

Version - 1.0

## Introduction

The Paradox PMD37M is an indoor/outdoor, dual-optic wireless Passive Infrared (PIR) motion detector with an antimask feature. It communicates with the Paradox M systems using 2-way wireless communication, featuring the latest Gaussian Frequency Shift Keying (GFSK) technology with frequency and encryption hopping. This ensures superior wireless range, enhanced encryption, supervision, reliability, and extended battery life. The PMD37M detector offers pet immunity for animals weighing up to 40 kg (90 lbs).

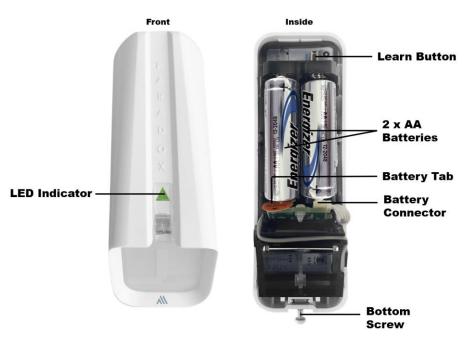
# **Quick Installation - Experienced Installers**

#### To install PMD37M:

- 1. Open the detector and remove the main unit.
- 2. Fix the backplate.
- 3. Reattach the main unit and close the detector.
- 4. Pair PMD37M with the console (Using the BlueEye application):
  - Go to: **Hardware** > Tap + on the top-right of the page >**Auto learn devices**. **NOTE**: You can instantly pair PMD37M by pressing the Learn button or by opening the tamper or any zone.
- 5. Configure PMD37M (Using the BlueEye application):
  - Go to: Hardware > Tap PMD37M from the device list > Enter the necessary details > Save.
  - Built-in status indications of PMD37M:
    - Red Blinking 3 times Not connected to the console; the device is defaulted (new or unpaired).
    - Red (3 seconds) Not connected to the console; but the device is paired.
    - Green (3 seconds) Detection and transmission occurred (maximum twice within 3 minutes)
    - Green Blinking Two detections within 3 minutes and goes to cool-down mode.
    - Red/Green After tamper is detected, the device blinks red and green alternately for 3 seconds. After the tamper is resolved and the device is closed, the device blinks green for 3 seconds.
    - Greenish Orange blinking 3 times Pre-alarm for anti-mask. After 5 seconds, the LED displays a steady orange that lasts for 10 seconds.
    - Greenish Orange blinking every 12 seconds The device has entered anti-mask mode.
    - Green blinking for 30 seconds PIR stabilization is in progress.

### Components of PMD37M

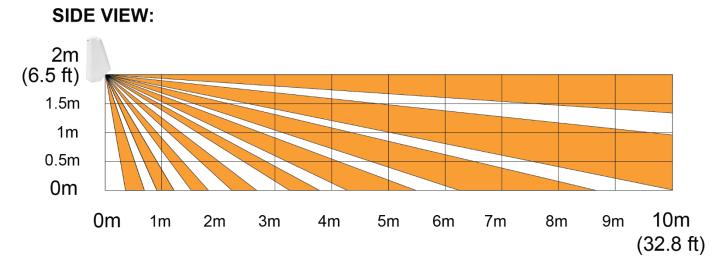
The following figure displays the components of PMD37M.



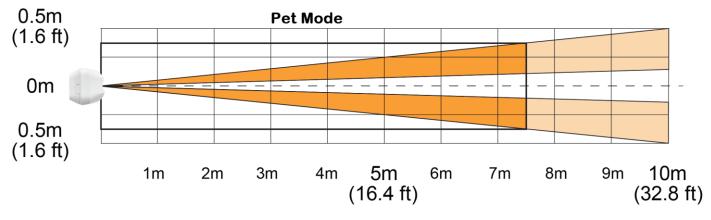
Components of PMD37M

# **Detection Field**

The detector must be installed at a height of 2 meters (6.5 feet) above the floor level.



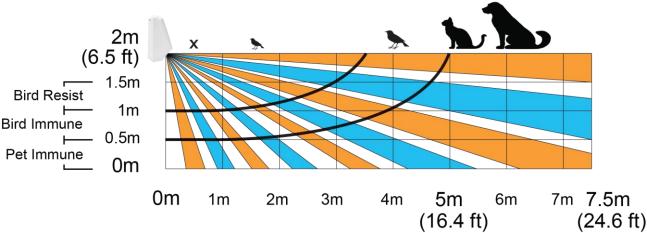
**TOP VIEW:** 



**NOTE**: Mounting the detector at a lower height may reduce its detection range, while mounting it higher could reduce the performance of the lower detection beams.

#### Pet Immunity

The PMD37M detector offers pet immunity for animals weighing up to 18kg (40 pounds). When an animal of this size moves close to the ground, it cannot cross enough beams at once to trigger an alarm. This minimizes false alarms caused by pets while maintaining accurate detection of human intrusions.



#### SIDE VIEW:

# **Physical Mounting**

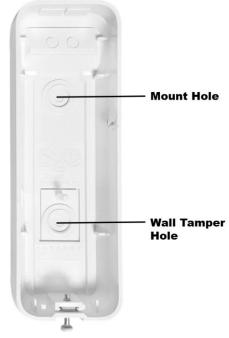
CAUTION:

- Outdoor installation allows placements within frames of sliding windows or doors, ensuring protection from raindrops. This provides optimal detection performance, anti-masking capabilities, and pet immunity.
- However, pet immunity may be reduced in outdoor installations. It is important to keep the area within 30 to 40 cm (11.8 to 15.7 in.) of the detector's range free from obstacles to maintain effective detection.

To mount the PMD37M motion detector:

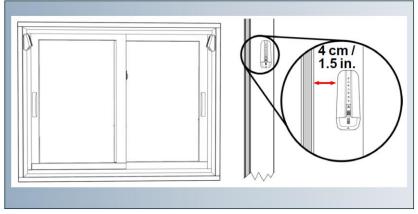
- 1. Release the screw at the bottom of the PMD37M motion detector and open the front cover.
- 2. Lift the main unit from the backplate using a flathead screwdriver.

- 3. Fix the backplate on the wall or window frame.
- **NOTE**: As per the EN security standards, one screw must be secured in the tamper hole. The use of doublesided tape does not trigger a wall tamper alarm.



- 4. Reattach the main unit to the backplate, starting with the bottom and then securing the top.
- 5. Remove the battery tab (present only if the battery is included with the product) from the battery holder. Ensure that two *AA* Lithium batteries are installed with the correct polarity.
- 6. Connect **Battery Connector**. The PMD37M is powered on.
- 7. Reattach the front cover and tighten it using the screw at the bottom.

#### NOTE: Maintain at least 4cm (1.5 in.) clearance from window shutter.



#### Power-up Sequence

During the power-up sequence, the LED will flash five times red if the device is not assigned to the console or five times green if assigned to the console. The PMD37M waits between 0-10 seconds before connecting/pairing with the console. If the cover of the device is open, green and red LEDs will flash quickly.

### Pairing PMD37M with the Wireless M Console

The pairing and configuration settings of PMD37M are managed through the BlueEye application.

#### **Prerequisites**

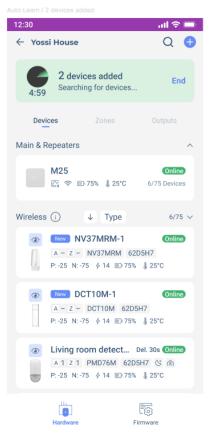
#### Ensure that:

- 1. The PMD37M is within the range of the console.
- The BlueEye application is installed on your mobile and connected to the site. 2.
- 3. The M console is powered on (Paradox logo color white, red, or green).

#### Pairing PMD37M

To pair the PMD37M with the wireless console by an installer:

1. In BlueEye > the Hardware tab, tap + on the top-right of the page, and then tap Auto learn wireless devices. The wireless console searches for new devices and a rotating radar icon is displayed. All unpaired devices pair within 6 minutes and appear at the top of the device list with a *new* tag and voice announcements. You can open the front cover of the detector and press the Learn button momentarily, or open the tamper or a zone for immediate pairing.



To identify the device that you want to pair, you can either open or close the zone, or trigger the device tamper, and then in the BlueEye application to see the corresponding check the device's screen display. When you open or close the zone, an eye icon displayed beside the device name shows opening and closing. When you trigger the device tamper, a T symbol appears on the device name in the BlueEye application.

#### **Pairing Previously Used Devices**

You can pair used devices under the following conditions:

- When the previously used device is not online with another wireless console: Start auto-learn. Open the device or press the Learn button momentarily for immediate pairing, or wait up to 6 minutes for automatic pairing.
- When the previously used device is online with another wireless console: Press and hold the Learn • button for 8 seconds to reset the device to its default settings. Reset is indicated by the LED flashing red three times. Once the reset is complete, initiate auto-learn. **NOTE:** Ensure the device is not connected or paired with the previous console before resetting the device.

# Configuring PMD37M

To configure the PMD37M settings:

- 1. When in the **Hardware** tab, tap **PMD37M** device.
- 2. On the page that opens, enter the necessary details for the parameters and then tap **Save**. For details about each parameter displayed on the page, see <u>Table 1</u>.

PMD37M	
12:30	all 🕆 🖿
← PMD37M	S/N 229D445
Online Anti-Mask Tam	per
Zone Label	
Home	Same
Device Location	
Enter Location	
P:-25 N:-75 ∲10 🜡 26*	C 💷 75%
LED	
Sensitivity	Medium 🗘 -
Pet Immune	
Anti-Mask	
Anti-Mask Sensitivity	Low 0
Zone Programming	^
Zone# 1 > Area 1: Kitc	hen home >
Zone Type	Instant 0
Zone Activity	Arm 0
Follow Delay Zone	
HW Version	2.0
FW Version	3.0.2 ck for upgrade
History Info	>
Installation Guide	>
(I) Suspend Device	e
T Suspend Tampe	er
Reset to defaul	t
Delete Device	
Save	

The following table lists the parameters displayed for configuring the PMD37M, along with their descriptions.

Parameter	Description
Zone Label	Enter a name for the zone.
LED	Determines whether the LED indications for the device are enabled or disabled.
Sensitivity	<ul> <li>There are three sensitivity levels, High, Medium (default) and Low.</li> <li>High – The High sensitivity mode detects smaller, subtle movements; useful for high-security areas or when precise detection is needed.</li> </ul>

		<ul> <li>Low – The Low sensitivity mode requires larger movements to trigger detection. It is recommended in areas where the incidence of false alarms from vibrations may be greater.</li> <li>Medium (Default) - Balanced sensitivity, detecting moderate movements. Recommended for standard installations where a balance of sensitivity and stability is needed.</li> <li>Detection Range Based on Sensitivity.</li> <li>Low - 3m to 5m</li> <li>Medium – 5m to 7m</li> <li>High – 7.5m to 10m</li> </ul>
Pet Immune		When enabled, the detector will disregard movements made by animals weighing up to 18 kg (40 pounds), reducing the chances of false alarms caused by pets while maintaining accurate detection of human activity.
Anti-mask		This option when enabled detects attempts to block or cover the sensor to prevent it from functioning properly.
Anti-mask Sensitivity		<ul> <li>There are two anti-mask sensitivity levels.</li> <li>High (Default) - Detects even minor obstructions or attempts to block the sensor.</li> <li>Low - Requires more significant blockages to trigger a masking alarm.</li> </ul>
	Zone# and Area	Assign a zone and area number.
Zone Programming	Zone Type and Zone Activity	<ul> <li>Select the type of zone – Instant, Delay, 24 hours when the device is active in the Arm, Stay, or Sleep modes.</li> <li>The following are the different zone types: <ul> <li>Instant – When in any armed status, an immediate alarm occurs. However, a delay period can be added to the Instant zone when arming in the Stay and Sleep modes.</li> <li>Delay – When a zone is opened, it triggers an entry delay in any arming mode.</li> <li>24 hours – Always armed. The system remains in alarm as long as this zone is open. The system can be armed even if the 24-hour zone is in alarm.</li> </ul> </li> </ul>
	Follow Delay Zone	This zone is instant and becomes a delay zone if a delay zone is opened first.
About		This tab displays details such as the installation date, production date, last programming date, battery replacements, battery history, and upgrade history.
Suspend Device		Disables monitoring of the device in the system.
Suspend Tamper		Disables tamper monitoring for the device.
Reset to Default		This will reset the device to the factory default settings.
Delete Device		NOTE: Only an installer can reset the device.This option deletes the device from the system completely.After deletion, the system generates a push notification onlyif the owner registration is complete, not during installation.NOTE: Only an installer can delete the device.

# **LED Indications**

After configuring PMD37M, the device displays various LED indications based on specific events. The following table lists the LED indications and their corresponding event.

Table 2	
LED Indication	Event

Red Blinking 3 times	Not connected to the console; the device is defaulted (new or unpaired).
Red (3 seconds)	Not connected to the console; but the device is paired.
Green (3 seconds)	Detection and transmission occurred (maximum twice within 3 minutes)
Green Blinking	Two detections within 3 minutes and goes to <b>Cool Down</b> mode.
Red/Green	After tamper is detected, the device blinks red and green alternately for 3 seconds. After the tamper is resolved and the device is closed, the device blinks green for 3 seconds.
Greenish Orange blinking 3 times	Pre-alarm for anti-mask. After 5 seconds, the LED displays a steady orange that lasts for 10 seconds.
Greenish Orange blinking every 12 seconds	The device has entered anti-mask mode.
Green blinking for 30 seconds	PIR Stabilization is in progress.

#### Resetting

Press and hold the **Learn** button for 8 seconds to reset the device to its default settings. Reset is indicated by LED flashing red three times.

# **Upgrading Firmware**

To upgrade the firmware:

- 1. When in the Hardware tab, tap on the device > Check for Upgrade.
- If an upgrade is available, tap Upgrade when prompted. The process may take a few minutes. Keep track of the progress in the BlueEye application to ensure that the upgrade is completed successfully. Both the Installers and owners can perform the upgrade.

# Signal Strength and Transmit Power Monitoring

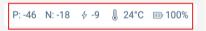
The BlueEye application provides insights into each device's received signal strength and transmission power to optimize performance.

To view the RSSI and transmit power range:

- 1. When in the **Hardware tab**, tap the <sup>(i)</sup> icon next to the **Wireless** tab. A pop-up window with the RSSI and transmit power range is displayed.
- 2. Maximum power transmitted by PMD37M:
  - 868 MHz: +14 dBm
  - 914 MHz: +22 dBm

<ul> <li>← Q →</li> <li>M25</li> <li>M25<th></th><th></th></li></ul>		
M25 ☐ 100% Wireless ① ↓ Type 15/75 ∧ New PMD2M Online RSSI Panel/Node (dBm) -95 -90 -85 -75 -50 -25 Transmit Power (dBm)	←	Q 🕀
☑ ■ 100%         Wireless ①       ↓ Type       15/75 ∧         ○       New PMD2M       Online         RSSI Panel/Node (dBm)       ×         -95       -90       -85       -75       -50       -25         Transmit Power (dBm)	main & Repeates	^
New PMD2M Online RSSI Panel/Node (dBm) -95 -90 -85 -75 -50 -25 Transmit Power (dBm)		Online
× RSSI Panel/Node (dBm) -95 -90 -85 -75 -50 -25 Transmit Power (dBm)	Wireless (i) ↓ Type	15/75 ^
RSSI Panel/Node (dBm) -95 -90 -85 -75 -50 -25 Transmit Power (dBm)	New PMD2M	Online
-95 -90 -85 -75 -50 -25 Transmit Power (dBm)	RSSI Panel/Node (dBm)	
	-95 -90 -85 -75 -50	Dear
	Transmit Power (dBm)	
+14 +5 -5 -9	+14 +5 -5	Dear
P:0.N:0. & 0 □ 0% # 0°C		

Tap on any listed device to view signal strength and additional device metrics. The following parameters are displayed for each device:



- **P** Received signal strength at the panel
- N Received signal strength at the device
- **4** Transmit power of the device.
- Current temperature reading of the device.
- Battery level of the device

A higher P and N value indicates stronger and clearer communication between the console and the device.

- If **P** is low, the console struggles to receive signals from the device.
- If **N** is low, the device struggles to receive signals from the console.

**NOTE**: Values below -93 with maximum Tx power are not recommended values, and RPT5M can be used to extend the range.

Power transmission impacts only **P**:

- When **power transmission** increases, the **P** value at the console generally improves, as a stronger signal is sent.
- If **P** value is good, the device can reduce its transmission power to save battery life.

### Walk Test

After powering on the detector or opening/closing the cover (if already powered on), the detector enters a walk-test mode for 15 minutes. Perform the following walk test to ensure the motion detector detects movement in the intended area.

#### Steps:

- 1. Walk across the detection field, moving in and out of the detector's range.
- 2. Observe LED Indications.
- 3. If the motion detector doesn't pick up movement as expected, adjust its height or location and re-test.

With **Sensitivity** set to **High**, and **Detection Energy** set to **Fast**, then crossing two beams is detected as a movement. With the **Sensitivity** set to **Low**, the amount of movement required to generate detection is doubled. The detector exits

the walk-test mode after 15 minutes. To reactivate it, open the cover of the device to trigger the tamper switch, and then close the cover.

## Cool-Down Mode

The PMD37M motion detector indicates detection with a 3-second green LED display (or 3-second red if the detector is not paired or connected to the console). After two detections within 3 minutes, the PMD37M enters a cool-down mode to conserve battery life. During this period, it is indicated by a green blink (or red if not paired), but this signal will not be transmitted to the console.

## **Dual Tamper Protection**

The PMD37M motion detector is equipped with dual tamper protection (wall and cover). If the system is armed, any tamper activation immediately triggers a system alarm. When the system is disarmed, a tamper activation generates a report to the CMS, sends a push notification, and displays a tamper trouble alert in the BlueEye application.



# **Technical Specifications**

The following table lists the technical specifications of PMD37M along with their descriptions. NOTE: The specifications are subject to change without prior notice.

Table 3	
Specification	Description
Wireless Type	GFSK two-way with frequency and encryption hopping
Sensor Type	2 dual elements
Coverage	88.5° - 11m (36 ft) x 11m (36 ft); Center beams: 15m (49.2 ft)
Detection Speed	PET Immunity mode: 7.5m x 2m (25 x 7 ft)
RF Frequency	868 (865.05 - 867.95) MHz or 914 (902.25 - 927.55) MHz Other countries might change
RF power	868 MHz up to +14 dBm radiated, 914 MHz up to +22 dBm in permitted countries.
Transmission Time	Less than 20 ms
Supervision Time	20 minutes, 10 minutes (Default), and 3 minutes
Status Indicators	Battery, temperature, TX/RX values
Battery Lithium	2 x 1.5 VDC AA, up to 5 years of battery life

Installation Environment	Outdoor
Firmware Upgrade	Remotely over the air, via BlueEye
IP Rating	IPX4
Operating Temperature (with lithium batteries)	-20°C to +40°C (-4°F to 104°F)
Auto Learn	Yes
Colors	White
Dimensions	6.1W x 12.3H x 4.3D cm (2.4W x 4.8H x 1.7D in.)
Weight	0.17 kg
Certification	CE, EN 50131-2-2, EN 50131-6, EN 50131-5-3, FCC 15.247

## FCC Statements

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. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

**NOTE**: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- 1. Reorient or relocate the receiving antenna.
- 2. Increase the separation between the equipment and the receiver.
- 3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- 4. Consult the dealer or an experienced radio/TV technician for help.

**WARNING** – RF EXPOSURE COMPLIANCE: This equipment should be installed and operated with a minimum distance 20cm between the radiator and your body.

#### FCC ID: KDYPMD37M IC: 2438A-PMD37M

• This Class B digital apparatus complies with Canadian ICES-003.

### **IC Statements**

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- 1. This device may not cause interference.
- 2. This device must accept any interference, including interference that may cause undesired operation of the device.

### Warranty

For complete warranty information on this product, see the <u>Limited Warranty Statement</u> document, or contact your local Paradox distributor.

## Patents

US, Canadian, and international patents may apply. Paradox is a trademark or registered trademark of Paradox Security Systems (Bahamas) Ltd.

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