR-PM1200 can be configured to provide a variety of system options. The same method used in the Advanced programming of KeyFobs is used for the programming of system options.

- Unlock Power Mag with valid KeyFob
- Open Door
- Remove Cover from Power Mag Wiring Bay
- Locate the Rotary Dial Switch and Push Button on the Power Mag circuit board.
- Press and Hold Power Mag push button until 1st beep.
- 1 Turn Rotary Dial Switch to the character representing the 1st digit of the System Option to be programmed.
- 2 Press the circuit board Push Button (the sounder will beep)
- 3 Turn Switch to the character representing the 2nd digit of the System Option to be programmed.
- 4 Press the circuit board Push Button (the sounder will beep, followed by a three beep acknowledgment).
- 5 When programming is complete, press and hold PGM Push button for 5 seconds to exit program mode.

System Option Programming Commands

Passage Options:

AA	Door Ajar OFF (default)	If door ajar is enabled, the Power Mag alarm will sound if the door is held open more than 20
ΑB	Door Ajar ON	seconds .
A C	Smart Pass OFF	After the Power Mag is released by KeyFob or the remote switch Smart Pass will, if enabled,
A D	Smart Pass ON (default)	automatically re-lock the Power Mag the instant the door is closed.
ΒE	Chime OFF (default)	While in Passage Mode, the Power Mag will emit a chime tone each time the door is opened.
ΒF	Chime ON	See Passage Mode (option BD)
DA	Pass Time: 5 Sec.	Pass Time is the duration the door will remain unlocked after activation of a KeyFob or the
DB	Pass Time: 10 Sec.	remote release.
DC	Pass Time: 15 Sec. (default)	
D D	Pass Time Tone ON (default)	If Pass Time Tone is enabled, the Power Mag sounder will buzz for 2 seconds at the beginning
DE	Pass Time Tone OFF	of pass time.
DF	Pass Time on Power-up ON	Pass time may be initiated by momentarily removing power. This option is intended to allow
AE	Pass Time on Power-up OFF	control from an outside source, such as a request to exit device or an access control panel.
Remot	e Switch Input Options:	
ΒA	Door Bell	A momentary short on the Remote Switch Input will cause the Power Mag sounder to emit a "ding -dong" door bell chime.
ΒB	Disabled (default)	Disabled - Shorting the Remote Switch Input will have no effect on system operation.
BC	Remote Release	A momentary short on the Remote Switch Input will cause the Power Mag to unlock for the programmed Pass Time (see Pass Time options)
ΒD	Passage Mode	The door will remain in Passage Mode (unlocked) as long as the Remote Switch Input is shorted.
Auxilia	ry Relay Options:	
CA	Activate during pass time	The auxiliary relay will activate during Unlock time or passage mode.
СВ	Activate on power fail.	While the system is under power, the Aux. Relay will remain engaged. In the event of a power failure, the relay will de-energize. This can be used for activating emergency lighting, etc.
СС	Disabled (default)	
CD	Activate on Remote Input	The Auxiliary Relay will remain active as long as the Remote Switch Input is shorted.
СE	Follows door position	Auxiliary relay follows door position - Door open - Aux. relay on, Door closed - Aux relay off.
CF	Follows door ajar alarm	Auxiliary relay follows door ajar alarm. The relay will activate when the door ajar alarm sounds and will restore when door is closed. This option may be used to activate 24 hour zone on alarm system.
Delete KeyFob Options:		
FΕ	Remove KeyFob by User Number	Remove KeyFobs assigned to the following User Number(s) - used to remove a single KeyFob or a sequential block of KeyFobs. [F] [E] [First KeyFob address] [Last KeyFob address] Example 1: Remove KeyFobs 20 through 29: [F] [E] [2] [0] [2] [9] Example 2: Remove KeyFob 45: [F] [E] [4] [5] [4] [5]
FF	Remove KeyFob by KeyFob activation	Use this option to remove a KeyFob in your possession. Activate system option F F, aim KeyFob at Power Mag and press KeyFob button. If the sounder chirps, KeyFob is not programmed in database.

System Option Programming Commands				
System Related Options:				
ΑE	Tone on power up OFF	The Power Mag can be configured to emit a 2 second tone each time it is powered up.		
A F	Tone on Power-up ON (default)	(programming AE or AF will disable DF- Pass Time on Power-up)		
FC	Adjust door test down	Physical installation parameters such as the construction of the door and jamb may require		
FD	Adjust door test up	that the internal constants be adjusted should the Power Mag fail to detect when the door has been opened.		

Example 1: Remove KeyFob from system (option FF)



Example 2: Program the Aux. relay to follow door position (option CE)



NOTE: If an existing KeyFob is to be re-programmed as a Passage Mode enabled KeyFob (address 90-99), be sure to first remove it from its original address. Follow the instructions above "Remove KeyFob from system" and then re-enroll as a Passage Mode KeyFob.

Advanced Features

Passage Mode

The Power Mag can be set to a Passage Mode (unlocked) state, where full access through the door is permitted. Passage Mode can be enabled only by KeyFobs mapped to addresses 90 through 99 or by the Remote Switch Input (if programmed for Passage - command BD). While these KeyFobs operate normally, granting access when the KeyFob button is pressed, they can also initiate Passage Mode through a special Hold Down feature. Passage Mode is initiated by aiming the KeyFob at the Power Mag and holding down the button for 5 seconds. The sounder will beep 3 times to acknowledge Passage Mode. To disable passage mode, aim any one of the Passage Mode enabled KeyFobs at the Power Mag and slowly press the button twice. If the KeyFob button is only pressed once, a Lock Down mode is enabled. (see Lock Down).

Lock Down Mode

Lock Down Mode allows a door in Passage Mode to be quickly locked in the event of a panic condition. A single button press from any Passage Mode authorized KeyFob while Passage Mode is active will put the door into a 3 minute Lock Down mode. Once in the Lock Down mode, ONLY the KeyFob which initiated Lock Down may be used to disable it, with another single button press, which will return the Power Mag to the standard locked mode. To insure that the door is not inadvertently opened while in Lock Down, all other KeyFobs except for the one which initiated Lock Down are disabled for the 3 minute duration.

Smart Pass

Smart Passage allows the Power Mag to automatically re-lock the door as soon as it senses that it has closed, even if the Pass Time has not expired. This will allow the lock to be programmed for the maximum Pass Time of 15 seconds (default) without the fear that an intruder will re-open the door and slip in behind a valid user. (programmable - command AD)

Door Ajar Alarm

Door Ajar Alarm will prompt the Power Mag to go into alarm if it senses that the door has been held open for 20 seconds. When in alarm, it may be silenced by closing the door. (programmable - command AB)

Remote Release

The Remote Switch Input can be programmed to allow a push of a momentary button to permit passage for the programmed Pass Time duration. (programmable - command BC)

Typical Applications



Using the Remote Switch Input as a door bell, interrupting power for "Request to Exit" and supervising the Power Mag for a "Door opened" condition through a dedicated zone on a burglar alarm control panel.



Typical Applications

Interfacing to an access control system to allow card reader access in addition to keyfob access. **Required Programming:** Set Appropriate Pass Time in Auxiliary Remote Passage Options (5,10 or 15 Relay Switch Power seconds) (default Pass time = 15 sec.) NC N/O Access ğ **Control Panel** 12 Volt Switched YELLOW Output. BLACK GREEN WHITE WHITE BLACK BLUE . Turn Off on successful card **Operation:** swipe. The Access Control panel interrupts Power Mag Power upon a successful card swipe, initiating Pass Time. Card Reader

Using a normally open toggle switch to provide passage mode and the Auxiliary Output to trigger a recording system to record activity only when door is opened.



SYSTEM USER DATABASE RECORD LOG			
USER #	USER NAME	USER #	USER NAME
00		25	
01		26	
02		27	
03		28	
04		29	
05		30	
06		31	
07		32	
08		33	
09		34	
10		35	
11		36	
12		37	
13		38	
14		39	
15		40	
16		41	
17		42	
18		43	
19		44	
20		45	
21		46	
22		47	
23		48	
24		49	

SYSTEM USER DATABASE RECORD LOG			
USER #	USER NAME	USER #	USER NAME
50		75	
51		76	
52		77	
53		78	
54		79	
55		80	
56		81	
57		82	
58		83	
59		84	
60		85	
61		86	
62		87	
63		88	
64		89	
65		90	
66		91	
67		92	
68		93	
69		94	
70		95	
71		96	
72		97	
73		98	
74		99	

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