

Outdoor Intelligent Wireless Detector With 2 PIR Installation Guide

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:

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.

INSUFFICIENT TEMPERATURE DIFFERENCE ★★★★★

Detector is sensitive to change from temperature difference in detection area, if target temperature is very close to previous environment temperature, there will be no temperature change, detector sensitivity will be lowered and will not be triggered sometimes when there is intrusion.

DIRT ON LENS ★★★

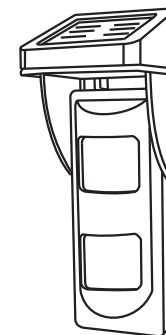
Lens becomes easily dirty when used outdoor, so please check the lens from time to time in order to avoid alarm miss caused by low sensitivity from dirty lens.

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.

INTRODUCTION

The detector is a dual pir outdoor wireless detector with intelligent solar charge technology; it can match most of the wireless control panels directly and all wired control panels by wireless-to-wired receiver. This detector adopts intelligent multigrade digital recognition technology and unique *SLT* calculation to process the 2-way special pir signal and 1 way environmental temperature signal to reach the topgallant detection and lowest false and missing alarm. It can recognize waving object and real human motion; resist direct or reflective sunshine and accommodate the false alarm caused by speedy hot and cool air. The detector can operate in outdoor severe environment for long term. 8 bands of sensitivities for option, can take on the weather difference caused by rain, snow, hail, strong sunshine, gale etc, it is a purely high-class outdoor detector worthy of selection and usage.

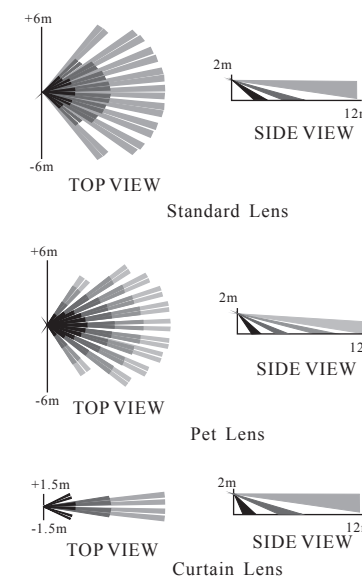


BRIEF INTRODUCTION

- 2 Dual PYRO Sensors
- VLSI based electronics with movement speed spectrum analysis.
- 8 bands of sensitivities for option
- Digital environmental temperature detection
- Anti strongly mutative hot/cool air
- Intelligent solar charge technology
- Anti direct or reflective sunshine
- Anti strongly mutative hot/cool air
- Pet immunity up to 25kg (With particular pet lens)
- 18 bands Fresnel lens (Standard wide angle lens)
- Anti UV ABS housing
- Fully-sealed optical design
- All-directional bracket installation: H90° and V30° adjustable

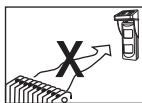
SPECIFICATIONS

<i>attery power :</i>	3.7V lithium chargeable battery,
<i>Current:</i>	Static ---70uA Alarm ---20mA
<i>DC Power Input:</i>	5.5V@40-50mA Solar panel
<i>Warm up period</i>	40s
<i>Install high:</i>	1.8m-2.4m
<i>Alarm time:</i>	2s
<i>Anti RFI/EMI:</i>	0.1-500MHz/3V/m
<i>Anti-white light:</i>	>100000LUX
<i>Low battery alarm:</i>	3.2V
<i>Temp compensation:</i>	intelligent digital compensation
<i>Temperature:</i>	-10°C/+55°C
<i>Humidity(RH):</i>	95%
<i>Sensitivity:</i>	8 grades adjustable
<i>Detect speed:</i>	0.2m/s to 3.5m/s
<i>Radio emission</i>	≥200m Open space
<i>Frequency:</i>	315/433MHz etc.
<i>Encoding:</i>	PT2262
<i>Dimensions:</i>	160mm*65mm*50.5mm
<i>Coverage:</i>	12m*12m 110° Standard Lens 12m*3m 12° (Curtain Lens) 12m*12m 110° (Pet Lens)

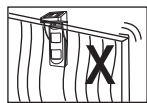


INSTALLATION GUIDE

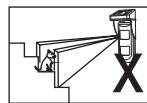
Even though Detector can accommodate outdoor severe environments, the following factors shall be avoided during install-ation in order to get the reasonable detection:



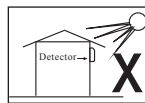
No direct facing cold/hot source



Mount on a secure and stable base/object



Incorrect Installation (with pet immunity lens)



Place without enough sunshine such as eave and umbrage etc



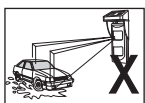
Keep away from strong electrical interferences



Keep away from high pressure power



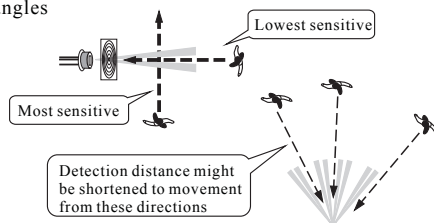
Don't install on a tree



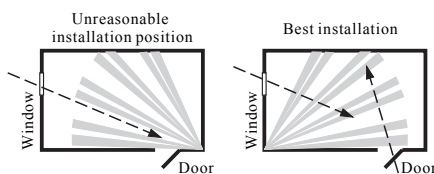
Avoid moving vehicles

On installation angle

Detection is with mechanical difference to intrusion angles



On installation position



Detection is not sensitive to intrusion from window in this way

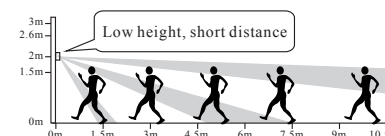
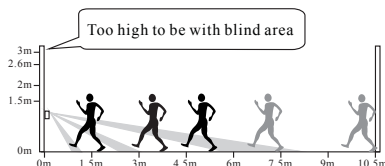
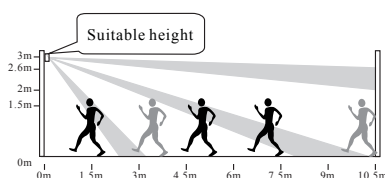


Detector is sensitive to intrusion from door and windows in this way



On installation height

Recommended installation height is 1.8-2.4m



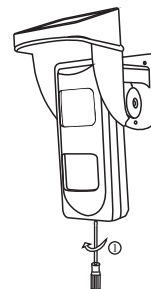
WALL FASTENING

In order to get the maximum detection range, please install detector at 2.1m height and adjust PCB position to "0" mark vertically. However, detector can be installed at 4m superlatively. Please guarantee that there is no source of interference nearby and the front view of detector is wide and clear.

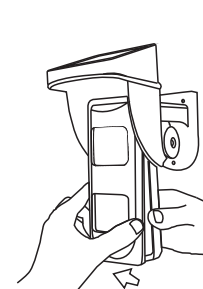
1. Drill a hole on wall and insert the rubber stopper into the hole, fasten the detector by 3 screws.

2. Open the front cover: release the bottom screw anticlockwise by a plus-screw-driver (no need to twist out from cover), lift out the cover from bottom and then turn on the power switch, red LED will flash for 40 seconds as warm-up, when LED stops, walking test can be performed. (Please refer to following content on other setting). Then, close the cover as figure and tighten the screw. (Refer to below figure for details)

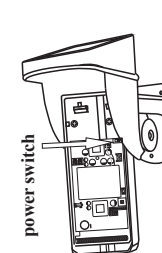
3. Decomposing steps



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



2. Disclose the covers from bottom



3. Turn on the power switch

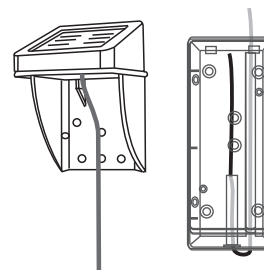


4. Make good alignment of bottom parts of front and bottom covers, and then press down the top part of covers, detector can be closed well.

INSTALLATION OF SOLAR BATTERY CABLE

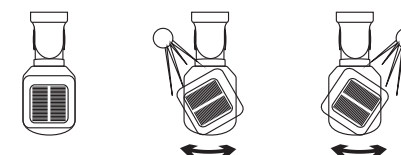
As figure, pass the solar panel connecting cable through the cable slot on back of detector and connect it onto the relevant terminals on PCB (Take care of polarities)

Note: please do lead cable according to above instruction, don't drill holes to lead cable on top/back/side of detector, otherwise it will damage the water-proof structure and cause false alarm or malfunction.

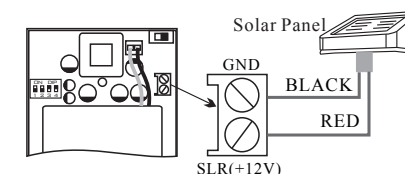


Adjustment on solar panel angle

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

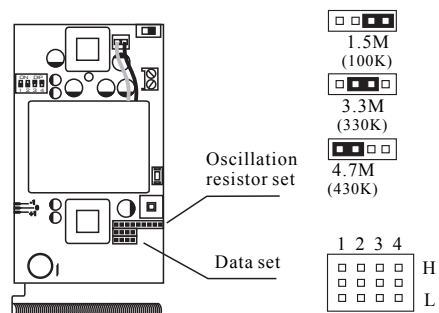
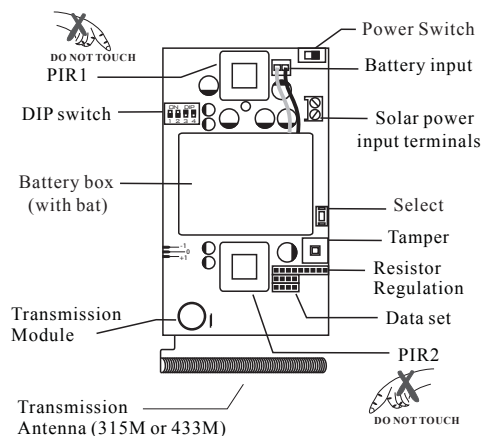


Solar panel can be adjusted within 135° horizontally



Warning: this terminal can only be input with 5- 5.5VDC power or our solar battery, illegal voltage might cause permanent damage to detector.

PCB LAYOUT AND WIRELESS CODING



DIP SWITCH SETTING



Dip switch 1: (sensitivity control)
When dip switch 1 is set to OFF, detector is in high sensitivity mode.
When dip switch 1 is set to ON, detector is in low sensitivity mode.

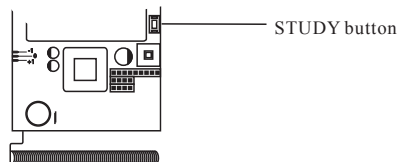
Dip switch 2: (Setting on PIR pulse detection)
When dip switch 2 is set to OFF, detector is in 2 pulses mode.

When dip switch 2 is set to ON, detector is in 3 pulses mode.

Signal processing statement: this detector adopts digital direct signal-analysis technology, digital processing CHIP will analyze those signals detected by sensors in frequencies, scope, polarity etc, and make comparison with those usual pet- data in data base and draw real conclusion on body intrusion. So, here, pulse setting is just a general index, might not be actual pulse quantity during signal processing.

ID registration (coding with alarm control panels)

You can match detector with control panel before installation. When control panel enters into learning status, you can press down STUDY button to trigger detector and register its ID into control panel.



Setting of compliance with other control panels

Oscillation resistor set:

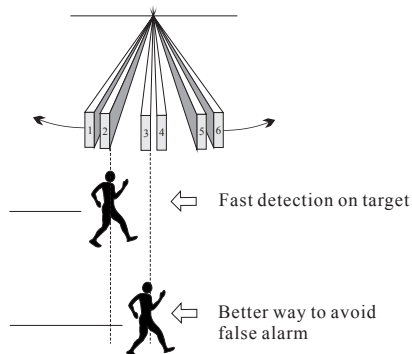
Compliance with other control panels can be reached through regulation of oscillation resistance on encoding chips. Refer to left figure, our oscillation resistance is with 3 modes:
PT2262 protocol: 4.7M、3.3M、1.5M
EV1527 protocol: 430K、330K、100K

Data set:

Proper coding data can be obtained by “DATA SET” pins for control panel recognition: 1=D3;2=D2; 3=D1;4=D0 (Codes under some special protocols might be inverse)

When set to 2 pulse counting, detector is in high sensitivity, detection of 2 intrusion pulses may cause alarm usually.

When set to 3 pulse counting, detector is in low sensitivity, alarm will be triggered only when 3 intrusion pulses are detected.



Dip switch 3: (mode selection)

When dip switch 3 is set to OFF, detector is in USE mode.

When dip switch 3 is set to ON, detector is in TEST mode.

DIP4 LED control

When it is “OFF” LED is turn off to reach the purpose of energy saving and concealed installation.

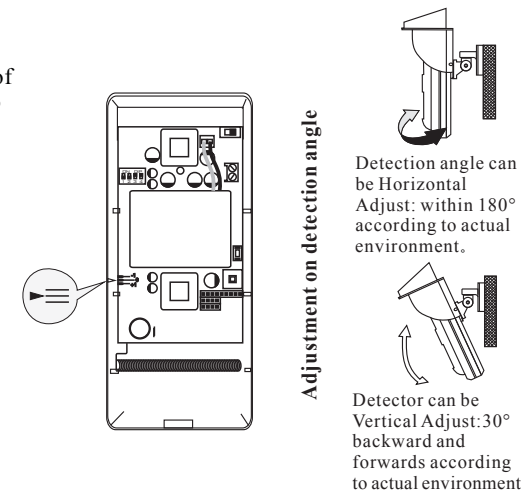
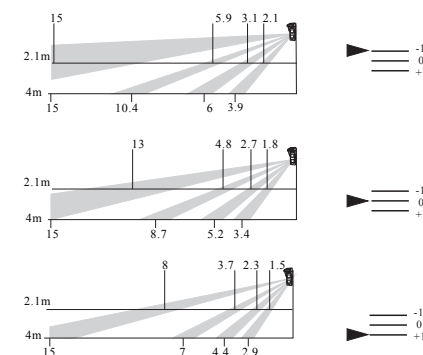
When it is “ON” , LED is turn on.



Note: after installation and walking test finished, dip switch 3 and 4 should be set to OFF mode in order to extent battery life!

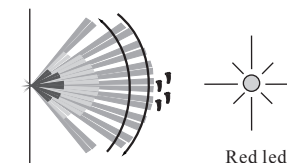
VERTICAL ADJUST

Adjustment can be made through the moving of PCB up and down as the left figure in order to reach the best detection



WALK TEST

Preparation before test, please do set dip switch 3 & 4 to ON position and choose proper sensitivity and pulse counts according to installation environment and detection requirement, in order that detector can obtain best operation. Close the front cap, when LED indication is off, perform a transverse movement to check the PIR performance through the red LED, this can avoid the dead angle of PIR detection. PIR is in highest sensitivity when movement is transverse to the detector.



NOTES AND WARNINGS

Even the most sophisticated detectors can sometimes be defeated or may fail to activate due to: DC power failure/improper connection, malicious masking of the lens, tampering with the optical system, decreased sensitivity in ambient temperatures near that of the human body and unexpected failure of a component or circuit. The above list includes the most common reasons for failure and it is recommended that the detector and the entire alarm system be checked weekly to ensure proper performance.

An alarm system should not be regarded as a substitute for insurance. Home & property owners or renters should be prudent enough to continue insuring their lives & property even though they are protected by an alarm system.

WARNING! Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the warranty. This device has been tested and found to comply with the limits for a Class B digital device, pursuant harmful interference in residential installations. This equipment generates and uses or radiates radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio and television reception. There is no guarantee that interference will not occur in a particular installation. If this device does cause such interference, which can be verified by turning the device off and on, the user is encouraged to eliminate the interference by one or more of the following measures:

- Increase the distance between the detector and the electrical/electronic equipment.
- Connect the device to a different power socket which supplies power to the detector.
- Consult the dealer or an experienced radio/TV technician