

1124 360° PIR Motion Detector

Description

The 1124 PIR (Passive Infrared) Motion Detector is a wireless, four-element pyro intrusion detector for use with DMP Wireless Receivers. The special hard lens offers wide coverage patterns even at low mounting heights, and is especially immune to sunlight, halogen lights and fluorescent lights.

The 1124 ceiling-mount PIR offers 360° / 65.6 ft. diameter coverage when mounted on a 10 ft. high ceiling and provides protection from intruders using a fully sealed sensor chamber. With a built-in tamper switch and selectable high/low sensitivity the 1124 is very flexible. For added convenience, the 1124 provides bidirectional temperature compensation.

The 1124 PIR operates with the XR500 Series Command Processor™ panels using the 1100X Receiver or with the XRSuper6, XR20, and XR40 Command Processor™ panels using the 1100D Receiver.

Features

- Wireless sensor with 360° / 65.6 ft. coverage pattern when installed at 10 ft. mounting height
- Fully sealed sensor chamber with hard spherical Lens
- Four-element Pyro sensor and sophisticated signal processing
- Bidirectional temperature compensation
- Sensitivity adjustment and fluorescent light stability

What is Included

- One PIR detector with DMP wireless transmitter
- One CR123A battery
- Zone name and number label
- Serial number label

Transmitter Serial Number

For your convenience, an additional pre-printed serial number label is included. Prior to installing the device, record the serial number or place the pre-printed serial number label on the panel programming sheet. This number is required during programming. As needed, use the zone name and number label to identify a specific transmitter.

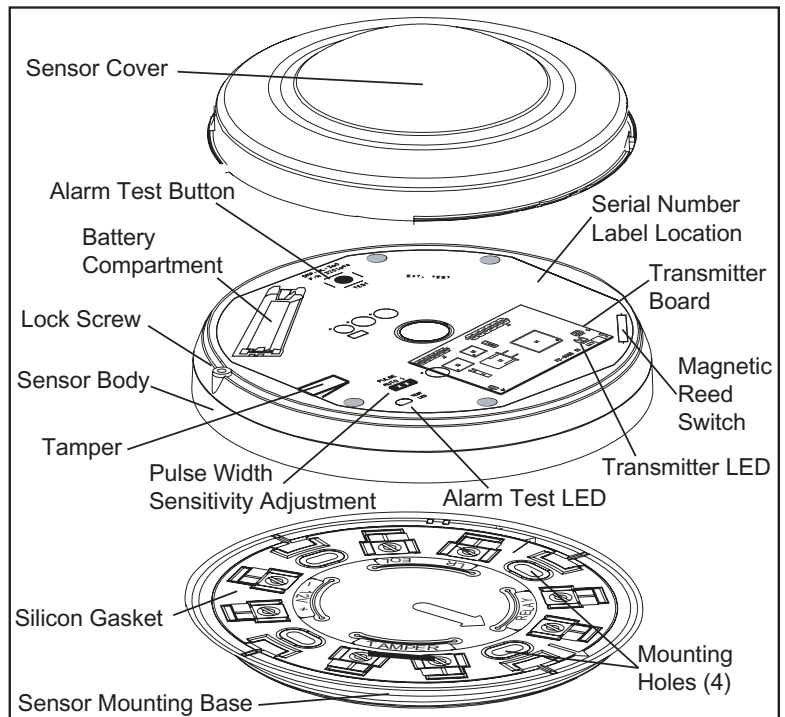


Figure 1: 1124 PIR Exploded View

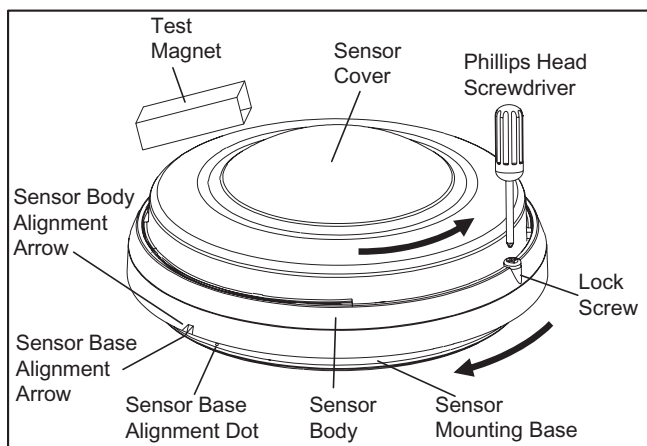


Figure 2: Remove Cover

Programming the PIR in the Panel

Refer to the XR500 Series Programming Guide (LT-0679) or the XRSuper6/XR20/XR40 Programming Guide (LT-0305) as needed. Program the device as a zone in **Zone Information** during panel programming. At the Serial Number: prompt, enter the eight-digit serial number, including leading zeros. Continue to program the zone as directed in the panel programming guide.

Note: When a receiver is installed, powered up, or the panel is reset, the supervision time for transmitters is reset. If the receiver has been powered down for more than one hour, wireless transmitters may take up to an additional hour to send a supervision message unless tripped, tampered, or powered up. This operation extends battery life for transmitters. A missing message may display on the keypad until the transmitter sends a supervision message.

Selecting the Proper Transmission Location (LED Survey Operation)

The PIR transmitter provides a survey capability to allow one person to confirm transmitter communication with the receiver while the cover is removed. Refer to Figure 2 to remove the PIR cover. The PIR transmitter board Red Survey LED turns on whenever data is sent to the receiver then immediately turns off when the receiver acknowledgement is received. Tripping the PIR tamper switch is a convenient way to send data to the receiver to confirm operation. The transmitter LED lights to indicate activity and to confirm operation. See Figure 1 for LED locations.

When the transmitter does not receive an acknowledgement from the receiver the LED remains on for about 8 seconds to let you know communication is not established. Communication is also faulty when the LED flashes multiple times in quick succession. Relocate the transmitter or receiver until the LED immediately turns off indicating the transmitter and receiver are communicating properly. Proper communication between the transmitter and receiver is verified when for each press or release of the tamper switch, the LED blinks immediately on and immediately off. Repeat this test to confirm five separate consecutive LED blinks. Any indication otherwise means proper communication has not been established.

Mounting Location Considerations

Mount the unit:

- On a rigid vibration-free surface in a clean area
- So the expected intruder movement is across the detection pattern fields, see Figures 4 and 5.

Do not locate the unit:

- Outdoors or in a place exposed to sudden temperature changes or moisture
- In any area containing moving or vibrating objects
- In any ceiling tile containing an air vent
- Where it may be exposed to false alarm sources such as: direct sunlight, heat sources (heater, radiators, etc.) in the field of view or strong air drafts (fans, air conditioner, etc.)

Setting the Sensitivity Jumper

Use the jumper located on the sensor unit PCB to set the sensitivity, as shown in Figure 3. Use the following to determine the appropriate jumper settings for an application.

Pulse Width Sensitivity Adjustment

Position 1 (right two pins) is for normal operating conditions and operation. Set the jumper on the two right pins of the 3-pin jumper closest to the number 1.

Position AUTO (left two pins) is used for harsh environment locations with air drafts. Set the jumper on the two left pins of the 3-pin jumper below the word AUTO.

Unit Testing

There are three ways to activate the walk and alarm transmission tests to check PIR range and verify signals. Before performing any of the tests, ensure the 1124 PIR is currently programmed in the Command Processor™ panel. Refer to Figures 2 and 3 as needed.

1. Using a magnet placed close to the sensor cover opposite the lock screw.
OR
2. Remove the cover and press the internal test button. OR
3. External push button connected to the two terminals marked EXT. TEST. When testing is complete disconnect the external push button wires and replace the sensor cover.

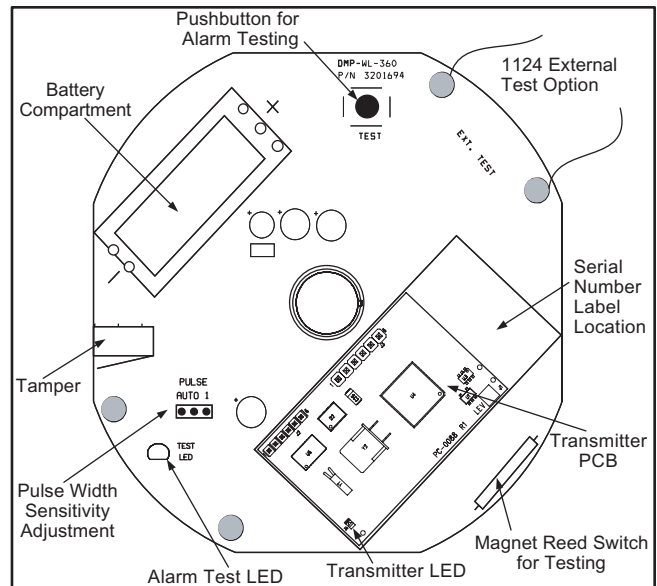


Figure 3: 1124 PIR Circuit Layout

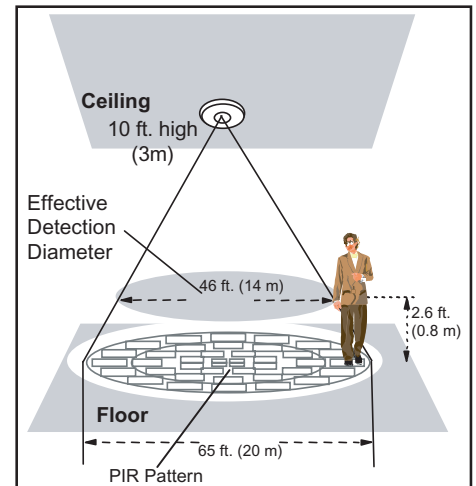


Figure 4: Detection Pattern

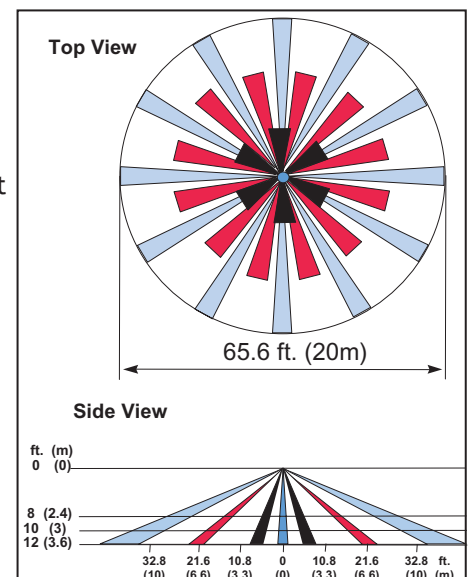


Figure 5: Lens Pattern

Walk Test

During the Walk Test the installer walks around the room where the PIR is installed to detect the PIR coverage. See Figures 4 and 5.

1. Initiate the selected test operation using the magnet, pressing the internal test button or external push button for less than one second.
2. This activates the device for one minute to enable the Walk Test.
3. Walk test the unit to verify the PIR coverage. Refer to Selecting the Proper Transmission Location (LED Survey Operation) as needed.

Alarm Transmission Test

1. Press the internal test button or external push button for at least two seconds. This immediately activates the alarm transmission.
2. To check this function, verify that the keypad display indicates a signal received from the detector. The detector sends 11 transmissions to the control panel during the one minute test period.

Tamper Transmission Test

1. Remove the sensor cover to fault the tamper and initiate a tamper trouble message.
2. Verify that the keypad display indicates a trouble or alarm message.

Mounting the Unit



Caution: You must be free of static electricity before handling sensor circuit boards. Touch a grounded, bare metal surface before touching circuit boards or wear a grounding strap.

Prior to permanently mounting the 1124 PIR, check that the PIR and control panel communication is working. See the Unit Testing section. As needed refer to Figures 1 and 2.

1. Use a Phillips head screwdriver to unscrew the lock screw at the edge of the 1124 case.
2. Hold the bracket mounting base in one hand and the sensor cover in the other hand. Turn the sensor cover counterclockwise to unlatch it from the base and remove the cover.
3. Hold the bracket mounting base in one hand and the sensor body in the other hand. Turn the sensor body counterclockwise to unlatch it from the base and separate the body from the mounting base.
4. Mark and drill the ceiling mounting holes. Use screws and anchors, if necessary, to mount the detector base to the ceiling.
5. Line up the sensor body alignment arrow with the base alignment dot. Turn the sensor body clockwise to line up the sensor body alignment arrow up to the base alignment arrow and latch the body into place. Do not overtighten.
6. Install the battery. See Installing or Replacing Batteries later in this document.
7. Place the sensor cover into the slots in the sensor body and turn the sensor cover clockwise to latch it into place.
8. Set the lock screw in place and use a Phillips head screwdriver to tighten it down.

Installing or Replacing Batteries

Note: If the battery reaches the factory preset low level, a Low Battery signal is sent to the panel. The 1124 PIR remains operational for approximately 30 days to allow adequate time to replace the battery.

Observe polarity when installing the battery. Use only 3.0V lithium batteries, DMP Model CR123A, or the equivalent battery from a local retail outlet.

Note: When setting up a wireless system, it is recommended to program zones and connect the receiver before installing batteries in the transmitters.

1. If installed, remove the sensor cover. See Figure 2.
2. If replacing the battery, remove the battery before installing a new battery.
3. Observe polarity and insert the 3.0V Lithium battery into the battery holder where indicated in Figures 1 and 3.



Caution: Risk of fire, explosion, and burns. Do not recharge, disassemble, heat above 212°F (100°C), or incinerate. Properly dispose of unused batteries.

Battery Life Expectancy

Typical battery life expectancy for DMP Model 1124 wireless PIR is three years. DMP wireless equipment uses two-way communication to extend battery life.

The following situations can reduce battery life expectancy:

- If a receiver is unplugged, does not return a signal, or is not installed.
- Frequent transmissions, such as constant motion where messages are sent every time the movement is detected.
- When installed in extreme hot or cold environments.

Note: Transmitters continue to send supervision messages until a receiver returns an acknowledgement. After an hour the transmitter only attempts a supervision message every 60 minutes.

Note: To compensate for frequent motion, after motion is detected with no activation and a message sent the 1124 PIR automatically rests until no motion is detected for two minutes. After two minutes of no activity, the 1124 PIR is ready to respond to any new motion detected. Because of this operation, do not program a wireless PIR for cross zone operation unless other zones are also programmed to provide cross zone operation.

The following situation can extend battery life expectancy:

- Extend transmitter supervision time in panel programming.
- Infrequent transmission trips, such as a low traffic area where messages are rarely sent.

FCC Information


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 made by the user and not expressly approved by the party responsible for compliance could void the user's authority to operate the 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:

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

Specifications		Patents	
Battery		Patent(s) Pending	
Life Expectancy	3 years (normal operation)	Listings and Approvals FCC Part 15 Registration ID CCKPC0088	
Type	3.0V Lithium CR123A		
See Battery Life Expectancy for details.			
Transmit condition	Alarm, Test, Supervision, Low Battery		
Detection			
Range	360° / 65 feet diameter		
Speed	1-5 feet/second		
Mounting height	up to 10 feet		
Dimensions	5.2" W X 2.25" H		
Color	White		
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