INSTALLATION GUIDE

PR-500
PASSIVE INFRARED DETECTOR

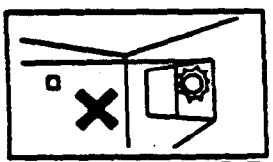
SPECIFICATIONS

Detection Method:	Passive Infrared.
Coverage:	35ft (10.6m) x 45ft (13.7m), 84°
Detection Zones:	9 zones (6 long, 3 short)
Pulse Count:	Installer option.
Detectable Walk Rate:	0.5-5ft/sec. (15-152 cm/sec.).
Mounting Height:	7ft nominal (2.1m), wall mounting.
Indicator:	Red LED.
Alarm Relay:	N.C., 28 VDC, 0.13A max.
Input Voltage:	6-12 VDC (voltage reversal makes PIR inoperative.
Current Drain:	15 mA
Standby Capability:	Power source should be capable of at least 4 hours of battery standby.
Operating Temperature:	32°F - 122°F (0°-50°C).
Operating Humidity:	Up to 95% RH (max.), non-condensing.
Dimensions:	3"W x 3-11/16"H x 1-1/2"D (76mm x 94mm x 38mm).
Net Weight:	3.3 oz (93.5 grams).

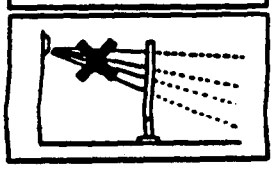
The PR-500 Passive Infrared Motion detector is a wall mounted unit which senses changes in infrared energy (temperature) within the protected area. When an intruder enters any of the detection zones, an alarm is triggered (and the LED lights). Best coverage will be obtained if the unit is mounted such that the likely direction of intruder motion is *across* the protection pattern (see Figure 1).

The PR-500 also features a jumper selectable Pulse Count option, which verifies intrusions before triggering an alarm. With the Pulse Count option enabled, an alarm is triggered after an intruder's first 3-4 steps. This option is helpful in areas where sudden changes in temperature are normal (forced air heating duct for example).

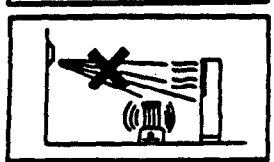
INSTALLATION CONSIDERATIONS



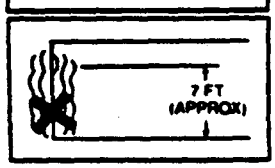
Do not install where the detector is exposed to direct sunlight or directly above strong sources of heat.



Make sure the detection area does not have obstructions (curtains, screens, large pieces of furniture, plants, etc.) which may block the pattern of coverage



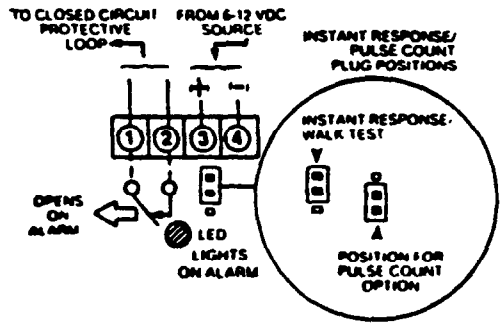
Avoid locating a unit in areas which contain objects likely to produce a rapid change in temperature, such as central heating, radiators or ducts (or heaters of any kind), air conditioners, open flame, etc.



Install the detector at a height of approximately 7 feet (2.1m) from floor. Do not mount on an unstable surface.
IMPORTANT: Avoid running alarm wiring close to heavy duty electrical power cables.

WIRING THE PR-500

Bring all wires through the wire access hole near the terminal block and connect to screw terminals (see Fig. 5).



Instant response triggers alarms immediately upon detection. Use for coverage of doorways and room openings.

The Pulse Count option verifies an intrusion before triggering an alarm, minimizing false alarms in adverse environments.

FIGURE 5

WALK TEST

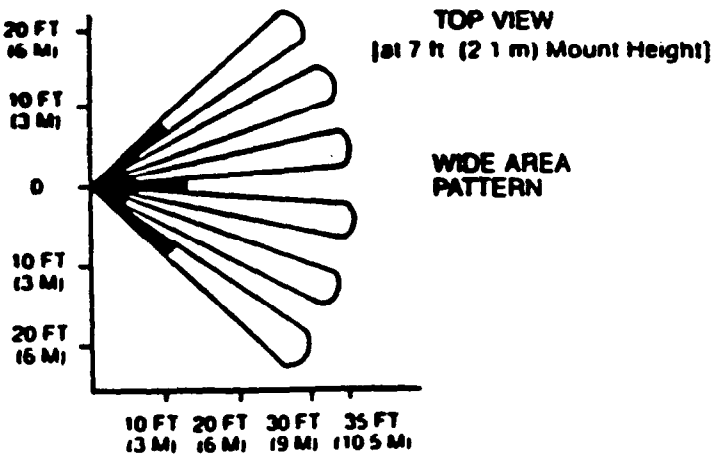
Important!: Two minutes warm-up required after applying power. Testing of the detector should be conducted with the protected area cleared of all people. The protective system's control should be disarmed during the test procedure to prevent reporting of unwanted alarms.

With the detector in INSTANT mode (upper jumper position) and the cover replaced, walk through the protected area. The LED will light when the detector senses your motion. Be sure to walk through the most likely intruder routes.

***NOTE:** If Pulse Count option is being used, be sure to walk test the unit with it set to this option (lower jumper position).*

PROTECTION PATTERNS

Detection Area (Wide Angle Mirror)



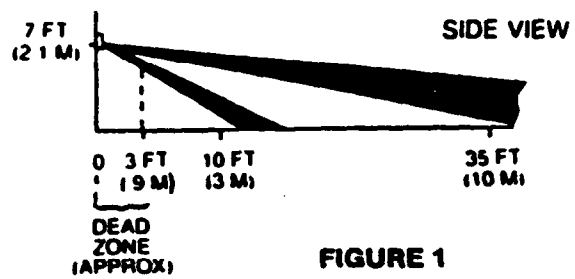
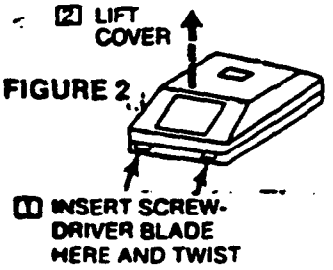


FIGURE 1

MOUNTING INSTRUCTIONS

(Refer to Figures 2-4)

1. Remove front cover:



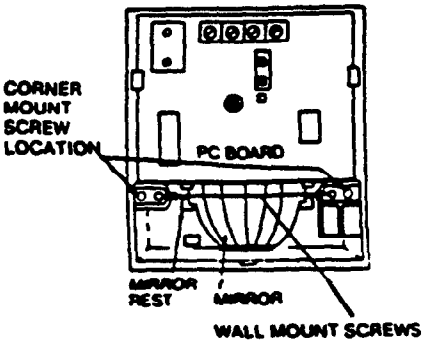


FIGURE 3

2. Drill wire entry hole about 1/4" (6mm) from top edge of unit and centered side to side with back of unit. Pull wiring through hole and pass through unit's wire entry hole located near the terminal block. The hole should be 5/16" (8mm) in diameter.

3. Hook unit on a #4 screw installed in the wall at the planned center (side-to-side) and about 1 inch below the planned top of the PIR. Leave 1/8" clearance between the screw head and the wall.

4. Insert two screws through the screw holes on both sides of the unit and secure to wall. For flat wall mounting, use the inside pair of holes. For corner mounting, use the outside pair of holes.

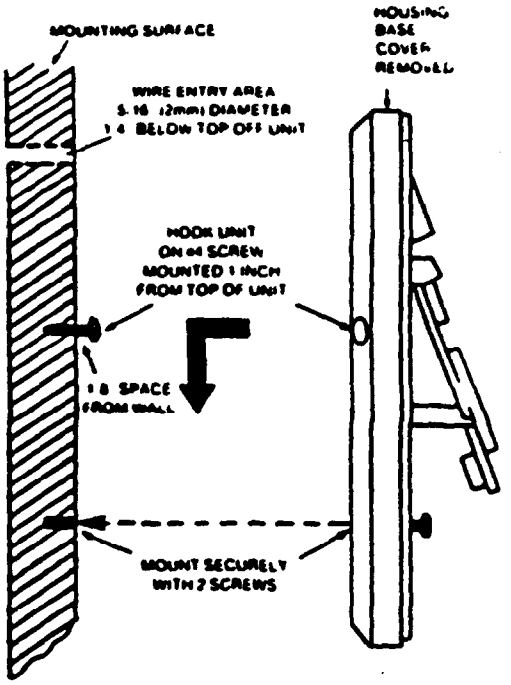


FIGURE 4

IMPORTANT!: Do not open any holes in the base unless they are used for mounting and will be completely covered by the heads of the screws. Check that the draft seal foam near the wire entry hole is intact and is allowed to fill the wire entry hole after the wires are connected.

MAINTENANCE

1. Power should be provided at all times. Loss of power to the unit will result in the alarm contacts reverting to an alarm state. The unit's DC source should have standby power available for at least 4 hours of operation during emergencies.
2. Units should never be re-aimed or relocated without the advice or assistance of the alarm service company.
3. The physical surroundings of the protected area should not be changed. If furniture or stock is moved, or air-conditioning or additional heating is installed, the system may have to be readjusted by the alarm service company.
4. Walk tests should be conducted frequently (at least weekly) to confirm continued proper coverage by each detector.

TROUBLESHOOTING

PROBLEM	PROBABLE CAUSE	REMEDY
Intermittent Alarm (LED operative)	Rapid temperature change Check for electric or gas heaters, open flames, electric arcs, etc.	Locate source and reposition detector
	Drafts causing drapes, light fixtures, display material to move	Eliminate source of motion
Intermittent or Continuous Alarm (LED inoperative if not disabled)	DC voltage supplied to detector is inadequate, intermittent, or polarity reversed	Assure that proper polarity and adequate voltage is supplied and that wiring is intact (no opens or shorts) and connection secure
	Protective loop is interrupted	Determine whether interruption is in protective loop wiring or at detector's alarm relay contacts Disconnect protective loop at detector relay contact terminals and check continuity across terminals If present, check protective loop wiring If absent at detector terminals (and proper voltage is supplied to the detector), return unit for service
LED Inoperative (If not disabled)	LED malfunction. Check for broken/shorted leads.	Return unit for service
Detection Area Changes	Repositioned furniture or equipment in the protected area.	Caution customer about layout changes. Reposition detector
	Mounting surface is unstable. A few degrees of vertical shift can change range substantially.	Mount on secure surface.

WARNING
THE LIMITATIONS OF YOUR PASSIVE INFRARED MOTION DETECTOR

While the Intrusion Detector is a highly reliable intrusion detection device, it does not offer guaranteed protection against burglary. Any Intrusion Detection device is subject to compromise or failure to warn for a variety of reasons:

- Passive Infrared Motion Detectors can only detect intrusion within the designed ranges as diagrammed in this installation manual.
- Passive Infrared Motion Detectors do not provide volumetric area protection. They do create multiple beams of protection, and intrusion can only be detected in unobstructed areas covered by those beams.
- Passive Infrared Detectors cannot detect motion or intrusion that takes place behind walls, ceilings, floors, closed doors, glass partitions, glass doors, or windows.
- Mechanical tampering, masking, painting or spraying of any material on the mirrors, windows or any part of the optical system can reduce the detection ability of the Passive Infrared Motion Detector.
- Passive Infrared Detectors sense changes in temperature; however, as the ambient temperature of the protected area approaches the temperature range of 90° to 105°F (32° to 40° C), the detection performance can decrease.
- This Passive Infrared Detector will not operate without appropriate DC power connected to it, or if the DC power is improperly connected (i.e., reversed polarity connections).
- Passive Infrared Detectors, like other electrical devices, are subject to component failure. Even though they are designed to last as long as 10 years, the electronic components could fail at any time.

We have cited some of the most common reasons that a Passive Infrared Motion Detector can fail to catch intrusion. However, this does not imply that these are the only reasons, and therefore it is recommended that weekly testing of this type of unit, in conjunction with weekly testing of the entire alarm system, be performed to ensure that the detectors are working properly.

Installing an alarm system may make one eligible for lower insurance rates, but an alarm system is not a substitute for insurance. Homeowners, property owners and renters should continue to insure their lives and property.

TO THE INSTALLER

Regular maintenance and inspection (at least annually) by the installer and frequent testing by the user are vital to continuous satisfactory operation of any alarm system.

The installer should assume the responsibility of developing and offering a regular maintenance program to the user as well as acquainting the user with the proper operation and limitations of the alarm system and its component parts. Recommendations must be included for a specific program of frequent testing (at least weekly) to insure the system's proper operation at all times.

LIMITED WARRANTY

Protection Products, a Division of Pittway Corporation, and its divisions, subsidiaries and affiliates ("Seller"), 165 Eileen Way, Syosset New York 11791 warrants its products to be in conformance with its own plans and specifications and to be free from defects in materials and workmanship under normal use and service for 18 months from the date stamp control on the product or, for products not having a Protection Products date stamp, for 12 months from date of original purchase unless the installation instructions or catalog sets forth a shorter period, in which case the shorter period shall apply. Seller's obligation shall be limited to repairing or replacing, at its option, free of charge for materials or labor, any part which is proved not in compliance with Seller's specifications or proves defective in materials or workmanship under normal use and service. Seller shall have no obligation under this Limited Warranty or otherwise if the product is altered or improperly repaired or serviced by anyone other than Protection Products factory service. For warranty service, return product transportation prepaid, to Protection Products Factory Service, 165 Eileen Way, Syosset, New York 11791

THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED OF MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. IN NO CASE SHALL SELLER BE LIABLE TO ANYONE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED OR UPON ANY OTHER BASIS OF LIABILITY WHATSOEVER EVEN IF THE LOSS OR DAMAGE IS CAUSED BY THE SELLER'S OWN NEGLIGENCE OR FAULT.

Seller does not represent that its product may not be compromised or circumvented; that the product will prevent any personal injury or property loss by burglary, robbery, fire or otherwise; or that the product will in all cases provide adequate warning or protection. Buyer understands that a properly installed and maintained alarm may only reduce the risk of a burglary, robbery or fire without warning, but it is not insurance or a guarantee that such will not occur or that there will be no personal injury or property loss as a result. CONSEQUENTLY, SELLER SHALL HAVE NO LIABILITY FOR ANY PERSONAL INJURY, PROPERTY DAMAGE OR OTHER LOSS BASED ON A CLAIM THE PRODUCT FAILED TO GIVE WARNING. However, if Seller is held liable, whether directly or indirectly, for any loss or damage arising under this Limited Warranty or otherwise, regardless of cause or origin, Seller's maximum liability shall not in any case exceed the purchase price of the product, which shall be the complete and exclusive remedy against Seller.

This warranty replaces any previous warranties and is the only warranty made by Seller on this product. No increase or alteration, written or verbal, of the obligation of this Limited Warranty is authorized.

TO THE INSTALLER

Provide maintenance and inspection (at least annually) for fire
sprinkler and fire pump testing by the owner. Visual is acceptable
for detection of any alarm system.

Periodically test to assure the responsiveness of operating fire
protection systems and equipment to the owner as well as
coordinating the proper with the proper operation and installations of
fire alarm systems and its components per the Owner Procedures
Manual. Test to a specific person at least annually (at least
semi-annually for fire pump) proper operation at all times.