Installation Instructions
TR560 Passive Infrared (PIR) Intrusion Detector

1.0 General Information

- Input Power: 9 to 16 VDC, 16 mA @ 12 VDC.
- Standby Power: There is no internal standby battery. Connect to DC power sources capable of supplying 16 mA-H of standby power in the event primary power fails.
- Coverage:

Broad Lens (standard):	60 by 70 feet (18 by 21 meters).
Barrier Lens:	60 by 6 feet (18 by 1.8 meters).
Pet Lens:	60 by 70 feet (18 by 21 meters).
Long Range Lens:	120 by 12 feet (36 by 3.6 meters).
Narrow Pet Lens:	120 by 12 feet (36 by 3.6 meters).
Dense Wide Angle Lens:	60 feet by 110° (18 meters by 110°).
Dual Corridor Lens:	120 foot (36 meters) barriers at 85° with 60 by 60 foot (18 by 18 meters) center coverage.

- Coverage Pointability: +2° to -10° vertically; ±10° horizontally.
- Pulse Count: Field selectable for 2 or 3 pulses.
- Alarm Relay: Normally Closed reed relay with contacts rated 125 mA @ 28 VDC maximum, resistive loads only. The relay opens on an alarm condition.
- Tamper: Cover activated Normally Closed tamper switch with contacts rated 125 mA @ 28 VDC maximum, resistive loads only. The switch opens when the cover is removed.
- Temperature: The storage and operating temperature range is -20° to +120°F (-29° to +49°C). *For U.L. Listed Requirements, the temperature range is +32° to +120°F (0° to +49°C).*
- Optional Lenses: OLB94 Barrier, OLP94 Pet, OLR94 Long Range, OLW94 Dense Wide Angle, OLN94 Narrow Pet, and OLC94 Dual Corridor.

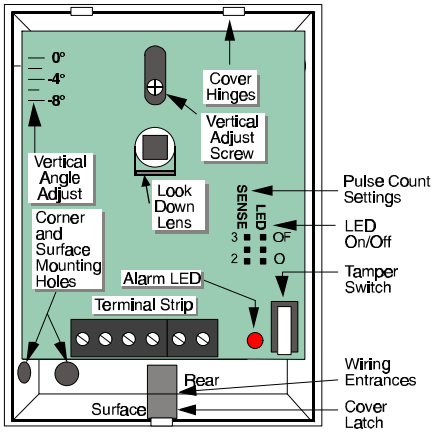


Figure A - Location of major items - circuit board

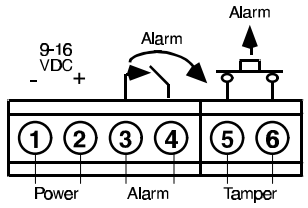
Things to Avoid/Remember
Avoid Direct hot and/or cold drafts. Windows. Small animals. Air conditioning outlets. Heat sources. Direct Sunlight.
Remember Won't detect through glass. Best catch performance is across the pattern. When using two or more detectors, cross patterns for best coverage.

2.0 Mounting

- Select a location likely to intercept an intruder moving across the coverage pattern.
- The recommended mounting height is 7.5 feet (2.3 meters). The maximum mounting height is 10.0 feet (3.0 meters).
- If using a Pet lens, install the detector no lower than twice the height of the pet, but never lower than three feet. **Do Not** remove the look-down lens mask. The recommended mounting height is 3 to 5 feet (1 to 1.5 meters).
- Remove the cover from the detector.
- Remove the vertical adjust screw and the circuit board from the enclosure.
- Knock-out the appropriate wire entrance.
- Route the wiring through the wire entrance. **Make sure all wiring is unpowered before routing.**
- Firmly mount the rear enclosure to the mounting surface using the surface or corner mounting knockouts.
- Reattach the circuit board to the enclosure.
- Seal the wire entrance with the foam plug provided.

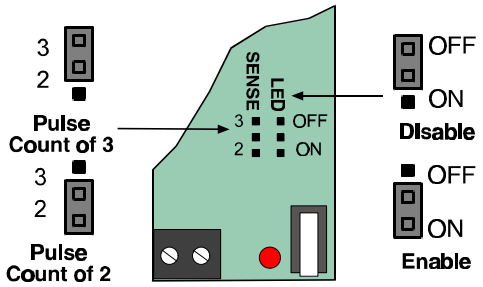
3.0 Wiring

- Only apply power after all connections have been made and inspected.



- Terminals 1 and 2: Input Power. 9 to 16 VDC limits (measured at the terminals). Use no smaller than #22 AWG (0.8 mm) wire pair between the detector and the power source.
- Terminals 3 and 4: Alarm Loop. Connect a Normally Closed burglar alarm loop here. An alarm will cause an open circuit.
- Terminals 5 and 6: Cover Tamper. Connect a Normally Closed monitor circuit here. Removing the cover will cause an open circuit.
- Do not coil excess wire inside the detector.

4.0 Pulse Count and LED Selection



- For selection, place the shorting cap across the pins marked (2) for a Pulse Count of 2 or (3) for a Pulse Count of 3. If the shorting cap is not used, detection will default to the Pulse Count of 2 setting.
- Pulse Count of 3: The recommended setting for maximum false alarm immunity. Tolerates environmental extremes on this setting. Pulse Count of 3 is not recommended for Long Range or Barrier type patterns.

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- Pulse Count of 2: The recommended setting for any location where an intruder is expected to cover only a small portion of the protected area. Tolerates normal environments on this setting. This setting will improve your intruder catch performance.

- To disable the LED, place the shorting cap across the top two pins. To enable the LED, place the shorting cap across the bottom two pins. If the shorting cap is not used, LED operation will default to the disabled setting.

5.0 Setup and Walk Testing

- Choose the proper coverage pattern. If it is necessary to replace the lens, perform the following:
  - Push down and inward on the top of the lens holder until it comes out of the track.
  - Rotate the lens holder out of the enclosure.
  - Replace the lens. Make sure the smooth side of the lens is facing outward, the grooved side of the lens is facing inward and the cut corners or arrows are facing up.
  - Replace the lens holder. Push the top of the holder behind the tracks. Do the same with the bottom of the holder.
- If the look down zone is desired, remove the black mask from the look down lens. **Do Not** remove the clear plastic assembly. **Do Not** remove the look down mask if a Pet lens is used.
- Select the proper vertical angle (use the chart below).

Mounting Height	Broad or Barrier Lens		Long Range Lens	
	40 ft.	60 ft.	80 ft.	120 ft.
7.5 ft.	-6°	-4°	-3°	-2°
8.5 ft.	-7°	-5°	-4°	-2°
9.5 ft.	-9°	-6°	-4°	-3°

- If using the Pet lens, adjust the circuit board so that the vertical angle is 0°.
- Tighten the vertical adjust screw when positioning is complete.
- Replace the detector's cover. Snap it into place to secure the tamper switch.
- Apply power to the detector. Wait at least two minutes after applying power to start the walk tests.
- Start walk testing across the coverage pattern. The edge of the pattern is determined by the activation of the alarm LED.
- Walk test the detector from both directions to determine its boundaries.
- If the rated range can not be achieved, try angling the coverage pattern up or down to ensure it is not aimed too low or high. Moving the circuit board up will angle the coverage pattern downward. Tighten the vertical adjust screw when positioning is complete. **The pattern may also be aimed plus or minus 10° horizontally by rotating the lens left or right.**

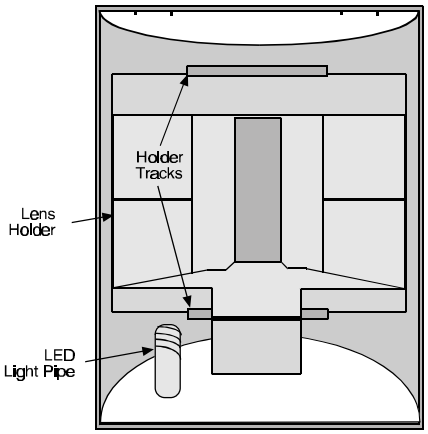

Figure B - Location of major items - cover

6.0 Other Information

- Maintenance: The range and coverage pattern should be verified at least once a year. Follow the steps as described in Section 5.0.
  To ensure continued daily operation, the end user should be instructed to walk through the far end of the coverage pattern daily. This will confirm an alarm output prior to arming the system.
- Coverage Gaps: Detection gaps may exist for detectors mounted higher than 7.5 feet. In such cases, gaps can be minimized by removing the look down lens mask and/or aiming the coverage pattern downward. This will result in some loss of forward range, but will eliminate detection gaps close to the detector.
  If the rated range and minimum gaps are desired, the detector should not be mounted more than 7.5 feet high.

7.0 Coverage Patterns