OPTEX

INSTALLATION INSTRUCTIONS

PASSIVE INFRARED DETECTOR **WONDEREX**

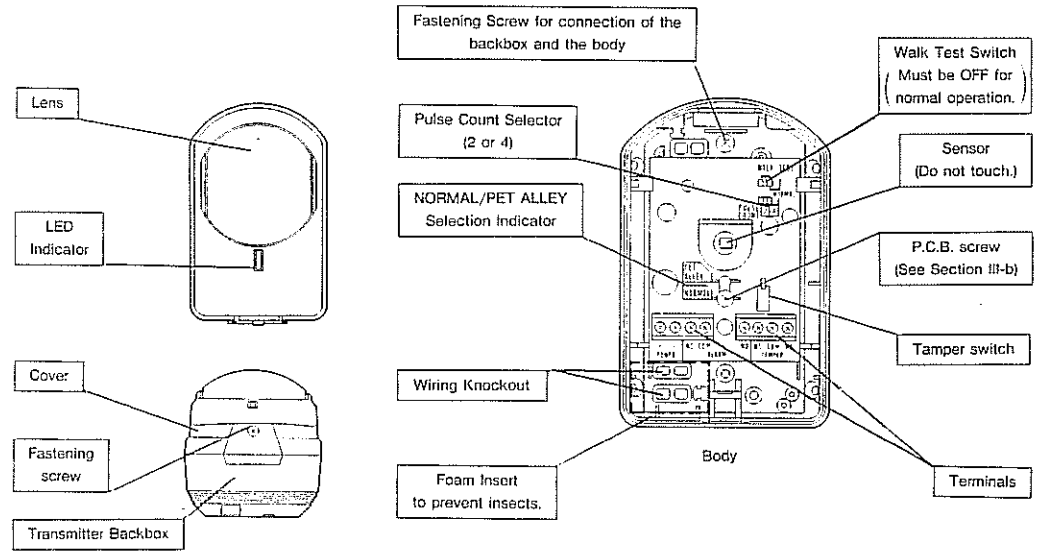
EX-35R

〈BATTERY OPERATED〉 This Passive Infrared Detector is powered by a 3~9V Alkaline Battery or Lithium Battery and is designed to be used with a transmitter of a wireless security system.

FEATURES

- Low Current Draw : 3.5μA (In Standby). • Operates on Wide Range of Power Input : 3~9V Alkaline Battery or Lithium Battery.
- Battery Saving Circuit : The alarm circuit will not be active until there is a 2minute period of inactivity in the pattern area.
- Switchable LED for walk test or normal operation (Switch LED off after installation to increase battery life).
- Backbox can conceal a wireless transmitter circuitboard (W 1.97inch(50mm) × H 3.15inch(80mm) × D 0.91inch(23mm)).
- Selectable "WIDE ANGLE" or "LONG RANGE" detection patterns.
- Selectable "NORMAL" (Multi-Level) and "PET ALLEY" detection patterns.
- Selectable pulse count 2 or 4. • Tamper switch.
- Connector Clip which can be used to supply power from a common battery and 9V Battery Clip are attached.

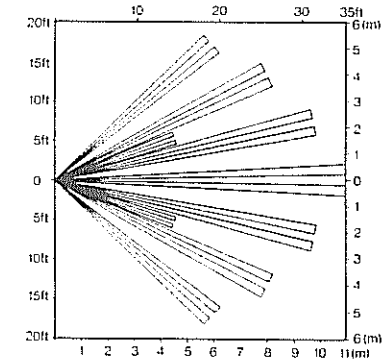
I. DESCRIPTION AND OPERATION



II. DETECTION AREA

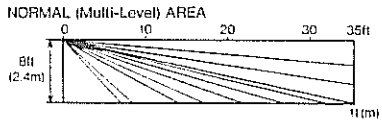
WIDE ANGLE

TOP VIEW

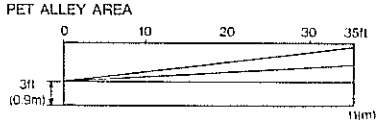


SIDE VIEW

NORMAL (Multi-Level) AREA



PET ALLEY AREA

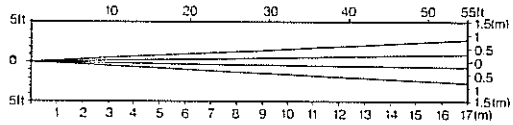


MAX. Detection Distance/Height

Installation Height	2ft (0.6m)	3ft (0.9m)	4ft (1.2m)	5ft (1.5m)	6ft (1.8m)	7ft (2.1m)	8ft (2.4m)
NORMAL	15ft (4.5m)	23ft (7.0m)	30ft (9.0m)	35ft (11.0m)	35ft (11.0m)	35ft (11.0m)	35ft (11.0m)
PET ALLEY	35ft (11.0m)	35ft (11.0m)	30ft (9.0m)	—	—	—	—

LONG RANGE

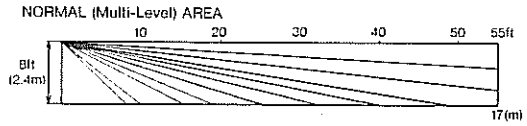
TOP VIEW



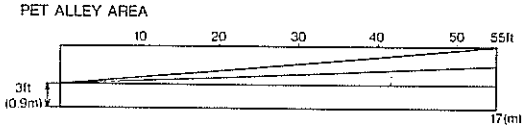
IMPORTANT
WHEN SELECTING THE LONG RANGE DETECTION PATTERN, ALWAYS SET PULSE COUNT SELECTOR ON "2".

SIDE VIEW

NORMAL (Multi-Level) AREA



PET ALLEY AREA



MAX. Detection Distance/Height

Installation Height	2ft (0.6m)	3ft (0.9m)	4ft (1.2m)	5ft (1.5m)	6ft (1.8m)	7ft (2.1m)	8ft (2.4m)
NORMAL	17ft (5.0m)	30ft (9.0m)	42ft (12.5m)	55ft (17.0m)	55ft (17.0m)	55ft (17.0m)	55ft (17.0m)
PET ALLEY	55ft (17.0m)	55ft (17.0m)	42ft (12.5m)	—	—	—	—

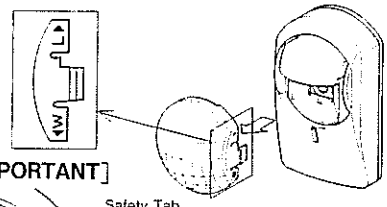
III. AREA PATTERN SELECTION

a) SELECTING WIDE ANGLE OR LONG RANGE PATTERNS

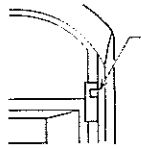
NOTE : The detection pattern is pre-set at the "W" (Wide Angle) position.

1. Inverting the lens will select either the Wide Angle or Long Range detection patterns.
2. Please note markings "W" (Wide Angle) and "L" (Long Range), on each side of lens.

[For Wide Angle detection the "W▶" points downward.
For Long Range detection the "L▶" points downward.]



[IMPORTANT]



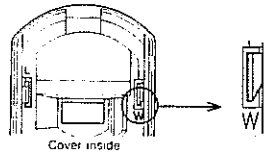
When the "L" (Long Range) pattern is used the "Safety Tab" MUST be removed (See illus.), and the Pulse Count Selector set at "2".

• Verify Pattern Selection / Lens Position, as follows.

"Tapered Edge" (Only one of the two tabs is tapered.)

— Example —

For Wide Angle patterns, the tapered edge on the Lens (See illus.) points to the "W" on the cover.
For Long Range, the tapered edge points at the "L".



Tapered edge of tab inserted in the Wide Angle position.

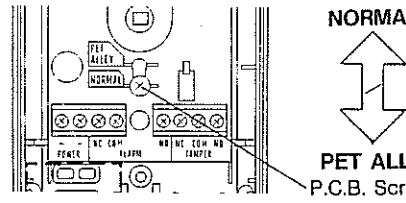
b) SELECTING NORMAL (Multi-Level) or PET ALLEY DETECTION PATTERNS.

(Detector is pre-set at the "NORMAL" position).

1. Loosen screw (see illus.), and slide the "P.C.B." (Printed Circuit Board) up or down to match the arrow with the desired pattern (see illus.).

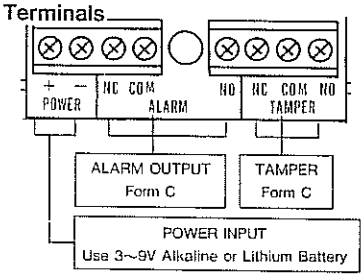
— Carefully —

— Tighten screw when complete —



IV. WIRING

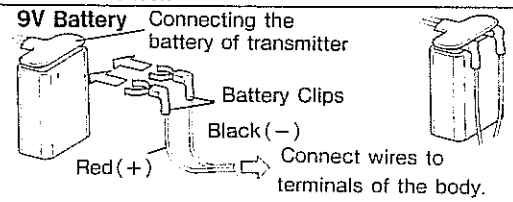
Terminals



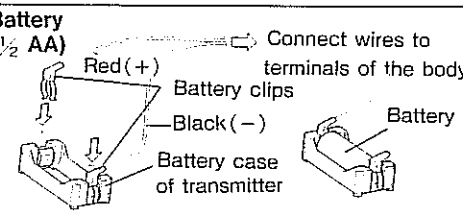
- EX-35R has battery clips which can use the transmitter's battery as a common power source.
- Follow the illustration on the right when using transmitter's battery in common with sensor's power.
- Attach the battery clips tightly.
- Do not short-circuit, clips, leads or battery with other metallic parts.

Using a common battery for the transmitter and the motion sensor.

9V Battery Connecting the battery of transmitter

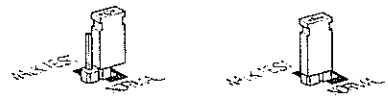


3.6V Battery (SIZE ½ AA)



V. WALK TEST SWITCH

JUMPER PIN SWITCH



NORMAL WALK TEST

Walk Test

1) LED will light when detector is tripped.
2) Alarm will be generated instantly on detection.

NORMAL : Normal Operation (Battery Saving Mode)

1) LED is off.
2) After every output trip, the battery saving circuit requires 2 minutes of inactivity before another output is activated.

VI. TROUBLE SHOOTING AND MAINTENANCE

PROBLEM	PROBABLE CAUSE	REMEDY
No alarm event even though someone is walking in detection area.	Incorrect detection area.	See Section II. V. (Conduct walk test)
	Transmitter is not connected to PIR.	See Section IV.
	Wireless transmission does not reach the receiver.	Check transmitter.
	Battery is dead.	Change batteries.
	Walk Test Switch is OFF.	Battery saving circuit See Section V.
	Incorrect polarity to detector.	Switch positive and negative at terminal.
	Incorrect power supply voltage. (disconnection, low voltage)	Check for correct wiring or non battery.
Alarm condition when no one is moving in the area.	Moving object within area. (curtain, wall hanging, etc.)	Remove object from detection area.
	Repid terperature changes of object. (heater, air-conditioner, etc.) wihin area.	Remove the sources from detection area or relocate detector.

VII. MAINTENANCES

- Conduct walktest at least once per year to confirm proper operation.
- When using EX-35R and a transmitter in common, the battery life will be shortened depending on the transmitter type (Current Draw). Use of EX-35R, only the expected battery life is shown in the chart on the right. The battery life will change depending on the temperature.

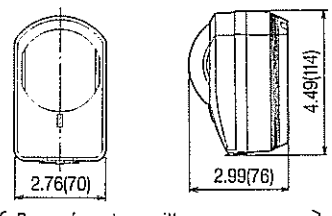
Battery Life (EX-35R only)	App 3 years/9V Alkaline Battery (560mAH)
	App 7 years/3.6V Lithium Battery (850mAH)
	App 10 years/9V Lithium Battery (1200mAH)

VIII. SPECIFICATIONS

Model	EX-35R
Detection method	Passive infrared
Coverage	WIDE : 35ft×35ft (11m×11m) 85°wide
	LONG : 55ft×5.5ft (17m×1.7m) Long Range
Detection zones (NORMAL / PET ALLEY)	WIDE : 64 zones/28 zones
	LONG : 12 zones/4 zones
Mounting Height	NORMAL 4~8ft (1.2~2.4m). PET ALLEY 2~4ft (0.6~1.2m)
Sensitivity	3°F (1.6°C) at 2ft/sec. (0.6m/sec.)
Detectable speed	1~5ft/sec. (0.3~1.5m/sec.)
LED indicator	Disabled during normal operation
	Alarm indicator optional (Walk Test)
Alarm period	Approx 2.5 sec.
Alarm output	Form C-Solid State Switch 10VDC 0.01A max
Alarm interval	Alarm output is inactive until there is a 2minute period of inactivity in the pattern area.
Tamper switch	Form C
Pulse Count	Approx 20sec 2 or 4 IMPORTANT : WHEN SELECTING THE LONG RANGE DETECTION PATTERN, ALWAYS SET PULSE COUNT SELECTOR ON "2".
Warm up period	Approx 1 minute

Power input	3~9V Alkaline Battery or Lithium Battery
Operating Voltage	2.3~10VDC
Current draw	3.5μA (In Standby)
	10mA (In Walktest, LED on)
Weight	5.0oz (142g)
Operating temperature	+14°F~+122°F (-10°C~+50°C)
Environment humidity	95% max
RF interference	No Alarm 20V/m

Dimensions inches (mm)



* Specifications and design are subject to change without prior notice.

NOTE

This unit is designed to detect movement of an intruder and activate an alarm control panel. Being only a part of a complete system, we cannot accept responsibility for any damages or other consequences resulting from an intrusion.

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