



DIY Wireless Home Security System Installation Guide



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Introduction

Part 1: Planning

The first thing you're going to want to do is figure out where you want to put the control panel. Typically, it's easiest for everybody to place it by the door you use most frequently you can always add extra keypads to your Magellan system. You also need it to be near an electrical outlet (don't choose one that's switch-controlled). Don't pick a space where it's easily viewed from the door or windows (you don't want would-be burglars to be able to scope out your system ahead of time). Please see System Planning Diagram and refer to Mounting Guide Lines.pdf

Next, figure out where the best place is to put your security and fire sensors (ref. PMD85 Out Door 45kg Pet Detector Installation Guide.pdf, PMD75 45kg Pet Detector Installation Guide.pdf PMD1 18kg Pet Detector Guide.pdf). Also choose a location for the inside alarm siren if applicable. Don't put it in an obvious location (where the burglar could find and destroy it quickly), but don't put it somewhere where the sound will be muffled with (i.e. closet, in upholstery).

Consider the most likely areas for a burglar to gain access eg. External doors, windows and gates etc. Using magnetic door contacts, indoor infrared detectors and outdoor detectors, design a system that suites your requirements. Range should be taken into account when using wireless systems see wireless limitations.pdf, wireless range extenders can be added to the system.

Part 2: Control Panel Installation

Position the control panel at the height where it's easy to access the keypad and read the display. Despite the name "wireless home security system" there will indeed be a wire involved in connecting the control panel to the outlet (ref. 6160 DC Power connect). To avoid tampering, you should run this wire through the wall (drill holes behind the control panel and below the outlet, then connect the two). Magellan 6160 systems come with a backup battery in case the plug is unplugged or the power goes out.

Installation could be a little more complicated if you are installing a monitored home security system. This will involve also connecting a phone line. Depending on your experience, you may need to have the alarm company technician help you with this stage. Consult the instructions that come with the system to complete installation of the control panel. If a radio monitoring device is required this is obtainable from your monitoring company and additional equipment may be required (see Magellan 6160 Console Radio Connection.pdf)

Part 3: Control Panel Programming

Magellan 6160 if purchased in a kit form, will be pre-programmed before delivery. You will be required to fill in the system programming form and fax or email it back before we will be able to program. You can also program the system easily at home by following the prompt on the key pad or by using the manual supplied. You'll use the control panel's keypad to program the features of the alarm system. You are required to program your own system code

Part 4: Sensor Installation

At this point, it's time to install the alarm system's sensors. You will have door sensors, window sensors and infrared detectors to install (depending on the system). Door and window sensors will consist of a magnet and a transmitter. The transmitter gets attached to the edge of the window frame or door while the magnet should be attached to the window/door.

Most of our systems come with PIRS (Passive Infrared Motion Sensors), you can also buy smoke detectors, broken-glass sensors, and other features. While these features are not typically difficult to install (a few screws, some plastic hammer in anchors), it is important to place them carefully in order to achieve the best results. Therefore, you should read the instructions that come with the Magellan 6160 system carefully.

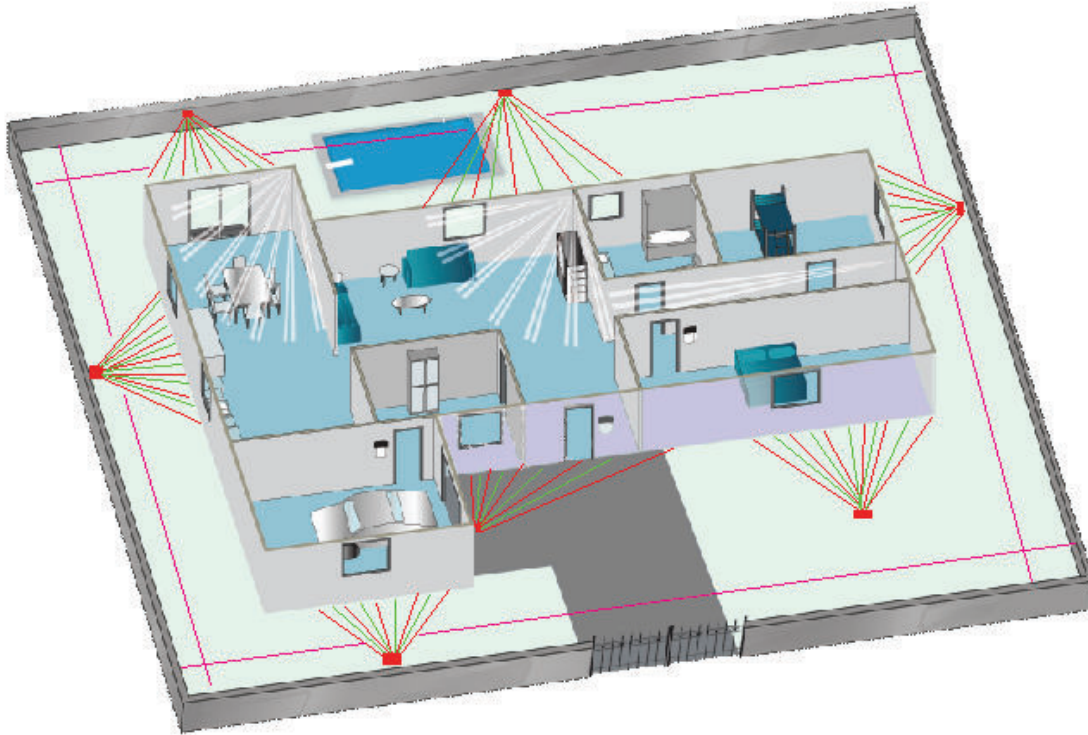
We do supply glue with the kits in order to mount the detectors although it is recommended that the detectors and sensors are attached with screws.

Part 5: Test It

The last step is to test your newly installed wireless home security system. Your Magellan 6160 comes with a "test" mode (see manual supplied). Make sure to test all of the sensors and all of the functions of the security system. If everything works, you're done. You'll want to test your system once a month or so to make sure everything is in working order.

System Planning Diagram

Layout Diagram Example

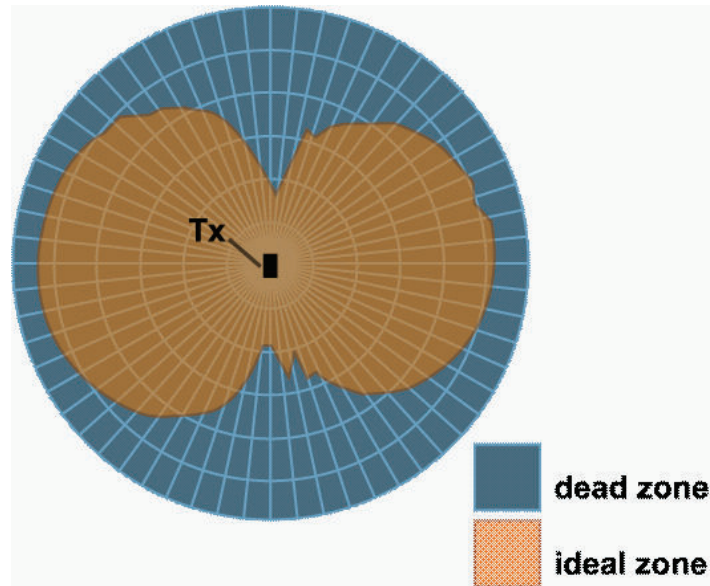


Mounting Guidelines

Mounting Locations

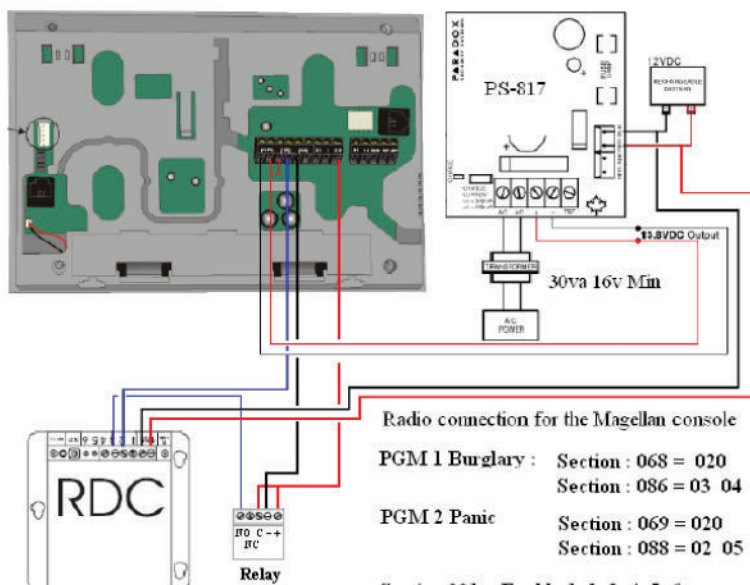
- Mounting locations affect the overall performance of the wireless system
- In order to ensure the best possible signal reception, the following list of criteria should be respected whenever possible
- Select an installation site that is free of obstacles that reflect and absorb RF signals (RF reflection and attenuation), and avoid installation near or in the path of strong RF fields (interference)
 - One of the most basic obstacles is the ground and its relation to the receiver.
 - The ground works as an RF noise generator, and also mirrors RF signals and sometimes even absorbs them
 - Avoid mounting the receiver in the basement as the range of the receiver is reduced when mounted below ground level
 - If it is absolutely necessary that the receiver be mounted in the basement, ensure that it is mounted as high and as close to the underside of the first floor as possible.
- Select a site that is not susceptible to drastic temperature changes
 - Mounting the receiver or transmitter in an area with drastic temperature changes can cause condensation and moisture to collect in the receiver or transmitter
 - Common problem areas include:
 - Heater air duct
 - Exterior doors
 - Refrigerators and freezers
 - Garage
- Mount the wireless receiver as high and as central as possible to the proposed placement of the transmitters
 - Ideally, the perfect antenna spreads its signal like a perfectly round circle. However, because of the transmitter's physical construction (i.e. PCB, battery) it is more like a figure 8.

Figure 1



- The “dead spot”, or area where the RF signal is weak or non-existent, varies from one transmitter to the next
- Mounting the receiver as central as possible to the transmitters will help in avoiding the “dead spots”
- Do not mount the transmitters too close to each other. Do not mount the transmitters too far or too close to the receiver.
- When RF devices are too close, strong RF signals can cause the devices to malfunction (Intermodulation)
 - When a transmitter is mounted too far from the receiver, the RF signal is too weak to communicate effectively or at all.
 - As a general rule, when installing transmitters ensure that there is at least 30cm (1ft) between each transmitter, and at least 1.5m (5ft) between each transmitter and the receiver
 - The maximum distance that a transmitter can be from the receiver is dependant on the transmitter’s transmission range

Magellan 6160 Console Radio Connection



Radio connection for the Magellan console

PGM 1 Burglary : Section : 068 = 020
 Section : 086 = 03 04

PGM 2 Panic : Section : 069 = 020
 Section : 088 = 02 05

Section 091 : Enable 1, 2, 3, 4, 5, 6

If using Magellan remotes for Panic : please program button as a (A) Panic 3

PMD85 Outdoor 45Kg Pet Detector Installation Guide



MAGELLAN™

MG-PMD85 SERIES

Outdoor Digital Dual-Optic High-Performance PIR V1.01

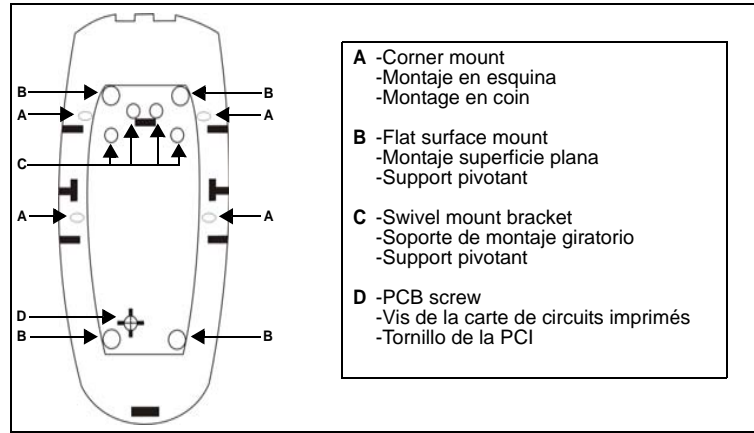
Instructions
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P R D O X
SECURITY SYSTEMS
Printed in Canada - 06/2007 paradox.com MGPM85-TI05



Figure / Figura / Figure 1

Installation / Instalación / Installation



English

Beam Patterns

The MG-PMD85 series features the following beam patterns:

Detector	Beam Pattern
MG-PMD85W	Pet Array beam pattern (see figure 3)
MG-PMD85L1	Horizontal Curtain beam pattern (see figure 4)
MG-PMD85L2	Vertical Curtain beam pattern (see figure 5)

Installation

After selecting the detector's location, drill or punch out holes for the mounting screws as shown in Figure 1.

Avoid placing the detector within proximity of sources of interference such as direct sunlight, reflective surfaces and moving cars. Do not mount the detector near or on metal, such as aluminum siding, as this may affect signal transmission.

The MG-PMD85 can also be mounted using the Paradox Swivel Mount Bracket (469). The swivel mount may allow for easier mounting. If using the swivel mount, it is recommended that you seal the space where the swivel mount is connected to the back cover with some silicon or with a rubber gasket to ensure that moisture does not enter the detector.

After you have installed the detector, ensure that the adjustable height markings on the upper right of the PCB's cover inside the unit match the installation height (see Figure 2). Any PCB adjustments should be followed by a walk-test to verify detector coverage.

Do not touch the sensor surface as this could result in a detector malfunction. If necessary, clean the sensor surface using a soft cloth with pure alcohol.

Ensure that the unit's front and back cover are tightly joined together without any spacing (around the rim of the unit) before tightening the screw, otherwise the weatherproof casing may be compromised and moisture may enter the unit.

Powering the Detector

1. Insert three "AA" batteries into the battery holder while verifying polarity (see Figure 2).
2. Insert the battery holder into the back cover and affix the battery cable to the battery connector on the PCB.

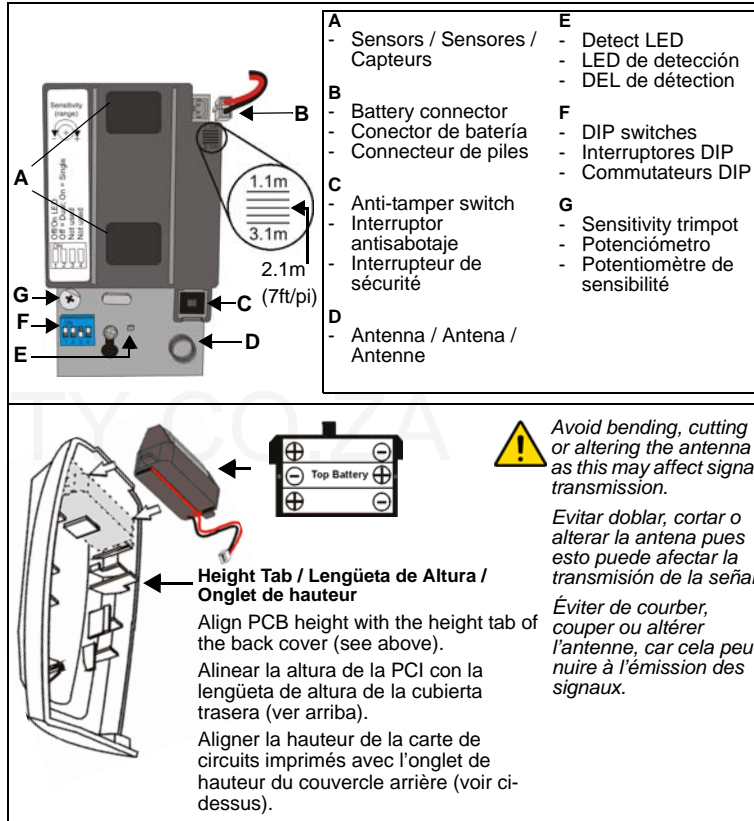
After connecting the battery cable, a power-up sequence will begin (lasting between 10 to 30 seconds). During this time, the red LED will flash and the detector will not detect an open zone or tamper.

Replacing the Batteries

1. Disconnect the battery cable from the battery connector of the PCB.
2. Remove the battery holder from the back cover and remove the old batteries.
3. Press and release the tamper switch to ensure that the unit has powered down. Follow the steps outlined in "Powering the Detector" above.

Figure / Figura / Figure 2

PCB Setup / Configuración de la PCI / Configuration de la carte de circuits imprimés



Technical Specifications

	Angle	Coverage	Installation Height	Pet Immunity
Compatibility:				
Sensor type:				
Sensor geometry:				
Operating temp:				
Power:				
RF frequency:				
Lens:				
Transmitter range:				
Tamper switch:				
Detection speed:				
Battery life:				

* FCC ID: KDYMGPMD85 Canada: 2438A-MGPM85
The MG-PMD85W 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.

** 868MHz (only) is not UL approved.

† Tested at 25°C. Battery life expectancy will vary according to the amount of traffic (movement) the detector has processed and the temperature outdoors. A higher check-in time interval and higher traffic will lower battery life. In colder temperatures, the capacity of alkaline batteries is reduced.

‡ The UL approved detection speed is 0.76m/s (2.5ft/s).

Figure / Figura / Figure 3

MG-PMD85W Pet Array Beam Pattern / Estructura de Tipo Paso de Mascotas MG-PMD85W / Diagramme de lentilles Couloir pour animaux MG-PMD85W

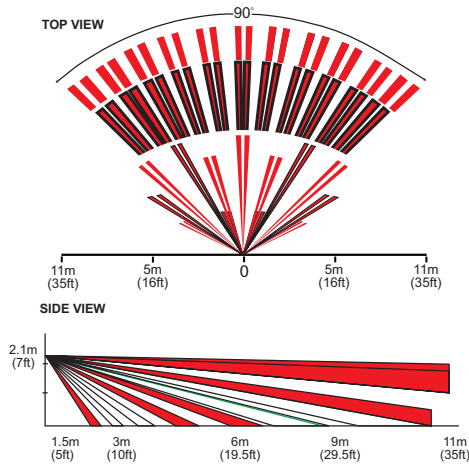


Figure / Figura / Figure 4

MG-PMD85L1 Horizontal Curtain Beam Pattern / Estructura de Tipo Cortina Horizontal MG-PMD85L1 / Diagramme de lentilles Rideau horizontal MG-PMD85L1

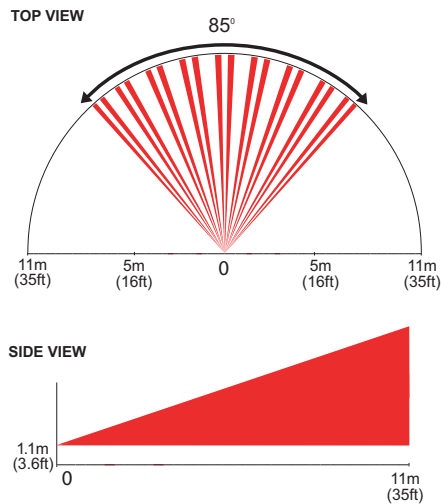
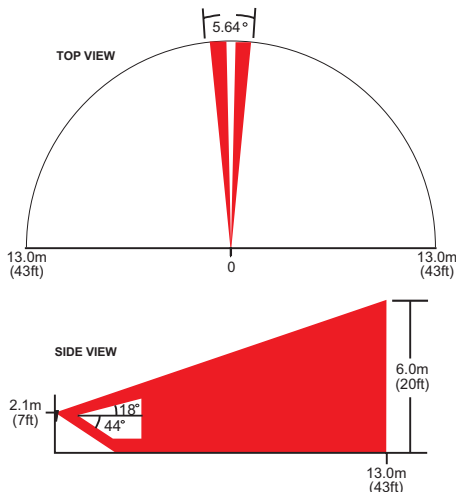


Figure / Figura / Figure 5

MG-PMD85L2 Vertical Curtain Beam Pattern/ Estructura de Tipo Cortina Vertical MG-PMD85L2 / Diagramme de lentilles Rideau vertical MG-PMD85L2



Detector Settings

Step	DIP	Details
1 LED Setting		LED Feedback On for 4 seconds: Motion has been detected Flash every 8 seconds: Low battery trouble (checked every 12 hours) Rapid Flash: Sending signal to receiver
	DIP Switch 1	OFF = LED deactivated ON = LED activated Δ
2 Signal Processing Mode		Single edge processing should be used in normal environments with minimal sources of interference. Dual Edge Processing provides better false alarm rejection if the detector is placed near sources of interference that can adversely affect it.
	DIP Switch 2	OFF =Dual edge ON =Single edge Δ
3 Sensitivity		The MG-PMD85 features adjustable sensitivity. Adjust from 1 (lowest sensitivity) to 10 (highest sensitivity) Δ .
	Trimpot	<p>! Depending on the sensitivity setting, an alarm condition can be generated between 0.25 sec. (highest) and 2 sec. (lowest) after the actual movement.</p> <p>Viewing Sensitivity Settings Remove the cover to view how many times the LED flashes, then adjust the setting accordingly. The LED flashes a consecutive amount of times to show the setting. Thus if the sensitivity is set to 6, the LED flashes 6 times.</p> <p>Turn clockwise =Increase sensitivity Turn counterclockwise =Decrease sensitivity</p> <p>! The sensitivity trimpot is fragile. Do not overtorque.</p> <p>Δ = default settings</p> <p>! DIP switches 3 and 4 are reserved for future use.</p>

Walk-testing

To put the detector into Walk-test Mode, open and close the cover. At 20°C (68°F), at the highest sensitivity setting and in Single Edge Processing mode, you should not be able to cross more than one complete zone (consisting of 2 beams, left and right sensor detecting elements) in the coverage area with any kind of movement; slow/fast walking or running.

At the lowest sensitivity setting, the amount of movement required to generate an alarm is doubled. The approximate width of a full beam at 11m (35ft) from the detector is 1.8m (6ft). To walk-test, move across the detection path, not toward the detector.

! After a power up, the detector will automatically enter Walk-Test mode for three minutes.

Signal Strength Test

In order to verify the receiver's reception of the motion detector's signal, perform a signal strength test before finalizing the installation of the MG-PMD85. Prior to performing the test, make sure that the batteries have been inserted into the battery holder to power the detector. Also verify that the motion detector has been assigned to a zone. For more information on signal strength tests and zone programming, refer to the appropriate receiver's *Reference & Installation Manual*. If the transmission is weak, just moving the detector by a few inches can greatly improve the reception. If the signal is still weak, it is recommended that the detector be moved to another location.

Alive Software

If the motion detector transmits two alarm signals (LED on for 4 seconds) within a five minute period, the detector will fall into Energy Save mode where the detector will not transmit any alarm signals for approximately 3 minutes. Due to the motion detector's Alive software, the red LED continues to flash to indicate a detection even when in Energy Save mode. Once the three-minute Energy Save mode ends, the detector will return to normal operation.

! If the detector's cover is removed and then replaced while in Energy Save mode, the first detection will trigger an alarm signal.

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PMD75 45Kg Pet Detector Installation Guide



MAGELLAN™

Digital Wireless Motion Detector with Pet Immunity (MG-PMD75) V2.0



Instructions
Instrucciones

P R D O X
SECURITY SYSTEMS
780 Industriel Blvd., Saint-Eustache (Quebec) J7R 5V3 CANADA
Tel.: (450) 491-7444 Fax: (450) 491-2313
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English

At the recommended height of 2.1m (7ft) ±10%, the MG-PMD75 motion detectors provide full coverage from 1.5m (5ft) to 11m (35ft). The installation height is measured from the center of the detector (Figure 1). All measurements shown in figures are expressed in meters and (feet).

Avoid placing the detector within proximity of the following sources of interference: reflective surfaces, direct air flow from vents, fans, windows, sources of steam/oil vapor, infrared light sources and objects causing temperature changes such as heaters, refrigerators and ovens.

⚠ Avoid bending, cutting or altering the antenna or mounting the detector near or on metal as this may affect signal transmission. Do not touch the sensor surface as this could result in a detector malfunction. If necessary, clean the sensor surface using a soft cloth with pure alcohol.

PCB Height Adjustment

The MG-PMD75 is designed for optimal performance at a height of 2.1m (7ft), but can be installed lower or higher. After you have installed the detector, ensure that the adjustable height markings on the right side of the PCB matches the tab inside the back cover (see "H" in Figure 1). For example, if the detector is installed at a height of 2.1m (7ft), the PCB should then be adjusted to 2.1m (7ft) (Figure 1). Align the desired marking (height) with the back cover's plastic tab. If another installation height is called for, readjust the PCB accordingly. Any PCB adjustments should be followed by a walk-test of the protected area. Walk-testing verifies that the required coverage is in place.

LED Setting (J5)

This setting enables or disables the red LED (Table 1). The red LED will illuminate for a period of 4 seconds to indicate detected movement. The motion detector performs a battery test every 12 hours. If the battery voltage is too low, the red LED will flash at 5-second intervals and the motion detector will send a low battery signal to the receiver. A trouble will then be generated and transmitted to the central monitoring station. The red LED will flash rapidly when the motion detector transmits a signal to the receiver.

Digital Shield™ Setting (J4)

In Normal Shield mode, the detector is set for normal environments. In High Shield mode, the detector is set for high-risk environments (potential interferences) and therefore provides greatly increased false alarm immunity. However, response time and detector speed may be slower. Refer to Table 1.

Single or Dual Edge Processing (J3)

This setting determines the DSP (Digital Signal Processing) operational mode of the detector. Single Edge Processing mode should be used in normal environments with minimal sources of interference. Dual Edge Processing mode provides better false alarm rejection in the case where the detector is placed near sources of interference that can adversely affect the motion detector. Refer to Table 1.

Operating Mode (J2)

This jumper determines what model of wireless receiver the motion detector will be communicating with, Omnia or Spectra. Refer to Table 1.

Check-in Supervision Timer (J1)

Jumper J1 sets the time interval in which the detector communicates a check-in signal when used with Omnia or Spectra 1759EX (see Operating Mode). Refer to Table 1.

If the detector is used with Magellan (see Operating Mode), J1 is disabled and the detector will regularly transmit a check-in signal to Magellan. The check-in supervision time is set in the Magellan console.

⚠ With an OMN-RCV3 V2.0 or higher, the receiver automatically detects the check-in time set in each of its assigned transmitters. As a result, the transmitters can have different check-in times. With a previous version of the OMN-RCV3, the transmitter check-in time needs to match the setting in the module.

⚠ With an OMN-RCV3 V2.0 or higher, if the check-in time setting is changed, power down and then power up the receiver in order for the change to be recognized.

Powering the Detector

1. Insert 3 "AAA" batteries into the battery holder while verifying polarity (Figure 4).
2. Insert the battery holder into the back cover and affix the battery connector to the PCB (see "A1" and "A2" in Figure 4).

⚠ After connecting the battery connector, a power-up sequence will begin (lasting 10 to 30 seconds). During this time, the red LED will flash and the detector will not detect an open zone or tamper.

Replacing Batteries

1. Disconnect the battery connector from the PCB. Remove the battery holder and remove the old batteries.
2. Press and release the anti-tamper switch to ensure that the unit has powered down.
3. Follow the steps outlined in "Powering the Detector".

Walk-testing

Open the cover in order to trigger the anti-tamper switch, then snap the cover back into position. This will activate the motion detector's walk-test mode for 3 minutes. At 20°C (68°F), in Normal Shield (J4 = ON) mode and Single Edge Processing mode (J3 = ON), you should not be able to cross more than one complete zone (consisting of 2 beams, left and right sensor detecting elements) in the coverage area with any kind of movement; slow/fast walking or running.

In High Shield mode, the amount of movement required to generate an alarm is doubled. The approximate width of a full beam at 11m (35ft) from the detector is 1.8m (6ft). When walk-testing, always move across the detection path and not toward the detector.

📌 Walk-test mode is also activated for 3 minutes once the motion detector is powered on.

Signal Strength Test

In order to verify the receiver's reception of the motion detector's signal, perform a signal strength test before finalizing the installation of the motion detector. Prior to performing the test, make sure the batteries have been inserted into the battery holder to power the detector. Also verify that the motion detector has been assigned to a zone. For more information on signal strength tests and zone programming, refer to the appropriate receiver's *Reference and Installation Manual*. If the transmission is weak, relocating the transmitter by a few inches can greatly improve the reception.

Alive Software

If the motion detector transmits 2 alarm signals (LED on for 4 sec.) within a 5-minute period, the detector falls into Energy Save mode where it won't transmit any alarm signals for approximately 3 minutes. Due to the motion detector's Alive Software, the red LED continues to flash to indicate a detection even when in Energy Save mode. Once the 3-minute Energy Save mode ends, the motion detector returns to normal operation.

📌 If the detector's cover is removed and then replaced while in Energy Save mode, the first detection will trigger an alarm signal.

Technical Specifications	
Sensor Type	Two dual opposed infrared sensors
Coverage - 90° (standard)	11m x 11m (35ft x 35ft)
Pet Immunity	Up to 40kg (90lbs)
Detector Speed	0.2m to 3.5m/sec. (0.6ft to 11.5ft/sec.)
Installation Height	2.1m to 2.7m (7ft to 9ft)
Operating Temperature	0°C to +50°C (+32°F to +122°F)
RF Frequency	433* or 868**MHz
Lens	2nd generation Fresnel lens, LODIFF®, segments
Power	3 X "AAA" alkaline batteries
Transmitter Range	35m (115ft) typical in a residential environment
Anti-Tamper Switch	yes
Battery Life†	Lowest check-in setting: 3 years Highest check-in setting: 1.5 years

* FCC ID: KDYOMNPM75 Canada: 2438A-OMNPM75
The MG-PMD75 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.

** 868MHz (only) (CE) compliant to all EU and EFTA countries except Greece according to RTT&E directives.

† Battery life expectancy will vary according to the check-in time interval and the amount of traffic (movement) the detector has processed. A higher check-in time interval and higher traffic will lower battery life.

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Warranty
Paradox Security Systems Ltd. ("Seller") warrants its products to be free from defects in materials and workmanship under normal use for a period of one year. Except as specifically stated herein, all express or implied warranties whatsoever, statutory or otherwise, including without limitation, any implied warranty of merchantability and fitness for a particular purpose, are expressly excluded. Because Seller does not install or connect the products and because the products

may be used in conjunction with products not manufactured by Seller, Seller cannot guarantee the performance of the security system and shall not be responsible for circumstances resulting from the product's inability to operate. Seller obligation and liability under this warranty is expressly limited to repairing or replacing, at Seller's option, any product not meeting the specifications. Returns must include proof of purchase and be within the warranty period. In no event shall the Seller be liable to the buyer or any other person for any loss or damages whether direct or indirect or consequential or incidental, including without limitation, any damages for lost profits, stolen goods, or claims by any other party, caused by defective goods or otherwise arising from the improper, incorrect or otherwise faulty installation or use of the merchandise sold.

Notwithstanding the preceding paragraph, the Seller's maximum liability will be strictly limited to the purchase price of the defective product. Your use of this product signifies your acceptance of this warranty.

BEWARE: Dealers, installers and/or others selling the product are not authorized to modify this warranty or make additional warranties that are binding on the Seller.

Figure 1 / Figura 1

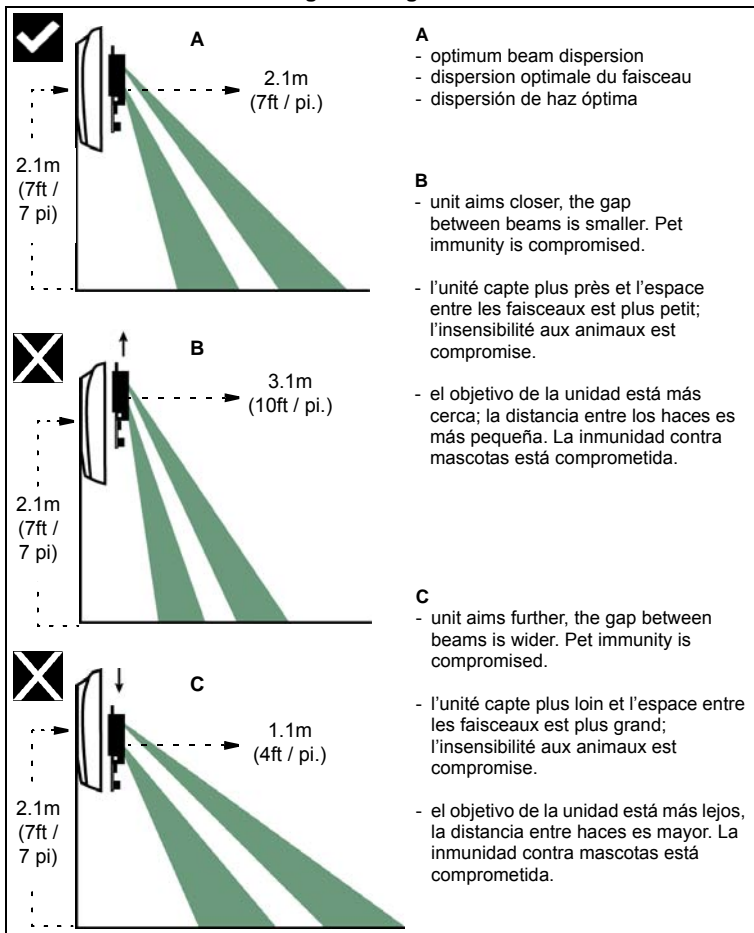


Figure 2 / Figura 2

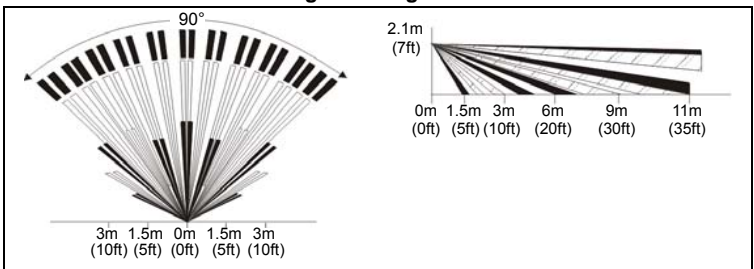


Figure 3 / Figura 3

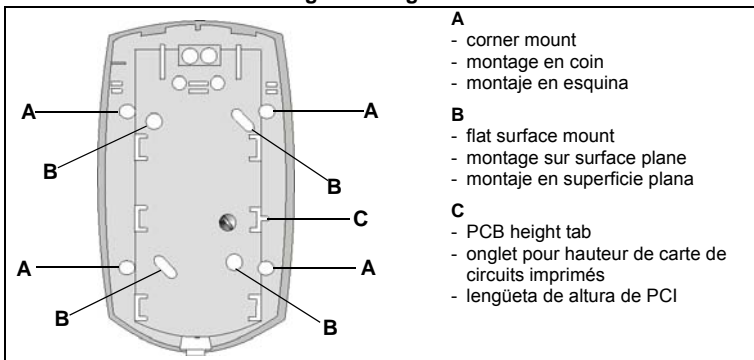
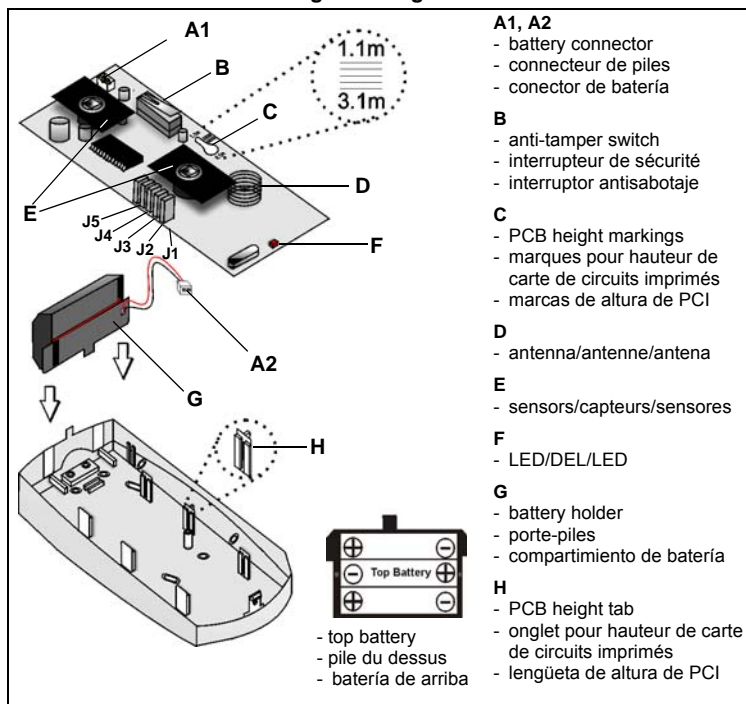


Figure 4 / Figura 4



Table/Tableau/Tabla 1

LED Indicator / Voyant DEL / Indicador LED	
J5	OFF = disabled/désactivé/deshabilitado ON = enabled/activé/habilitado Δ
Digital Shield (sensitivity) / Algorithme numérique Shield (sensibilité) / Digital Shield (sensibilidad)	
J4	OFF = High Shield (low sensitivity) / Protection élevée (faible sensibilité) Blindage Superior (baja sensibilidad) ON = Normal Shield (high sensitivity) / Protection normale (forte sensibilité) Blindage Normal (alta sensibilidad) Δ
Processing Type/Type de traitement/Tipo de Procesamiento	
J3	OFF = Dual edge / divisé / polaridad doble ON = Single edge / simple / polaridad simple Δ
Operating Mode / Mode de fonctionnement / Modo de Funcionamiento	
J2	OFF = Omnia / Spectra 1759EX ON = Magellan Δ
Check-in Supervision Timer / Délai de supervision de présence / Tiempo de Verificación de Presencia	
J1*	OFF = 12 minutes / minutos ON = 12 hours / heures / horas Δ

Δ = default/par défaut/de fábrica

* = Omnia / Spectra 1759EX only

* = Omnia / Spectra 1759EX seulement

* = Sólo Omnia / Spectra 1759EX

After changing the jumper settings, snap on the cover to close the anti-tamper switch or press and release the anti-tamper switch in order to save the changes.

Après la modification des réglages des cavaliers, remettre le couvercle en place pour fermer l'interrupteur de sécurité ou enfoncer et relâcher ce dernier afin de sauvegarder.

Después de cambiar la configuración de los puentes, encaje la cubierta en su lugar para cerrar el interruptor antisabotaje o pulse y suelte el interruptor anti-sabotaje para guardar los cambios.

PMD1 18Kg Pet Detector Guide



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MAGELLAN™

Analog Single-Optic PIR
(18kg/40lbs Pet Immunity)
(MG-PMD1P)
V2.0



Instructions
Instrucciones

P A R A D O X
SECURITY SYSTEMS
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J1 OFF = 12 minutes
J1 ON = 12 hours (default)

! *With an OMN-RCV3 V2.0 or higher, the receiver automatically detects the check-in time set in each of its assigned transmitters. As a result, the transmitters can have different check-in times. With a previous version of the OMN-RCV3, the transmitter check-in time needs to match the setting in the module.*

! *With an OMN-RCV3 V2.0 or higher, if the check-in time setting is changed, power down and then power up the receiver in order for the change to be recognized.*

Operating Mode (J2)

MG-PMD1P can function on either the Magellan or Omnia communication protocol. Set J2 according to which receiver the MG-PMD1P will communicate with.
J2 OFF = Omnia / Spectra 1759EX
J2 ON = Magellan / Spectra 1759MG (default)

Sensitivity Setting (J3)

J3 OFF = (High Sensitivity) In "1-3 mode", you should not be able to cross more than one complete zone (consisting of two beams - left and right sensor detecting elements) in the coverage area with any kind of movement. Use this setting for the majority of installations (default).
J3 ON = (Low Sensitivity) In "2-6 mode", the amount of movement required to generate an alarm is doubled. The use of 2-6 mode is recommended in areas where the incidence of false alarms may be greater.

Fast / Slow Mode (J4)

J4 OFF = "Slow Mode" is suggested in areas where the incidence of false alarms may be greater.
J4 ON = "Fast Mode" is recommended for the majority of installations (default).

LED ON / OFF (J5)

The red LED indicates the following:

Alarm

The red LED will illuminate for a period of 2 seconds whenever the motion detector detects any kind of movement.

Low Battery

The motion detector performs a battery test every 12 hours. If the battery voltage drops below a certain level, the red LED will flash at 5-second intervals and the motion detector will send a low battery signal to the receiver. A trouble will be generated and then transmitted to the central monitoring station.

Signal Transmission

The red LED indicator light will blink rapidly when the motion detector transmits a signal to the receiver.

J5 OFF = LED deactivated

J5 ON = LED activated (default)

! *After changing the jumper settings, replace the cover to close the anti-tamper switch, or press and release the anti-tamper switch, in order to save the changes.*

Powering the Wireless Detector

Verifying proper polarity, insert three "AA" alkaline batteries into the motion detector's battery compartment. To replace the batteries, remove the old batteries, then press and release the anti-tamper switch and wait 60 seconds in order to reinitialize the unit. Insert new batteries while verifying proper polarity.

! *After inserting the batteries in the motion detector, a power-up sequence will begin (lasting 10-30 seconds). During this time, the red LED will flash and the detector will not detect an open zone or tamper.*

Alive Software

To conserve the motion detector's battery life, if the motion detector transmits 2 open zone signals (LED on for 2 s) within a 5-minute period, the detector will fall into Energy Save Mode where it will not transmit any alarm signals for approximately 3 minutes. Due to the motion detector's Alive Software, the red LED will continue to flash to indicate a detection even when in Energy Save Mode. Once the three-minute Energy Save Mode ends, the motion detector returns to normal operation. If the detector's cover is removed and then replaced while in Energy Save Mode, the first detection will trigger an alarm signal.

Walk-testing

Open the cover in order to trigger the anti-tamper switch, then snap the cover back into position. This will activate the motion detector's walk-test mode for 3 minutes. In "fast" mode (J4 = ON), at 20°C, you should not be able to cross more than one complete zone (consisting of two beams left and right sensor detecting elements) in the coverage area with any kind of movement; slow/fast walking or running. In slow mode (J4 = OFF), the amount of movement required to generate an alarm is doubled. Walk-test mode is also activated for 3 minutes once the motion detector is powered on.

Signal Strength Test

In order to verify the receiver's reception of the motion detector's signal, perform a signal strength test as described in the receiver's Reference and Installation Manual before finalizing the installation of the motion detector. Prior to performing the test, make sure the batteries have been inserted into the battery compartment to power the detector. Also verify that the motion detector has been assigned to a zone according to the instructions in the receiver's Reference and Installation Manual. If the transmission is weak, relocating the transmitter by a few inches can greatly improve the reception.

Technical Specifications	
Sensor Type	Dual rectangular element
Coverage - 88.5° (standard)	11m x 11m (35ft x 35ft) Center beams: 15m (50ft)
Installation Height	2.1m to 2.7m (7ft to 9ft)
Pet Immunity	18kg (40lbs)
Operating Temp.	0°C to 49°C (32°F to 120°F)
RF Frequency	433* or 868** MHz
Lens	2nd generation Fresnel lens, LODIFF®, Pet Immune
Power	3 x "AA" Alkaline batteries
Transmitter Range	35m (115ft) with MG-6060; 70m (230ft) with MG-RCV3; in a typical residential environment
Anti-Tamper Switch	Yes
Battery Life†	Up to 4 years
UL approved detection speed	0.76m/s (30 in/s)

* FCC ID: KDYOMNPM1 IC: 2438A-104560
The MG-PMD1P 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.

** 868MHz (only) (CE) compliant to all EU and EFTA countries except Greece according to RTT&E directives. Please note that the 868MHz version is not UL approved.

† Battery life expectancy will vary according to the check-in time interval and the amount of traffic (movement) the detector has processed. A higher check-in time interval and higher traffic will lower battery life.

Warranty
Paradox Security Systems Ltd. ("Seller") warrants its products to be free from defects in materials and workmanship under normal use for a period of one year. Except as specifically stated herein, all express or implied warranties whatsoever, statutory or otherwise, including without limitation, any implied warranty of merchantability and fitness for a particular purpose, are expressly excluded. Because Seller does not install or connect the products and because the products may be used in conjunction with products not manufactured by Seller, Seller cannot guarantee the performance of the security system and shall not be responsible for circumstances resulting from the product's inability to operate. Seller obligation and liability under this warranty is expressly limited to repairing or replacing, at Seller's option, any product not meeting the specifications. Returns must include proof of purchase and be within the warranty period. In no event shall the Seller be liable to the buyer or any other person for any loss or damages, whether direct or indirect or consequential or incidental, including without limitation, any damages for lost profits, stolen goods, or claims by any other party, caused by defective goods or otherwise arising from the improper, incorrect or otherwise faulty installation or use of the merchandise sold.

Notwithstanding the preceding paragraph, the Seller's maximum liability will be strictly limited to the purchase price of the defective product. Your use of this product signifies your acceptance of this warranty.

BEWARE: Dealers, installers and/or others selling the product are not authorized to modify this warranty or make additional warranties that are binding on the Seller.

Note: The warranty does not apply to the alkaline batteries provided with the unit.

One of the following US patents may apply: 6215399, 6111256, 6104319, 5920259, 5886632, 5751803, 5721542, 5287111, 5119069 and 5077549. Canadian and international patents may also apply. LODIFF® registered trademark of Fresnel Technologies Inc. Omnia, Magellan and Spectra are trademarks or registered trademarks of Paradox Security Systems Ltd. and its affiliates in Canada, the United States and other countries. All rights reserved. Specifications may change without prior notice.
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English

At the recommended installation height of 2.1m (7ft) ±10%, the MG-PMD1P will provide full coverage from 2m (6.5ft) to 15m (50ft), without any dead zones (Figure 2).

Avoid placing the motion detector in proximity to potential sources of interference such as: reflective surfaces, direct air flow from vents, fans, windows, sources of steam/oil vapor, and objects causing temperature changes such as heaters, refrigerators, ovens, and infrared light sources. Do not place objects or furniture higher than 0.9m (3ft), which a pet can climb onto (e.g. a cat on a couch), within 2.1m (7ft) of the detector. In addition, do not aim the detector at a stairway a pet may have access to.

! *Do not touch the sensor surface; this could result in a motion detector malfunction. If necessary, clean the sensor surface with pure alcohol using a soft cloth.*

Avoid bending, cutting or altering the antenna or mounting the detector near or on metal as this may affect signal transmission.

Compatibility

The MG-PMD1P is compatible with the following:

- Magellan All-In-One Wireless Console (MG-6060)
- Magellan Wireless Expansion Module (MG-RCV3)
- Omnia Wireless Expansion Module (OMN-RCV3)
- Spectra 1759EX control panel (Omnia protocol)
- Spectra 1759MG control panel (Magellan protocol)

Pet Immunity

An animal's immunity to false alarms depends on its size, temperature, and length of coat. Longer hair and smaller size make an animal more likely to be immune, while shorter hair and larger animals are more likely to create a false alarm. When a higher level of immunity is required, such as when animals are constantly in the detection area, consider using our MG-PMD75 digital dual-sensor high-performance PIR (40kg/90lbs true pet immunity).

The MG-PMD1P pet immunity feature has not yet been investigated by UL.

Check-in Supervision Time Value (J1)

Jumper J1 sets the time interval in which the detector communicates a check-in signal when used with Omnia or Spectra 1759EX (see Operating Mode).

If the detector is used with a Magellan receiver (see Operating Mode), J1 is disabled and the detector will regularly transmit a check-in signal to Magellan. The check-in supervision time is set in the Magellan receiver.

Figure 1 / Figura 1

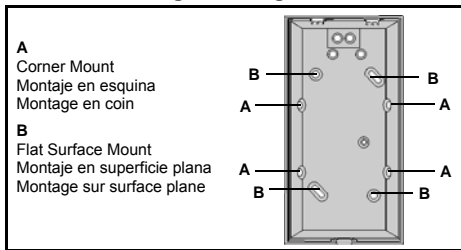


Figure 2 / Figura 2

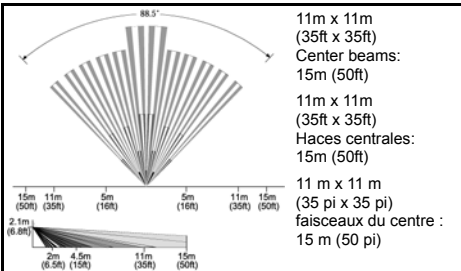


Figure 3 / Figura 3

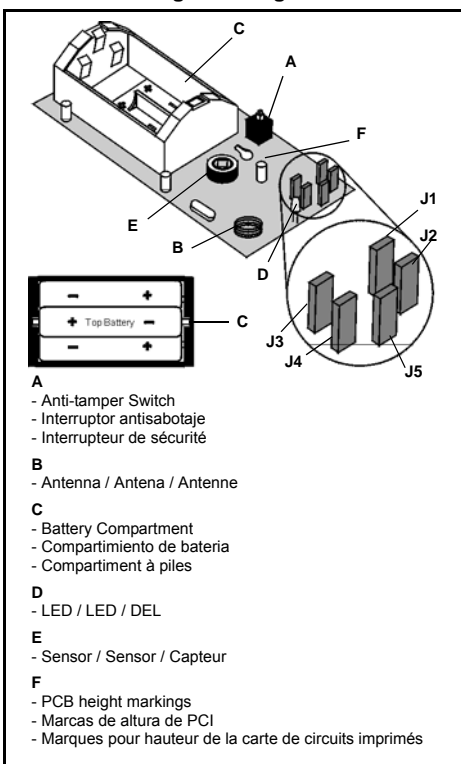


Table 1 / Tabla 1 / Tableau 1

LED Indicator / Indicador LED / Voyant DEL	
J5	OFF = Disabled / deshabilitado / désactivé ON = Enabled / habilitado / activé Δ
Fast - Slow Mode / Modo Rápido - Lento / Mode rapide - lent	
J4	OFF = Slow Mode / Mode Lento / Mode lent ON = Fast Mode / Modo rápido / Mode rapide Δ
Sensitivity Setting / Configuración de la Sensibilidad / Réglage de la sensibilité	
J3	OFF = High Sensitivity / Alta Sensibilidad / Sensibilité élevée ON = Low Sensitivity / Sensibilidad Lenta / Sensibilité faible Δ
Operating Mode / Modo de funcionamiento / Mode de fonctionnement	
J2	OFF = Omnia / Spectra 1759EX ON = Magellan / Spectra 1759MG Δ
Check-in Supervision Timer / Tiempo de Verificación de Presencia / Délai de supervision de présence	
J1*	OFF = 12 minutes / minutos / minutes ON = 12 hours / horas / heures Δ

Δ = default / de fábrica / par défaut;
 * = Omnia / Spectra 1759EX only;
 * = Sólo Omnia / Spectra 1759EX;
 * = Omnia / Spectra 1759EX seulement

Español

Instalado a la altura recomendada de 2.1m (7ft) ±10%, el MG-PMD1P brinda una cobertura total desde 2m (6.5 ft) hasta 15m (50ft) sin ninguna zona ciega (ver la Figura 2).

Evitar ubicar el detector de movimiento cerca de fuentes potenciales de interferencia como: superficies reflectantes, corrientes de aire provenientes de sistemas de ventilación, ventiladores, ventanas, fuentes de vapor de agua / humo de aceite, y objetos que provoquen cambios de temperatura como aparatos de calefacción, refrigeradores, hornos y fuentes de luces infrarrojas. No poner objetos o muebles de más de 0.9m (3ft) de altura, sobre los cuales pueda trepar una mascota (i.e. un gato sobre un sofá), a 2.1m (7ft) o menos del detector. Además, no dirigir el detector hacia una escalera por donde pueda entrar una mascota.

⚠ No tocar la superficie del sensor pues puede provocar un mal funcionamiento del detector. De ser necesario, limpiar la superficie del sensor con un paño delicado y alcohol puro. Evitar doblar, cortar o alterar la antena o montar el detector cerca de o sobre metal pues esto puede afectar la transmisión de la señal.

Compatibilidad

El MG-PMD1P es compatible con:

- Consola Inalámbrica Todo en Uno Magellan (MG-6060)
- Módulo de Expansión Inalámbrico Magellan (MG-RCV3)
- Módulo de Expansión Inalámbrico Omnia (OMN-RCV3)
- Central Spectra 1759EX (protocolo Omnia)
- Central Spectra 1759MG (protocolo Magellan)

Inmunidad contra Mascotas

El que un animal no genere falsas alarmas depende de su tamaño, temperatura, y del largo de su pelaje. El pelo largo y el tamaño pequeño disminuyen la generación de falsas alarmas, mientras que un animal de pelo corto y gran tamaño tiene más posibilidades de crear una falsa alarma. Para los casos en que sea necesario un nivel de inmunidad superior, p.e. animales que caminan constantemente en el área de detección, considere usar nuestro doble sensor digital de alto rendimiento MG-PMD75 (con inmunidad real contra mascotas de hasta 40kg/90lbs de peso).

La característica de inmunidad contra mascotas del MG-PMD1P aún no ha sido inspeccionada por UL.

Valor del Tiempo de Verificación de Presencia (J1)

El Puente J1 establece el intervalo de tiempo en el cual el detector transmitirá una señal de presencia cuando se usa con Omnia o Spectra 1759EX (ver Modo de Funcionamiento).

Si el detector es usado con un receptor Magellan (ver Modo de Funcionamiento), el puente J1 es deshabilitado y el detector transmitirá regularmente una señal de presencia a Magellan. El tiempo de verificación de presencia es definido en el receptor Magellan.

J1 OFF = 12 minutos

J1 ON = 12 horas (de fábrica)

⚠ Con un OMN-RCV3 o posterior, el receptor detecta automáticamente el tiempo de supervisión de presencia definido en cada uno de sus transmisores asignados. Por lo tanto, los transmisores pueden tener tiempos de verificación distintos. En una versión anterior del OMN-RCV3, el tiempo de verificación de presencia del transmisor debe coincidir con el tiempo definido en el módulo.

Door Contact Installation Guide



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**Wireless 2-Zone Door Contact
(Universal Transmitter)
MG-DCTXP2
V3.0**



Instructions
Instrucciones



www.paradox.com

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English

The MG-DCTXP2 can support two inputs simultaneously (reed switch & universal input). It transmits two different serial numbers (SN), one for each input, which are always SN and SN+1 (e.g. 240 000 & 240 001). A switch or other security device can be connected to the universal transmitter input terminals to provide wireless transmission of the device's open/closed status.

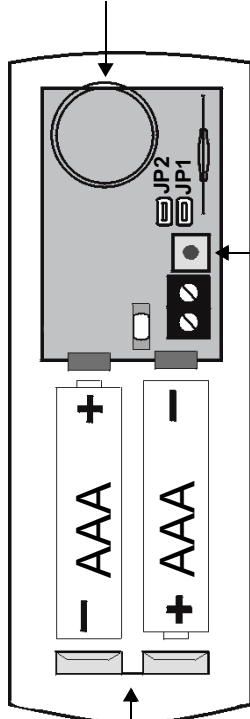
Location & Mounting

There should be at least 30cm (1ft) between each transmitter and 1.5m (5ft) between the transmitters and the receiver.

Testing the Unit

1. Perform a signal strength test before finalizing installation. If the transmission is weak, relocate the transmitter by a few inches to improve reception.
2. Verify that the batteries are inserted properly.
3. Assign the door contact to a Magellan receiver.
4. Open and close the assigned door/window to verify proper operation.

! Do not cut, bend or alter the antenna. Avoid mounting the door contact near or on metal as this may affect transmission.



Learn Mode

Learn Mode allows you to transmit the serial numbers of each input. To enter Learn Mode, open the cover and wait until the LED stops flashing.

Anti-Tamper Switch	Serial Number	Visual Confirmation
Press and release the anti-tamper switch once.	SN = Reed switch (e.g. 240 000)	The LED will flash once four times.
Press and release the anti-tamper switch twice within one second.	SN+1 = Universal transmitter input (e.g. 240 001)	The LED will flash twice rapidly four times.

Jumpers

JP1 ON	Normally Open Reed Switch/Universal Input: open = "zone open" signal closed = "zone closed" signal
JP1 OFF	Normally Closed Reed Switch/Universal Input: open = "zone closed" signal closed = "zone open" signal
JP2	NOT USED

Powering the Unit

Verify proper polarity and insert two alkaline "AAA" batteries. After inserting batteries, a power up sequence will begin (10-20 seconds) during which the door contact will not detect an open zone or tamper.

Low Battery

The door contact performs a battery test every 12 hours. If the voltage is below 2.3V after four consecutive battery tests (48 hrs.), the red LED will flash at 5 second intervals and the MG-DCTXP2 will transmit a low battery signal.

Replacing the Batteries

To replace batteries:

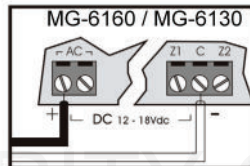
1. Remove the old batteries.
2. Press and release the anti-tamper switch several times.
3. Wait 60 seconds to reinitialize the unit.

Technical Specifications

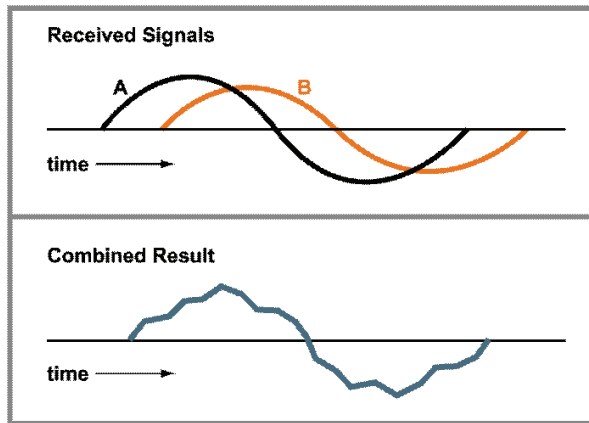
Reed switch w/magnet	One (high sensitivity) with a standard gap of 1cm (0.4") from magnet
Input Response Time	45 ms
RF frequency	433MHz or 868MHz
Power	3.0Vdc (Two "AAA" Alkaline batteries)*
Battery life	Up to three years**
Range (typical in a residential environment)	MG/SP Series, MG-RTX3, and MG-RCV3: 60m (200ft) Magellan Console: 30m (100ft) Spectra 1759MG: 45m (150ft)
Anti-tamper switch	Yes
Compatibility	MG5000/MG5050, Any Spectra SP Series panel, MG-6130/MG-6160, MG-RTX3, MG-6030/MG-6060, Spectra 1759MG, and MG-RCV3
Dimensions	11cm X 3.2cm X 2.5cm (4.4in X 1.3in X 1.0in)
Operating temperature	0°C to 49°C (32°F to 120°F)
Approvals [†]	433MHz 868MHz

DC Power Connect

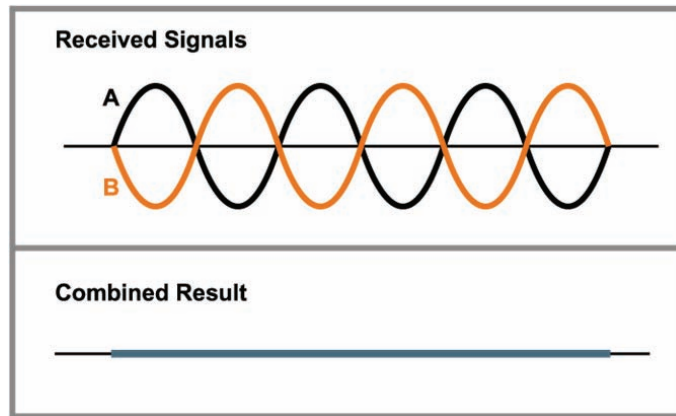
PA12-T100



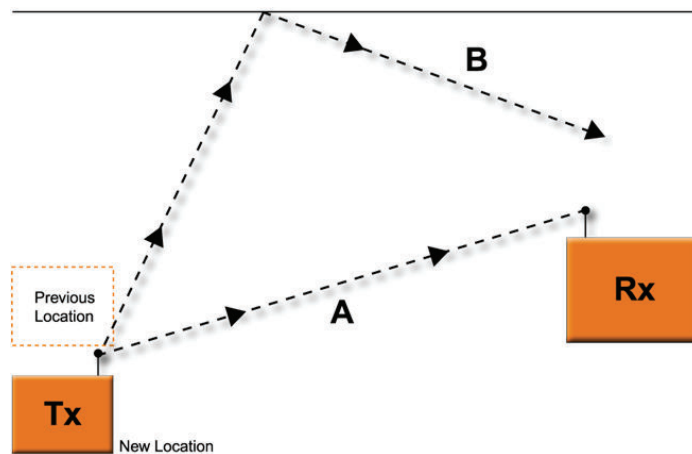
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- In extreme situations, the reflected RF wave (B) inverts and cancels out the direct path RF wave (A)



- To remedy this, simply move the transmitter or receiver a few inches



Electrical Interference

- Caused by the unintentional generation of RF due to an electrical spark, arc or discharge
- Any wiring connected to the spark source conducts the RF and acts as a transmitting antenna
- As a general rule, the noisier an electrical device is the potential it has of generating RF noise
- Three types of electrical interference
- RF noise from electrical equipment
- RF noise generated by electronic devices
- Interference from natural sources such as lightning

Possible sources of electrical interference:

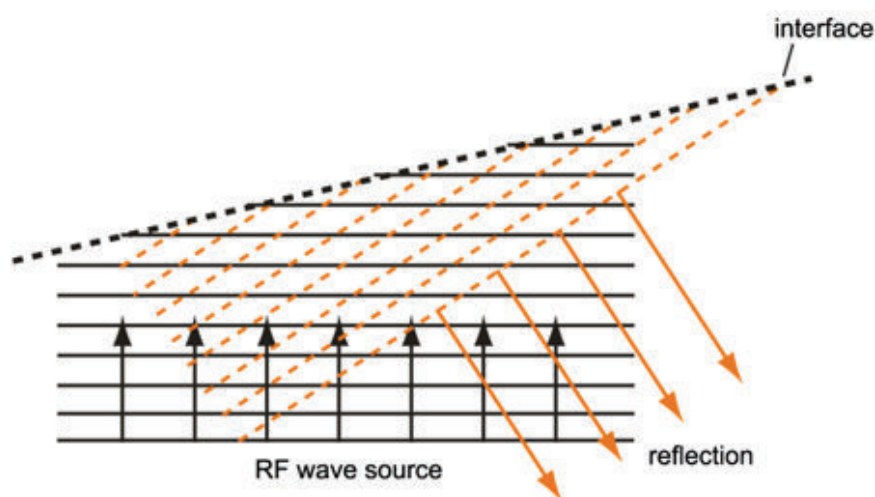
- TV or computer cathode ray tube (CRT) displays
- Electric welders
- Air conditioners
- continue on following page.....
- Brush-type motors
- Electrical Interference
- Relays and switches of all kinds
- Arcing and corona discharge in power line insulators
- Malfunctioning fluorescent/neon lighting and automobile spark plugs
- Light dimmers

Intermodulation

- Occurs when a strong signal (i.e. communications tower), whose frequency is generally not near that of the wireless receiver, overloads some circuit in the receiver. As a result, the circuit generates harmonics of the strong signal, which then combine in the receiver to create a new frequency.
- The newly created frequency, called an Intermodulation Product, interferes with the wireless system in much the same way as other sources of interference.
- For example, mounting a transmitter too close to a receiver can cause intermodulation. The signal from the transmitter is too strong due to its proximity to the receiver.

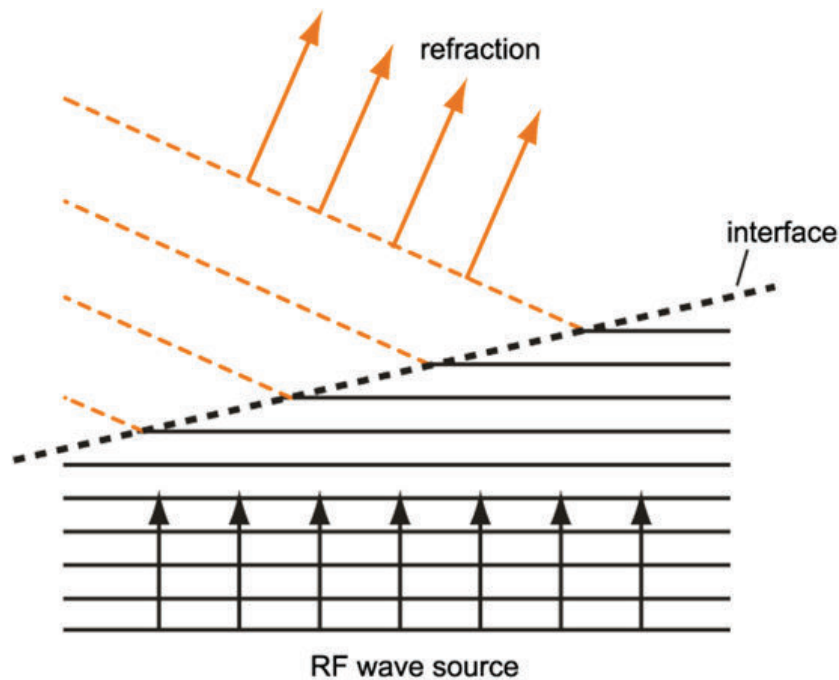
RF Reflection and Attenuation

- RF Reflection and Attenuation
- Reflection: RF signals bounce off a reflective surface such as a wall or the ground.
- Attenuation: When RF signals pass through solid objects, some of the signal power is absorbed. This loss of RF energy is called Attenuation, which varies depending on the structure of the object.
- An installation site's physical construction and the obstacles on the site affect RF signals.
- Walls, doors, floors, elevator shafts, people and other obstacles offer varying degrees of attenuation and reflection.
- This causes the RF radiation pattern to be irregular and unpredictable.
- When an RF wave meets an obstacle, one of the following three phenomena occur:
 - Reflection
 - Reflection from walls, ceilings and floor surfaces can be partial or complete and cause multipath interference.

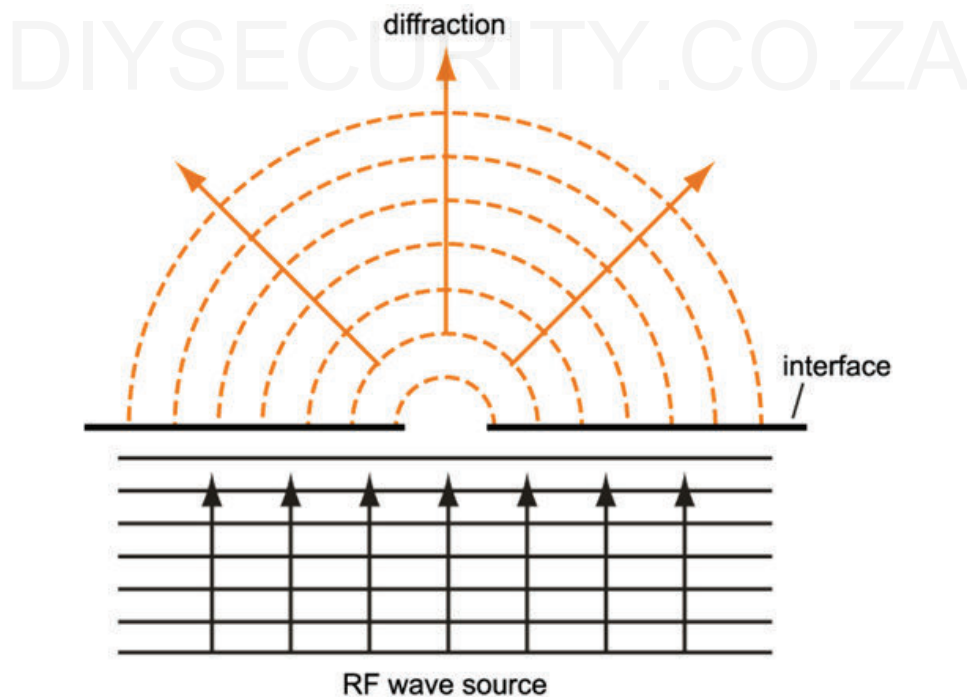


Refraction

- Occurs when an RF wave crosses a boundary from one medium to another (i.e. from air to water). A wave entering a medium at an angle will change direction



- Diffraction: It is the bending of RF waves around an object's edge, such as a sharp corner or opening



- Objects that reflect and attenuate RF signals include:
 - Metal objects
 - Objects with metal in them
 - Ground
 - Circuit breaker boxes
 - Trees: RF energy loss depends on the size and type of tree. Large trees with dense foliage create greater loss
 - Walls: Interior walls create less RF energy loss and exterior walls, especially those with stucco, create greater loss
 - Floors: Wood floors create less RF energy loss and concrete and steel floors create greater loss
 - Mirrored walls have very high RF energy loss



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