

Manual For Intelligent Outdoor Solar PIR Alertor

General Introduction On Outdoor Application

This detector is remarkable in function, but the following notices can make it more stable if installer can pay attention to them:

SUNSHINE

Direct or reflective sun light is no good for detector operation, try to avoid them during installation. Our outdoor PIR adopts double-layered screen light sensing system, which is very effective for screening of interfering light.

WEEDS

High weeds and shrubbery in detection range may wave in wind and cause false alarm, especially for those detectors operating in horizontal fan area, so keep cutting on weeds and shrubbery.

RAIN

Sudden rainstorm can cool the hot pitch road or surface of other roads quickly. And all detectors can detect rain in the sky. But detector with down view window can even detect water on ground, which will bring much more interference to detectors outdoor than that mounted on wall, so everything will lower its temperature similar to water. Human body or cars after pouring from rain can offer very little temperature gap for detection, so sensitivity will be lowered a lot.

INSECTS

Insects will trigger false alarm when they climb into detector or stay on lens, while those staying away from detectors can't trigger alarm. If there is interference from insects, please re-install detector or use insecticide. And please adopts strictly sealed components on those drilled holes or glass glue around detector.

CAR

Moving car in detection range may trigger false alarm to detector.

DIRT ON LENS

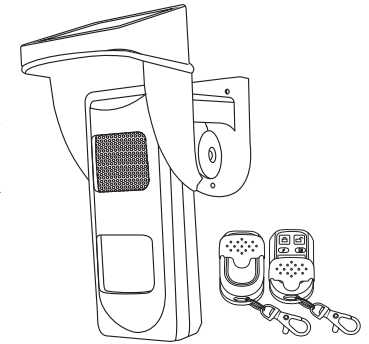
Lens becomes easily dirty when used outdoor, so please check the lens from time to time in order to avoid alarm miss caused by low sensitivity from dirty lens.

UNSTABLE INSTALLATION BASE

Detector will trigger false alarm easily if installation base can be interfered by vibration, this is the reason why some detectors installed near to street can cause false alarm easily.

Brief Introduction

This is a remarkable digital outdoor solar-power PIR alertor with sound and light indication, which can avoid external interference from sunshine, humidity, dust, insects and wind also. This detector adopts very advanced technology as below: direct analysis technology to intrusion PIR signal from digital high-speed micro-processor; dual-polarities detection, direct adjustment to digital signal sensitivity; filtering technology to mixed rays from multi PIR channels etc. In a word, it is stable in operation and advanced in function, combined with its IP-65 water proof design, it is suitable for operation in those areas needs sound and light remind such as forest, high-tension pole, park, warehouse and docks etc.



Technical Parameter

Battery size: 3.6VDC AAA lithium chargeable battery,
Power consumption: stand by: 20uA; alarm: 85mA
External DC input: 9-16 VDC >200mA (For indoor operation)

Warm up time: 50s

Installation height: 1.8m - 2.4m

Alarm period: 2s

Encoding: PT2262/EV1527 etc

Frequency: 315/433MHz etc

Alarm LED: High light red/blue led

Audio output: 90db at 30cm

RFI / EMI protection: 0.1-500MHz/3v/m

Anti-white light interference: >10000LUX

Low batter alarm: below 2.9V

Temperature compensation: Digital

Operating temperature: -30°C/+50°C

Operation humidity (RH): 95%

Sensitivity: 2P Optional

Detection speed: 0.2m/s to 3.5m/s

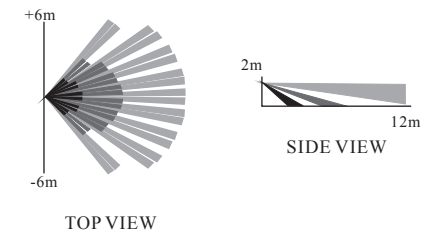
Radio emission: ≥ 200m (Open space)

Size: 210*80*190mm

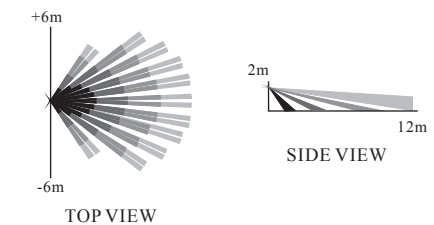
Anti fire: Flame-resistant ABS material

Detection range: 12m*12m 110° (Standard Lens)

12m*12m 110° (Pet Lens)



Standard Lens



Pet Lens

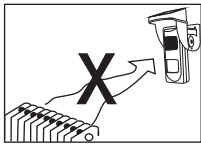
Function

- High light flash LED for more deterrence
- Voice sound remind, different sounds for option
- 2 unique anti-polarity PIR detection technology
- Adjustable detection sensitivity
- Solar charge technology
- High-temperature resistant & water-proof structure
- Automatic digital temperature compensation
- Anti strong white light and sunshine
- Fresnel lens with 18 bands
- Optical parts
- Horizontal 180° and vertical 30° adjustment
- Digital pulse signal processing
- Pet immunity up to 25kg

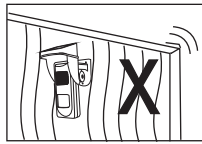
Installation Guide

General installation principle

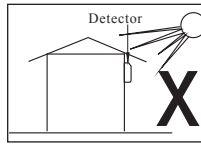
Even this detector is very complex in function, but following incorrect installation should be avoided in order to get the best stable function



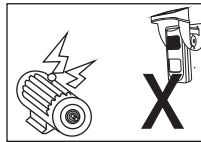
Don't face direct hot or cold air



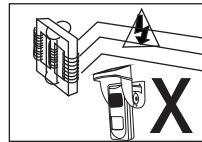
Installation base should be stable



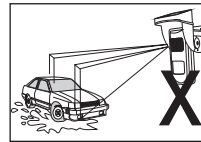
Solar panel should face direct sunshine



Keep away from strong interference



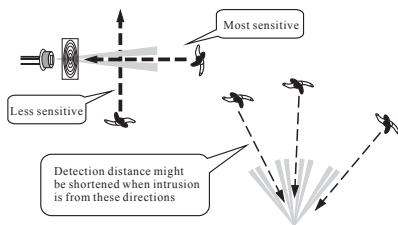
Keep away from high tension



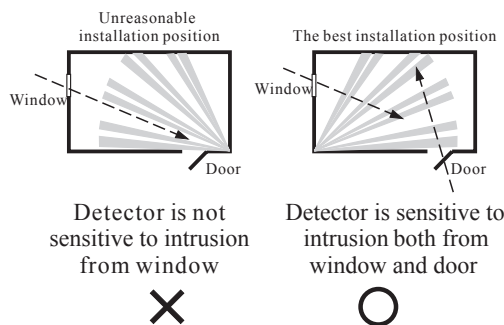
Moving vehicle may cause false alarm

On installation angle

Detector is with physical difference to installation angle

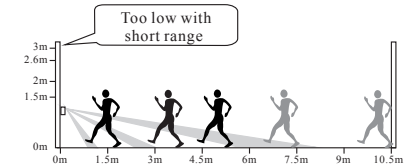
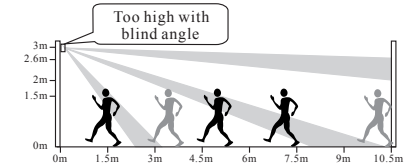
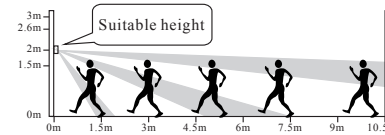


On installation position



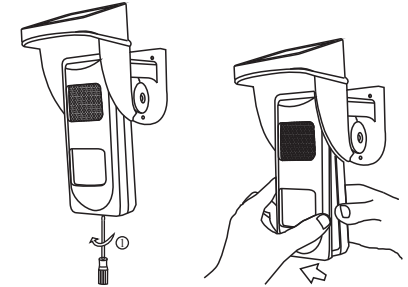
On installation height

Recommended installation height is 1.8-2.4m



Wall installation

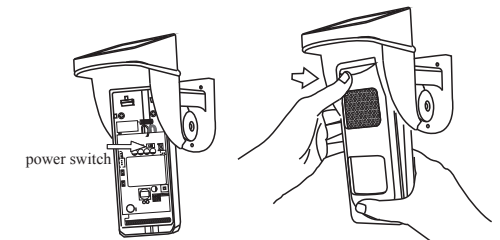
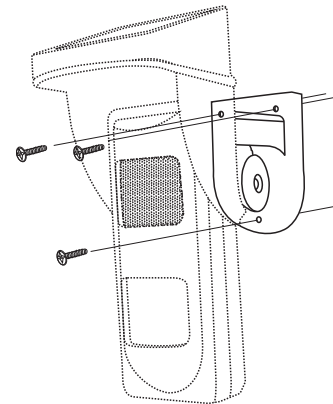
In order to get the best detection range, detector should be installed on 2.1m. However, the maximum installation height can be 4m, but make sure that there is no interference source near detector and detector is with wide detection view. Drill a hole on wall and insert the rubber stopper into the hole, fasten detector with 3 screws as figure.



Remove the front cover and loose screw at the bottom, open the cover and turn on the power switch then detector can start to work. And then close the cover and fasten the screws as right figure.

1. Loose the bottom screw with cross-type screw driver

2. Disclose the covers from bottom

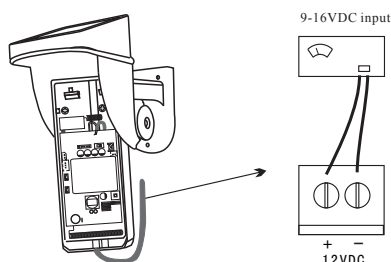


3. Turn on the power switch

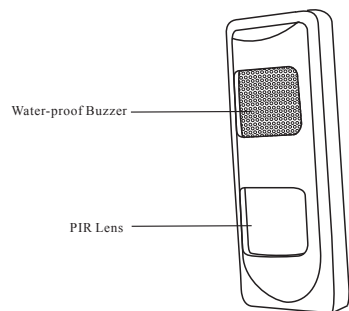
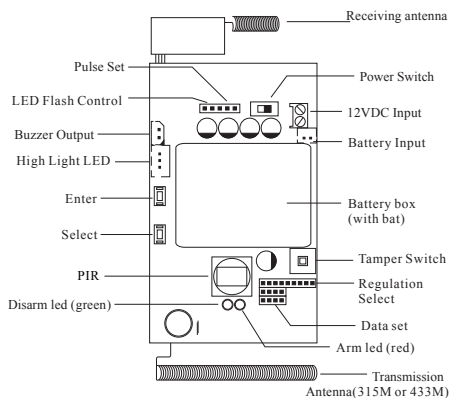
4. Make good alignment of bottom parts of front and bottom covers, and then press down the top part of covers, detector can be closed well.

The 12V power supply connection

When detector is installed at the place where sunshine can't reach or where there is lack of sunshine, 12VDC must be connected as back-up power. Connect external 12VDC power to detector as figure, lead the power cable from bottom power-lead slot and seal the cable-lead hole by silicone sealant in order to avoid water and insects go into detector, then connect power cable to relevant terminals (Care for the polarities), NOTE: please do make cable lead according to requirement and don't open a hole from top of housings in order that water and insects won't run into detector and cause false alarm. When external power is connected to detector, please make sure that its voltage is 9-16VDC, too low or too high voltage might cause damage to detector!



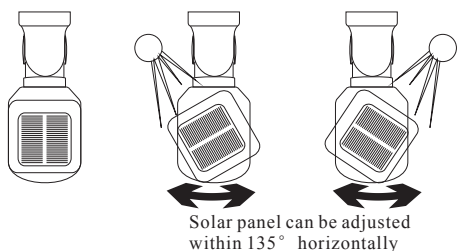
Accessories



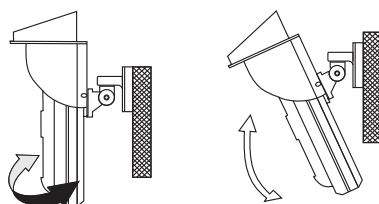
Adjustment according to environment

Adjustment on solar panel angle

According to different altitudes area and actual environment, solar panel can be adjusted to get the max sunshine



Adjustment on detection angle





Detection angle can be Horizontal Adjust: within 180° according to actual environment
Detector can be Vertical Adjust: 30° backward and forwards according to actual environment


Installation Set

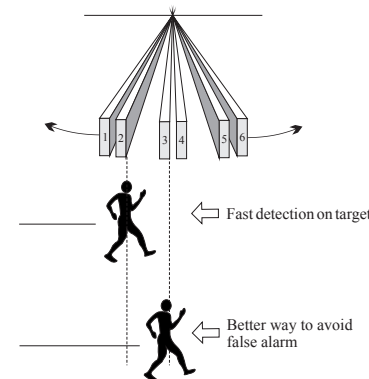
Pulse setting on detector sensitivity

Statement on signal processing: this detector adopts direct analysis on digital signal, digital processing chip will analyze the detected signal from sensor on their frequencies, extent and polarities. And make comparison with pets file in data base and get a final real human being intrusion judgment. So here PULSE SET is a general reference index, it doesn't represent pulse quantity during digital signal process.

LED | Sensitivity
 High Sensitivity
 When jumper set to HIGH SENSE mode, detector is in highly sensitive status, alarm can be triggered by detection of 2 intrusion pulses


LED | Sensitivity
 Low Sensitivity
 When jumper set to LOW SENSE mode, detector is in low sensitivity, alarm can be triggered only when 3 intrusion pulses are detected


ON/OFF LED Control
 ON LED ON
 When jumper set to OFF mode, even detector is triggered, high light red/blue LED will not turn on, this is just for purpose of energy-saving. (NOT SUGGESTED EXCEPT FOR SPECIAL ENVIRONMENT)




Arm/disarm by remote controller

Button  on remote controller is for ARM,  is for DISARM,  is for EMERGENCY while  is invalid empty button. Press down relevant button can operate and control this wireless alarm kit.

ARM: press down  button, system enters to ARM status after “DI” sound, all zones enter into ALERT status, any trigger on detectors will send out sound and light as alarm. (Red arming light will flash from time to time to indicate system is in arming status.)

DISARM: press down  button, system enters to DISARM status after two “DI DI” sound, all zones detectors will not send ALARM signal during DISARM status, system can receive alarm signal from EMERGENCY zone. (Green disarm LED will flash from time to time to indicate system in DISARM status.)

EMERGENCY ALARM: When there is emergency, press down  emergent button, system can send out alarm signal immediately. Alarm can be canceled only DISARM button is pressed down.

Self-check and audio sound choice

During operation, please open front cover according to manual, press down SELECT button and switch power supply to “ON” position, system will play recorded messages automatically, release left hand and press down SELECT button one by one till you hear the needed voice, then press down ENTER button, detector will send out “DI” sound, then red/green led will flash and enter into SELF-CHECK status, system will enter STAND BY status 40 seconds later.

Optional voices are 16 bands, and special voices can be OEM (MOQ 500 sets):

- | | | |
|-----------------------------------|---|--------------------------------------|
| 1.No smoking and no fire, thanks! | 7.Attention, you have entered forest area, No fire please! | 11.Sorry,no dumping here! |
| 2.Private area, no trespassing! | 8.Attention, you have entered a restricted area, please fuck off. | 12.No fishing and swimming! |
| 3.Watch out! No touching! | 9.You are welcome | 13.No admittance without permission! |
| 4.Watch out, deep water! | 10.Keep away! Dangerous area! | 14.Please keep off the grass,! |
| 5.Keep away! High voltage area! | | 15.No parking, constantly in use! |
| 6.Mind your step! | | 16. Wu! Wu! Wu! (sirens) |

Remote controller and wireless coding

Coding of remote controller

If extra remote controller need to be added, press down SELECT button for 6 times when detector is powered and in DISARM status, red led on detector will be turned on, press down ARM/DISARM button on remote controller, red LED will turn off and send out “Coding succeed” sound, then remote controller is memorized into this alarm system, system will quit out from coding status and coding succeeds.

Coding of wireless detectors

If extra wireless detectors need to be added, press down SELECT button for 3 times continuously when detector is powered and in DISARM status, red led on detector will be turned on, then trigger wireless detector, red LED will turn off and send out “Coding succeed” sound, then detector is memorized into this alarm system, system will quit out from coding status and coding succeeds.

Delete of wireless devices

If wireless coding need to be deleted, please press down SELECT button for 6 seconds, detector will send out “deleting succeed” sound, then all wireless codes are deleted. Release setting button then system quit out from deleting status.

Note: wireless devices in the kits are well coded in factory, you can operate them after connection of power supply!

NOTES:

- 1.After enter into STUDY mode, detector will keep 10 seconds for signal scanning, 10 seconds later, LED will turn offer automatically and quit out from STUDY mode.
- 2.This system can study max 8 wireless devices: 4 remote controllers + 4 wireless detectors/magnetic contact/fire sensors etc. If 8 wireless devices have been studied into this system, no extra wireless device can be studied. At this time, if system enter into STUDY mode and there are proper signal comes in, red LED will flash for 2 times and send out 2 “Useful zones unavailable, please release unnecessary zones and retry.” sound indicating ERROR.

Linkage with other devices

1.Linkage with external detectors

This is an intelligent and flexible system, it can be operated as independent device, also can be operated with other linked wireless devices. It can be linked with max 4 wireless devices including wire motion detector, magnetic contact, smoke or gas detectors, panic button etc, which can satisfy users' requirements greatly.

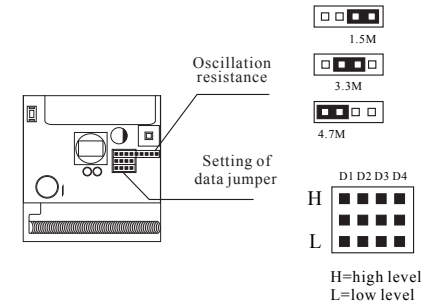
In order that user can recognize whether it is indoor or outdoor intrusion, wireless signals can be separated into indoor sensors or outdoor sensors. If it is indoor alarm, system will send out WOO WOO sound, if it is outdoor sensors alarm, system will send out the pre- selected voices

2.Linkage with alarm control panel (For option)

Detector in this alarm system can transmit wireless alarm signal to other alarm control panel (or wireless sirens) for network alarm operation. Alarm protocol can be PT2262 or EV1527, frequencies can be 315MHZ or 433MHZ.

Oscillation resistance setup

Parameter corresponding with other control panels can be reached by setting of oscillation resistance on coding chips. Please refer to figure on right, we have 3 modes: 4.7M/3.3M/1.5M



Setting of data jumper

Proper data codes can be obtained by jumper setting on “DATA SET”, then control panel can recognize the codes: D1\D2\D3\D4

Optional versions and models

Voices	Remote control ARM/DISARM	Linkage with other wireless detectors	Linkage with control panels
Single voice	×	×	×
16voices for option	✓	✓	×
Single voice	✓	✓	×
16voices for option	✓	✓	✓
Single voice	✓	✓	✓

Walking Test

Close the front cover of detector, make horizontal movement in front of detector to check PIR function, LED flashes and sound indications send out stands for alarm trigger. Walking test can avoid PIR dead angle. PIR is horizontal to detector when sensitivity is highest. (Repeated walking tests are required in detection range in order to adjust detector detection range)



If detector housing is open rudely or detector is removed down from wall or impacted, detector will send out “woo woo...” sound and LED flashes(if not turned off) for remind of alarm.

Notes:

Sometimes even the most advanced detector might be damaged or sent out false alarm, it might due to following reasons: trouble on DC power or wrong connection, vicious covering on the pir, damage on optical system, environment temperature is very close to body temperature or some component is broken accidentally, its sensitivity will be reduced, so it is strongly requested to test the detector and the complete alarm system each month in order that they can work normally. Alarm system is not the substitute of insurance. Even there is a set of alarm system under working, family or owner and tenant should still be very careful and make commercial investment on their lives and properties.