



Installation Instructions

D9550 Passive Infrared Intrusion Detector

1.0 Specifications

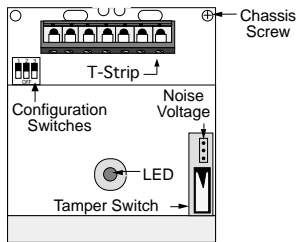
- **Input Power:** 6 to 15 VDC; 18 mA-H @ 12 VDC.
- **Standby Power:** There is no internal standby battery. Connect to DC power sources capable of supplying standby power if primary power fails. Eighteen mA-H required for each hour of standby time needed. *Four hours (92 mA-H) minimum are required for Underwriters Laboratories' Certificated installations.*
- **Coverage:**

Standard Broad	50 ft. by 50 ft.	(15.3 m by 15.3 m)
Barrier (Optional)	80 ft. by 16 ft.	(24.4 m by 4.9 m)
Long Range (Optional)	120 ft. by 10 ft.	(36.6 m by 3.1 m)
- **Sensitivity:** Adjustable for Standard, Intermediate, or High.
- **Alarm Relay:** Form "C" reed relay with contacts rated at 3 watts, 28 VDC, 125 mA maximum for DC resistive loads.
- **Tamper Switch:** Normally Closed (with cover in place) tamper switch. Contacts rated at 3 watts, 28 VDC, 125 mA maximum.
- **Temperature:** The storage and operating range is -40° to +120°F (-40° to +49°C). *For U. L. Certificated installations, the range is +32° to +120°F (0° to +49°C).*
- **Options:** TC6000 Test Cord, B328 Gimbal Mount Bracket, B335-3* Low Profile Swivel Mount Bracket, OMB77-3* Barrier Mirror, and the OMLR77-3* Long Range Mirror. *Shipped in packages of three.

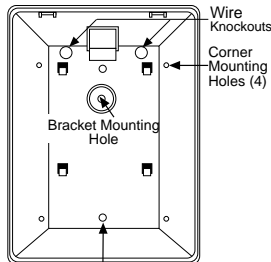
Note: Misalignment of the detector when using an optional mounting bracket may reduce range.

- **U. S. Patent Numbers:** # 4,764,755 and # 5,083,106.

2.0 Mounting



Location of Major Items
Circuit Board



Rear Enclosure
and Mounting Holes

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.	

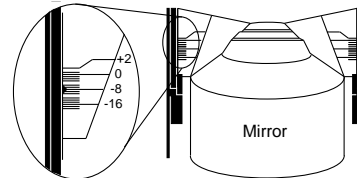
- Select a location that is most likely to intercept an intruder moving **across** the coverage pattern.
- The recommended mounting height range is 6.5 ft. to 8.5 ft. (2 m to 2.6 m).
Note: The mounting surface should be solid and vibration free.
- Remove the cover. Insert a thin flathead screwdriver into the notch at the bottom of the cover and pry up.
- Remove the circuit board/mirror unit from the enclosure. Push the circuit board/mirror unit toward the top of the enclosure until it clears its four retainer tabs, then lift out.
- Open the knock-out wire entrance and route the wiring through.

Surface or Corner Mounting

- Open 2 holes for surface or corner mounting.
- Mark the location for the mounting screws using the enclosure as a template.
- Pre-start the mounting screws.
- Firmly mount the detector.
- Replace the circuit board/mirror unit.

Select the Vertical Angle

The angle adjust markings are on the mirror. Slide the mirror forward or back until the angle hash marks are in-line with the markers on each side of the frame.



This chart will help you set the correct Vertical Angle based on the mounting height, mirror type, and desired range.

Mounting Height	Broad		Barrier		Long Range	
	30(9)	50(15)	50(15)	80(25)	80(25)	120(36)
6.5(2)	-6°	-3°	-3°	-2°	-2°	-1°
7.5(2.3)	-8°	-5°	-5°	-3°	-3°	-2°
8.5(2.6)	-9°	-6°	-6°	-4°	-4°	-2°

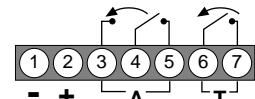
Height and desired Range listed in feet (meters)

The mirror is adjustable +2° to -18° vertically and +10° to -10° horizontally. To change the mirror, just pull it out from its resting grooves.

Note: Excessive handling of the mirror surfaces may lead to performance degradation.

3.0 Wiring

CAUTION: Only apply power **after** all connections have been made and inspected.



- Connect wiring as shown.

Terminal Descriptions

- **1 (-) & 2 (+):** Input power. Use no smaller than #22 AWG (0.8 mm) wire pair between the detector and the power source.
- **3 (NO), 4 (C), & 5 (NC):** Alarm relay (reed) contacts rated at 3 Watts, 125 mA, 28 VDC maximum for DC resistive loads and protected by a 4.7 ohm resistor in the common "C" leg of the relay.
Do not use with capacitive or inductive loads.
- **6 & 7:** Tamper Contact, rated 3 watts, 28 VDC, 125 mA.

Note: If using the large knockout, be sure to seal the wire entrance with the foam plug provided. The small round knockouts do not require the foam plug.

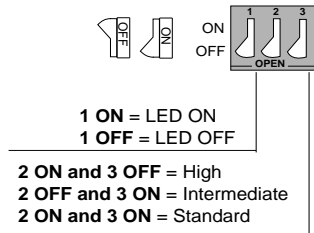
Note: Do not coil excess wiring inside the detector.

4.0 Configuration Switches

The configuration switches are described as follows:

LED Operation:

- **ON:** Allows the LED to operate when activated by alarm.
- **OFF:** The LED will not operate on alarm.

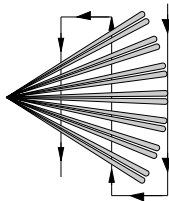


Sensitivity Mode:

- **Standard:** The recommended setting for maximum false alarm immunity. Tolerates environmental extremes on this setting. Standard Sensitivity is not recommended for Long Range or Barrier type patterns. **The detector is shipped in Standard Sensitivity mode.**
- **Intermediate:** 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.
- **High:** The recommended setting for fast response to intruder signals. For use in quiet environments where thermal and illumination transients are not anticipated.

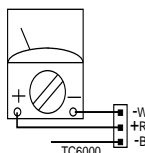
5.0 Setup and Walk Testing

- Apply power to the unit.
- Wait for the LED to stop pulsing (approximately 2 minutes if no motion is detected in the coverage pattern), then start walk testing.
 - Walk test **across** the coverage pattern.
- The edge of the coverage is determined by activation of the LED.
- Walk test the unit from both directions to determine the boundaries.
- If the desired range can not be achieved, try angling the mirror up or down to assure the coverage pattern is not aimed too high or low.



6.0 Final Tests

- Connect a DC VOM to the Noise Voltage pins.
 - Set the meter scale for about 3.0 VDC (use of the TC6000 is recommended).
- The base reference level for reading background noise is approximately 2.0 VDC.

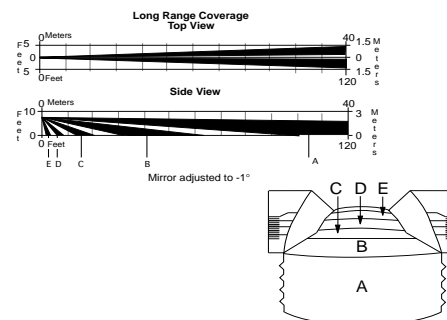
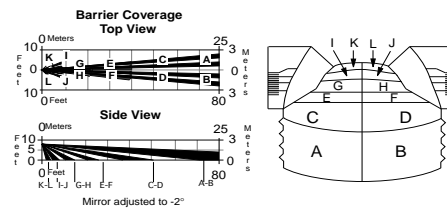
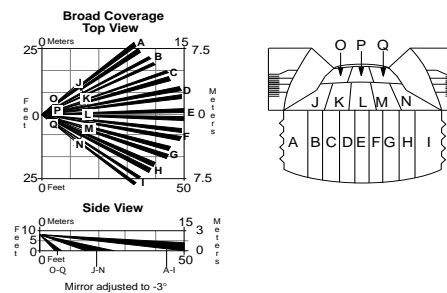


- Installations in quiet environments will result in a steady reading between 1.9 and 2.1 VDC.
- Voltage changes greater than 0.75 VDC from the reference level are desirable for good catch performance.
- If changes are less than ± 0.75 VDC, the device may fail to respond if the temperature between the intruder and the background is minimal.
- Turn on all heating and cooling sources that would normally be in operation during times of protection.
 - Stand away from the unit and outside the coverage pattern, then monitor the background noise for at least **3 minutes**.
 - Readings should not deviate from the reference level more than ± 0.15 VDC.
 - For readings outside these limits; eliminate the cause, re-point the unit slightly, or mask off the affected zones.

7.0 Other Information

- **Maintenance:** At least once a year, the range and coverage should be checked in accordance with the Walk Testing section. To ensure continual daily operation, the end user should be instructed to daily walk through the outer edge of the coverage pattern. This assures an alarm output prior to arming.
- **Masking:** Before attempting any masking, be sure the chosen mirror surface is the correct one. When attempting to remove any masking, many adhesives will either destroy the mirror surface or leave enough residue behind to reduce coverage performance. See Section 8.0 Mirror Segment to Pattern Reference.

8.0 Coverage Patterns



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