

PASSIVE INFRARED DETECTOR
CX-702 , CX-702V
STANDARD ALARM MEMORY



FEATURES

CX-702

- Dual Purpose Lens:Selectable "WIDE ANGLE" and "LONG RANGE" detection patterns.
- Double Conductive Shielding of the pyroelectric element
- Extremely High Light and RFI Immunity (Patent listed)
- Multifocus Optics Design (Patent listed)
- LED On/Off Switch
- Sealed Optics
- Easy Installation

CX-702 V Only

- Alarm Memory
- LED Remote Control Terminal

- ※ The CX-702 is UL Listed per UL639, Intrusion-Detection Units.
- ※ The CX-702V has not been investigated by UL.

OPTION

- CA-1W : Wall Mount Bracket : adjustable $\pm 45^\circ$ (Horizontally), 0-20° (Vertically downwards)
- CA-2C : Ceiling Bracket : adjustable $\pm 45^\circ$ (Horizontally), 0-20° (Vertically downwards)

1. INSTALLATION HINTS

1

Avoid direct sunlight.

2

Avoid mounting detector where movement of Fans or Air Conditioning Fans can be detected.

3

Avoid vapor or high humidity that can cause condensation.

4

Avoid Curtain, Screen, etc. blocking detection area.

5

Do not install outdoors.

6

⚠ WARNING

Never repair or modify product. It may cause accident, fire hazard or electric shock.

7

⚠ WARNING

When damage has occurred to the product, i.e. water logged, abnormal things inside product, overheating or smoking, strange smells etc., immediately stop using product and contact your supplier. Otherwise, continued use in such condition may cause electric shock or fire hazard.

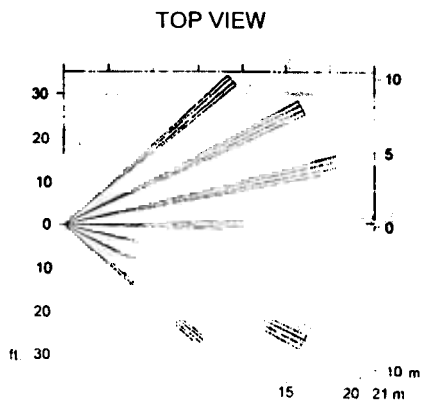
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⚠ CAUTION

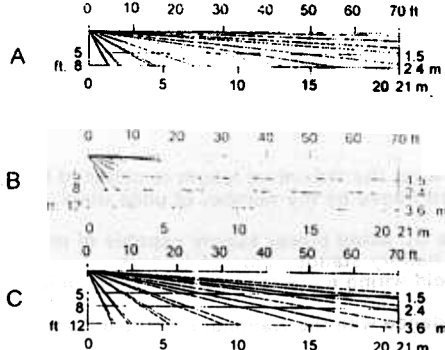
Mount securely. A falling product may cause injury.

2. DETECTION AREA

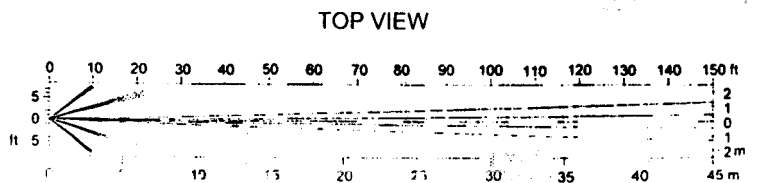
WIDE ANGLE



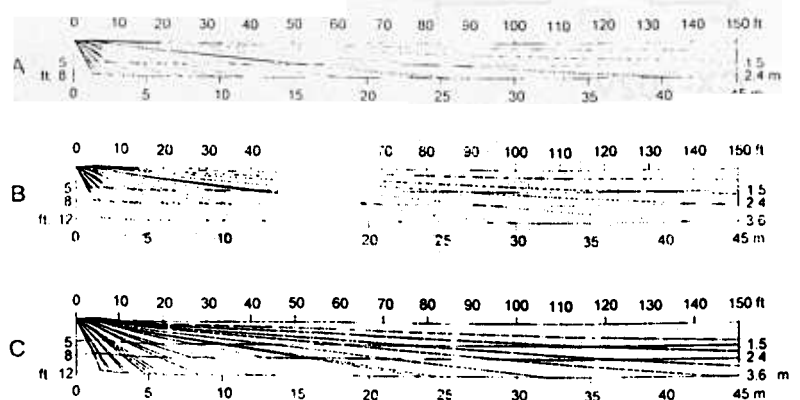
SIDE VIEW



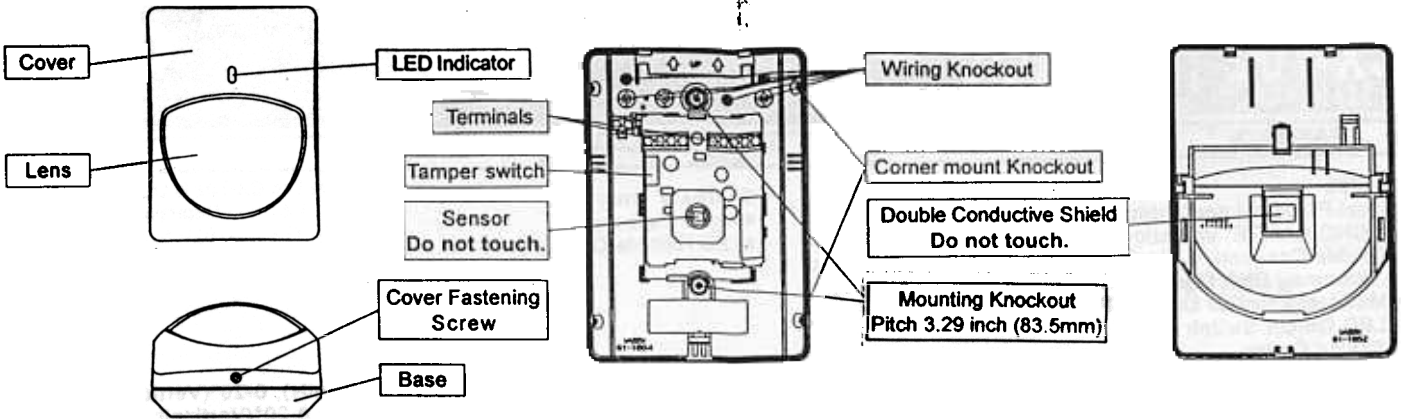
LONG RANGE



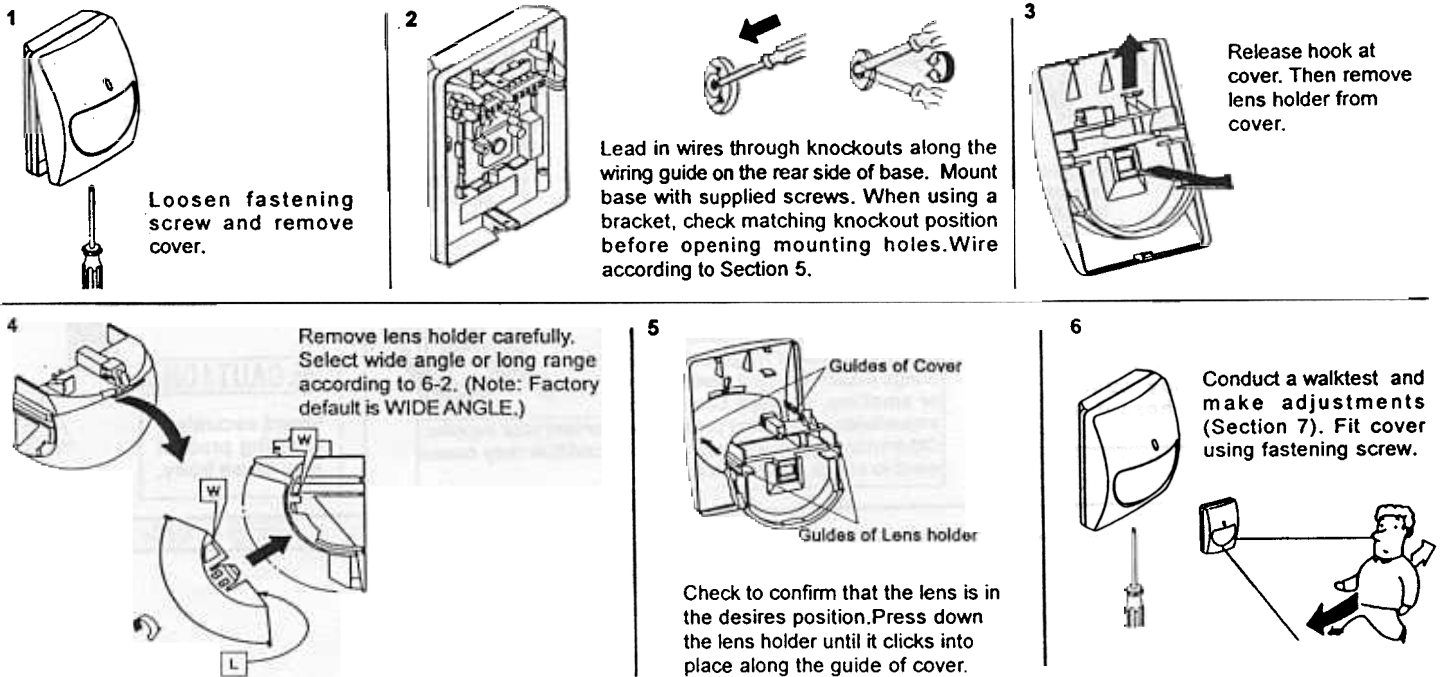
SIDE VIEW



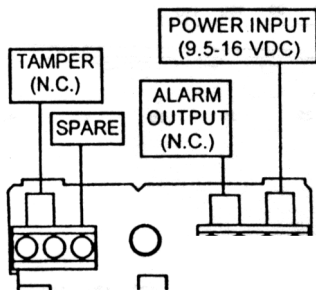
3. DESCRIPTION AND OPERATION



4. INSTALLATION



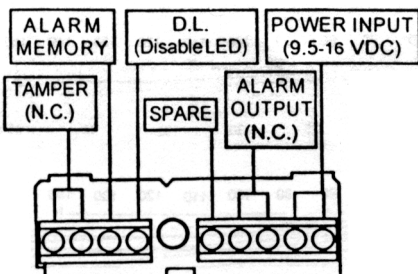
5. WIRING



Power wires should not exceed the following lengths.

WIRE SIZE	CX-702		CX-702V	
	12V	14V	12V	14V
AWG 22(0.33mm ²)	1700ft (520m)	3700ft (1130m)	1180ft (360m)	2520ft (770m)
AWG 20(0.52mm ²)	2690ft (820m)	5830ft (1780m)	1830ft (560m)	4000ft (1220m)
AWG 18(0.83mm ²)	4290ft (1310m)	9350ft (2850m)	2950ft (900m)	6430ft (1960m)

CX-702V



[Connect tamper terminals to a 24 hour supervisory loop.]

When using two or more units on one wire, the maximum length is obtained by dividing the maximum wire length listed above by the number of units used.

- ※ UL requires CX-702 to be connected to a UL listed power supply capable of providing a nominal input of 12VDC 11mA(max.) and battery standby time of 4 hours.
- ※ For UL Listed systems, do not connect field wiring more than 25 feet to Alarm Memory, and DL terminals.
- ※ The equipment shall be installed in accordance with the National Electrical Code, NFPA 70.

ADJUSTMENTS FOR REQUIRED AREA/PATTERN

The CX-702 is designed to provide ideal detection areas for different patterns ranging from 40ft.(12m) to 70ft.(21m) Wide Angle, and 80ft.(24m) to 150ft.(45m) Long Range. The following adjustments will provide ideal detection areas for each of these requirements.

1. DETERMINE THE AREA PATTERN

Before making adjustments, determine the pattern area, detection range mounting height.

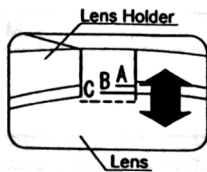
2. SELECTING WIDE ANGLE OR LONG RANGE DETECTION

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.
3. For Wide Angle, "W" will be on top of lens.
4. For Long Range, "L" will be on top of lens.

3. VERTICAL ADJUSTMENT OF DETECTION AREA

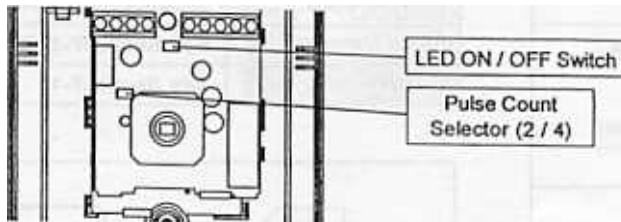
Adjust the vertical angle according to the desired detection range and mounting height.

1. Set the upper edge of the lens at either the "A", "B" or "C" position.
2. The following chart illustrates the different position setting.
3. Confirm the detection area by conducting a walktest.



W: WIDE ANGLE						L: LONG RANGE				
HEIGHT	DISTANCE					DISTANCE				
	40 (12)	50 (15)	60 (18)	70 (21)	80 (24)	100 (30)	120 (36)	150 (45)		
6 (1.8)	B	A	A	A	B	B	B	A	A	
8 (2.4)	C	C	C	C	C	C	C	C	C	
12 (3.6)	C	C	C	C	C	C	C	C	C	

7. FUNCTIONS



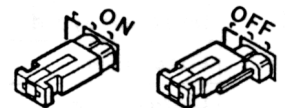
CAUTION!
Always conduct a walktest after changing the position of this switch to ensure the detector is still providing optimum coverage.

1. LED ON/OFF

The Alarm LED indicator can be switched either "ON" or "OFF"

D.L. terminal (CX-702V Only) / LED remote control terminal

LED can be enabled or disabled remotely from control panel by D.L. terminal. Ensure to switch off the LED's "ON / OFF" switch

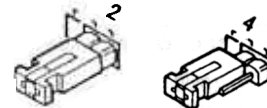


2. PULSE COUNT

The Detection Mode can be switched to either "2" or "4" mode depending on the environmental conditions of the installation.

- 2: For normal applications.
- 4: For use in hostile areas where there may be movement of small animals or other objects such as fax machines or curtains.

When the "4" is selected, the detector's sensitivity may seem sluggish. It is therefore important to always conduct a walktest to ensure that the desired coverage is given.



CAUTION!
Do not use pulse count 4 for Long Range detection.

3. ALARM MEMORY (CX-702V Only)

Alarm Memory

This function is used to indicate if the detector was activated while the panel was armed. It will cause the red LED on the Detector to illuminate once the panel has been disarmed.

Compatible Control Panel is required for Alarm memory.

Connect A.M. terminal to Control Panel's Control Voltage Signal terminal (System Arming Status Voltage Output).

Operation

- If the unit triggered during armed period, when the system is disarmed, LED will remain lit to confirm that it reported an alarm.
- Alarm Memory will operate even when LED is switched OFF.
- Alarm Memory will not operate while system is disarmed.
- After Alarm Memory latches, Alarm Output and LED operate normally during armed period.

Reset

Alarm Memory resets automatically when system is re-armed.

4. POLARITY SELECTOR (CX-702V Only)

This allows detector to be used with a variety of control panel memory latch outputs for either + or - switching. The memory latch from the panel may be used with either the DL function or the Alarm Memory.

AM Jumper

	CONTROL VOLTAGE SIGNAL	
	POSITIVE	NEGATIVE
System Armed	OPEN or +5~16VDC	0~1VDC(grounded)
System Disarmed	0~1VDC(grounded)	OPEN or +5~16VDC

POSITIVE: Leave AM Jumper as it is
NEGATIVE: Cut AM Jumper as shown

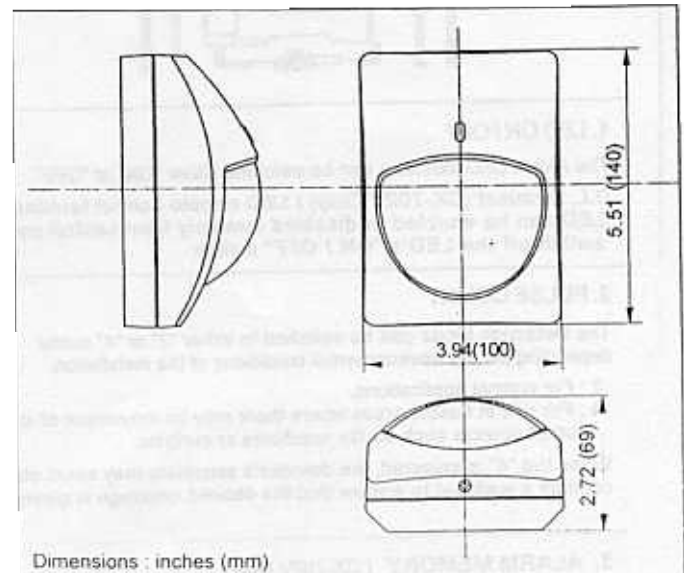


PROBLEM	PROBABLE CAUSE	REMEDY
LED does not light.	Improper power supply voltage. (disconnection, low voltage)	Correct supply voltage to 9.5 - 16V DC. See Section 4.
	Improper detection area.	See Section 2.
	LED switch is OFF.	Turn on the switch.
	Improper polarity to detector.	Switch positive and negative at terminal.
LED lights even though no person within area.	Moving object within area. (curtain, wall hanging, etc.)	Remove the sources from the detection area.
	Temperature of object within area changing rapidly (heater, air conditioning, etc.)	Remove object from the detection area.
LED lights but signal is not sent.	Relay contact is stuck or damaged due to overloading.	Check load of output. The unit needs repair or replacement.
LED continues to light	Faulty wiring.	Wire correctly.
	Poor connection of alarm memory.	Reconnect wire.
	Wrong control voltage from panel.	Must be 0-1V DC.(grounded) See Section 7-3,7-4.

9. SPECIFICATIONS

Model	CX-702	
Detection method	Passive infrared	
Coverage	Wide Angle 85°wide	Long Range
	70ft × 70ft (21m × 21m)	150ft × 8ft (45m × 2.4m)
Detection zones	68 zones	22 zones
Mounting height	5 - 12ft (1.5 - 3.6m)	
Sensitivity	3°F at 2ft./sec, 8ft mounting height (1.6°C at 0.6m/sec, 2.4m mounting height)	
Detectable speed	1- 5ft / sec (0.3 - 1.5m/sec)	
Power input	9.5 - 16VDC	
Current draw	8mA (normal) / 11mA (max.) at 12VDC	
Alarm period	Approx. 2.5 sec.	
Alarm output	N.C. 28VDC 0.2A max.	
Tamper switch	N.C. Opens when cover is removed. 28VDC 0.1A max.	
Pulse count	Approx. 20 sec 2 or 4	
Warm-up period	Approx. 1 min.	
LED indicator	Alarm condition	
RF interference	No alarm 30V/m	
Operating temperature	-4°F - +122°F (-20°C - +50°C)	
Environment humidity	95% max.	
Weight	7.0oz (200g)	

Model	CX-702V
Current draw	8mA(normal) / 16mA(max.) at 12VDC
Alarm Memory	See Section 7-3, 7-4
D.L.terminal	See Section 7-1



*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 part of a complete alarm system, we cannot accept responsibility for any damages or other consequences resulting from an intrusion.

This product conforms to the EMC Directive 89/336 EEC.



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