

ENGLISH

OUTDOOR SOLAR PIR DETECTOR VOICE PROMPTER

Installation instructions

1.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 sunlight 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 avoid detection of 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 adopt 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.

TYPHOON

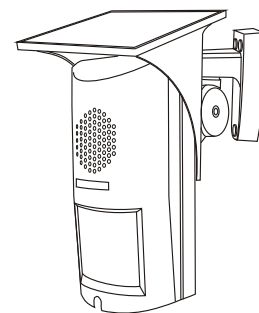
If a strong typhoon blows, it may also produce factors that make the detector false positives, such as strong swaying of branches brought by the typhoon, a large number of water droplets directly spraying the front end of the lens, and various large objects blown up may cause the detector false positives.

2.Introduction on Products

This is an outdoor passive infrared detection voice indicator with superior performance and solar charging technology, using monocrystalline silicon solar charging technology, with lithium battery intelligent charging and discharging protection chip, high charging efficiency, large charging current, no direct sunlight can be charged; Outdoor anti-interference ability is strong, can avoid outdoor sunlight, ultraviolet and radio frequency, car headlights and other interference, the waterproof structure design of IP65: waterproof, dustproof, insect, wind effect is remarkable; The advanced detection and processing technologies are: infrared signal direct calculation and analysis technology, bipolar detection technology, automatic temperature compensation technology, infrared channel mixed optical multiple filtering technology. It can be applied to outdoor green ways, forest parks, construction sites, high-voltage line towers, mixed intersections, warehouses, oil depots, docks and other places that need voice prompts.

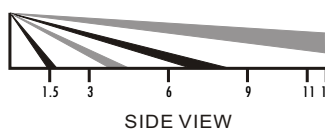
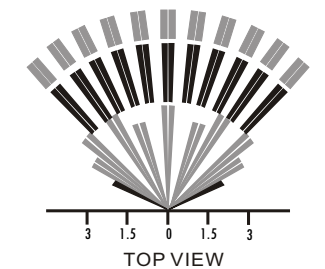
3.Main Function

- Ultra-low power circuit design
- Professional waterproof design, applicable to any outdoor occasion
- 15 seconds of self-recording, easy to change the voice
- Polysilicon solar charging technology
- High-quality large-capacity lithium battery
- Red and blue high-brightness flashing lights, with deterring effect
- Unique full range temperature compensation technology
- Resistant to strong electromagnetic radiation interference
- Can remotely arm and disarm (some models)
- Can be linked to other wireless detection equipment (some models)
- Application in all places that need voice reminders



4.Technical Parameter

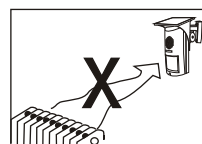
Power	: 4.2V Lithium battery
Current	: 40uA (single) 3mA (remote)
Mount height	: 1.8m-2.4m
Detection range	: 12m x 12m 108° (wide lens)
Temperature compensation	: digital
Recording time	: 15s
Anti EMI	: 0.1-1000MHz/30V/m
Anti white light	: >10000 Lux
Anti RFI	: 50000V
Alarm data format	: Ev1527 (remote)
flashes	: Red-Blue flash
Transmitting distance	: ≥200m (open space)
Frequencies	: 315/433MHz
Operation temperature	: -25°C/+55°C
Operation humidity	: 95% RH
Detection speed	: 0.2-3.5 m/s
Fire proof	: ABS plastic
Pet immunity	: 15kg
size	: 170mm x 145mm x 110mm



5. Installation guide

Although the performance of the passive infrared detection voice prompter is very strong, in the installation process, try to avoid the following bad installation methods and occasions, which can make the detector obtain better and more stable detection performance!

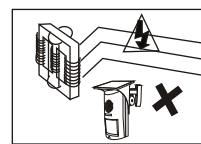
Installation guide



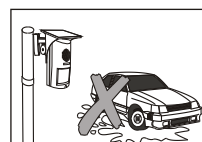
Don't face detector to cold/heat source



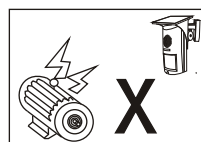
Installation base should be stable



Keep away from high-pressure cable



Attention to car interference



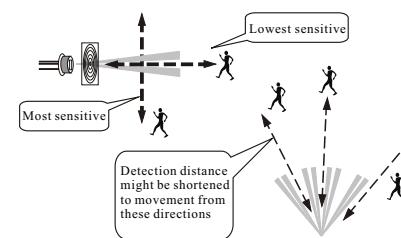
Keep away from strong EMI interference



This installation cannot be charged

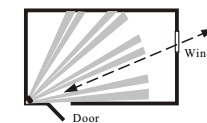
On installation angle

Detection is with mechanical difference to intrusion angles



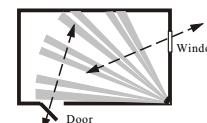
On installation position

Unreasonable installation position



Detection is not sensitive to intrusion from window in this way

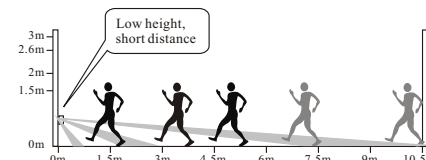
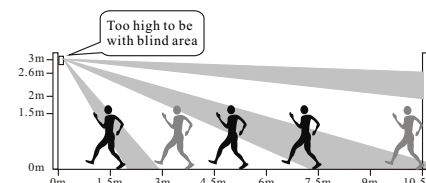
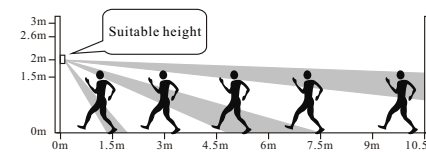
Best installation



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

On installation height

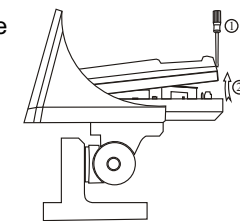
Recommended installation height is 1.8-2.4m



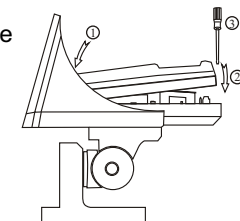
6.Installation & Bracket

For the best protected detection Angle, the detector should be installed at a height of 2.1 m and adjusted vertically to zero. Make sure that there are no interference sources working near the detector and that there is a wide field of view in front of the detector. Place the product in the corresponding position to be installed, mark three holes on the wall, drill 40mm deep holes with a 6mm diameter drill bit, and then drive the rubber plug into the holes, screw on the screw, fix the product on the wall, and finally tighten the three screws.

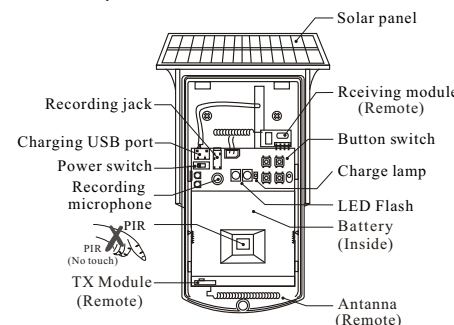
Open the case



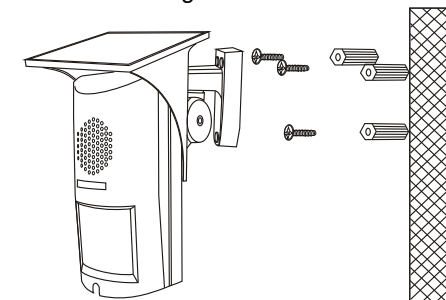
Close the case



Internal parts



Wall mounting

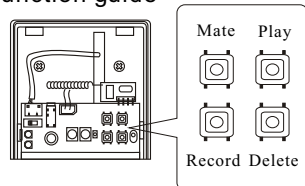


7. Walking test & Setting

After turning on the power switch, the red and blue LED flashes for about 30 seconds, and then the product enters the standby detection state.

Voice recording can be performed in two ways.

Key function guide



Mate: Remote control learning key

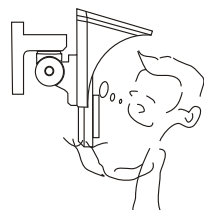
Record: Record key

Play: Voice preview key

Delete: Voice delete key

Built-in microphone recording

Before recording, press the **delete key** once (after deleting, it will sound "bibi" twice), then press the **recording key**, and record after the sound of "bi" is emitted. The length of the voice is pressed, and two "bibi" sound will be emitted when the recording is finished. After the recording is completed, you can tap the **voice preview key** once to listen to the recording effect. If you are not satisfied, you can delete the recording repeatedly until you are satisfied.

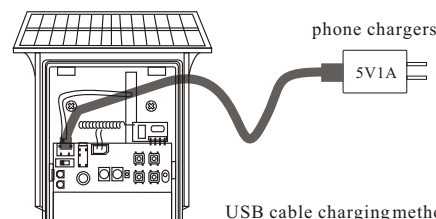


When recording, the distance between the mouth and the microphone head is controlled within 5 cm, the recording effect will be better.

Low voltage alarm and charging

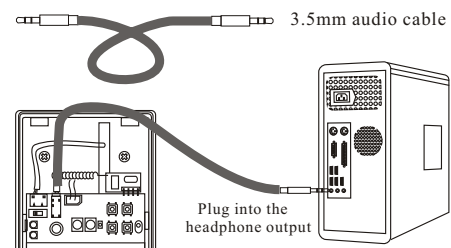
As long as the product is installed in a position that can keep the sun shining for more than 3 hours a day, it can be used normally, if the product battery voltage is lower than 3.3V, the system will issue a "low voltage code" prompt, at this time, it is necessary to take out the product, USB charging cable, the phone extra charge for the product, charging time is about 3 hours.

When charging, it is not necessary to turn on the power switch on the PCB. The green LED light is on, indicating charging. When the battery is fully charged, the green LED lights go out.



USB cable charging method

Use computer (mobile) playback recording



According to the figure, use 3.5mm audio cable to connect both ends of the alarm and computer; Before recording, press the **delete key** once (after deleting, it will sound "bibi" twice), then hold down the **recording key**, and play the voice on the computer after the sound of "bi", and press as long as the voice is long, and sound "bibi" twice when the recording is finished. After the recording is completed, you can tap the **voice preview key** once to listen to the recording effect. If you are not satisfied, you can delete the recording repeatedly until you are satisfied.

When the audio cable is inserted into the detector input hole, the microphone recording function automatically fails.

When recording by computer or mobile phone, the output volume of the computers should be adjusted appropriately to obtain the best recording effect.

LED display

Status	Red and blue flashing lights
Warming-up	Red & blue flashing alternated 40 times
Alarm	Red and blue flashing synchronize with the alarm voice
Undervoltage	Blink slowly 3 times
Arm	The red light flashes every 10s
Disarm	The blue light flashes every 10s

Remote control and wireless pir mate (only available on some models)

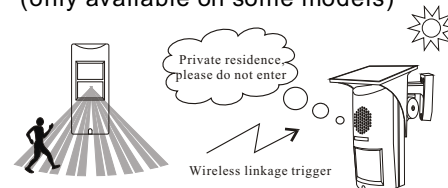
Click "Mate" 4 times, the system will enter the code mode (red flashing light on), at this time, trigger a remote control or other wireless detector (must be the company's similar products), you can automatically match the code, the system issued "code success", the remote control after the successful match, you can remote control the product. Press the "arm key", the product will issue "system arm"; Press the "Disarm key" and the product will say "System disarm".

Remove remotes and detectors (available only on some models)

If you long press the "Mate" key for more than 5s, the system will automatically delete all the matched remote controls and detectors, and issue a "delete success".

This product can link 8 remote controls or wireless detectors (products provided by the company are required), which can be easily and flexibly applied to all kinds of places to play the role of early warning and alarm.

Wireless linkage mode (only available on some models)



Walking test

After the product is installed in place, the horizontal movement of the performance of the PIR can be checked in front of the detector. When the tester moves in front of the product, the red and blue high-brightness LED flashes back and forth and there is a voice prompt that indicates that the alarm has been triggered. Through the walking test, the detection range of the PIR can be determined. The highest sensitivity of the PIR is to make lateral movement in front of the detector. (In the detection area, repeated walking tests were carried out to more accurately adjust the detection area of PIR).

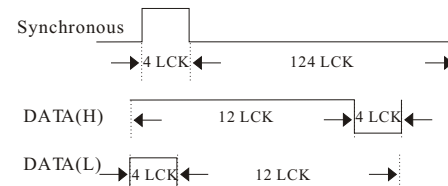
If the product is not used for a long time, it is also necessary to charge the product with a mobile phone charger every 3 months.

8. Encoded information type

Coding format

The wireless coding format of this product is as follows:

synchronous code	16Bit ID	D1	D2	D3	D4
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Definition: 1 LCK=8 pcs OSC CLOCK

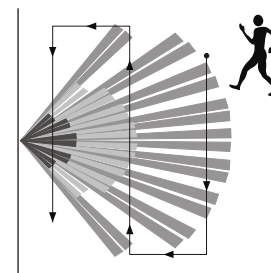
9. Pet immunity

Pet immunity is a high index for judgment of PIR detector function, we adopt 2 methods on pet immunity process at the same time:

1. Physical method: special process of Fresnel lens detection area to lower false alarm rate caused by small animals
2. Software analysis method: analysis on technical data on detector signal and make comparison with data base in the microchip in detector, then draw a conclusion on moving object to verify it is human being or pets.

From above we can know that at function of pet immunity is relevant, this relativity includes 2 parts: firstly, pet immunity is relevant, but its false alarm rate is greatly lowered comparing detectors without pet immunity function, at the same time, there is limitation on pets' quantity and size. Secondly, installation is very important to pet immunity, it is with some requirements, not a random installation can reach a good result, so please read details in the manual before installation.

TEST PATH



If the detector does not record, it will not be able to trigger the alarm, the test method can press the "voice preview key" to see whether there is a voice, if not, please record first.

If the product is not used for a long time, it is also necessary to charge the product with a mobile phone charger every 3 months.

Transmit mode

3 group of data to be sent in 2 seconds in a variable area.

Coding specification

Low voltage: *D (1101)*

Alarm: *B (1011)*

Rule

Low voltage detection is 2.4V, one scan per minute.

How can wireless detectors be connected to wired control panel?

It is recommended to power up before installation, so that the alarm host can "learn" the identity ID of the detector: turn on the power switch, after the self-test is completed, operate the relevant Settings of the control panel, gently shake in front of the detector, let the detector alarm, you can send the identity ID to the control panel.



Note: when pet immunity function is required while multi-directional bracket is used, detector should be vertical to wall, no leaning. And bracket adjustment is allowed in horizontal direction, detector should be installed vertically to ground!

Note: we can omit those animals below 1m or 20kg on ground, but as pets approaching detector, its moving frequency will change, and pet immune function will be weakened, so a reasonable position is strongly suggested to be selected to avoid pets' approaching.

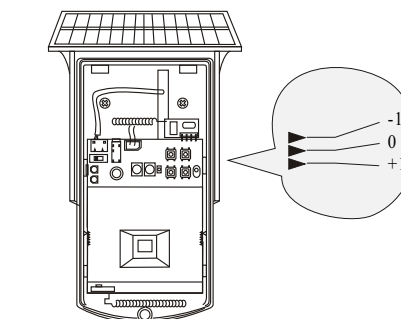
10. Vertical adjustment

Detector can get its best detection by setting of PCB vertical height, strongly suggest installer should make optimum setting to PCB vertical height according to actual environment.

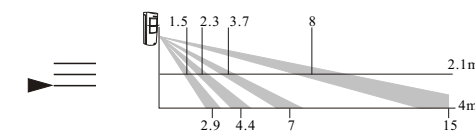
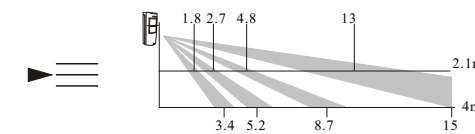
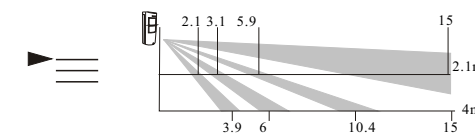
Mark-1: when PCB is set to this position, detector is with best pet immunity.

Mark 0: when PCB is set to this position, detector is at most standard status.

Mark+1: when PCB is set to this position, detector can avoid ambitious crawl intrusion; mean while, pet immunity function will be lowered.



Effect chart on wide angle lens adjustment



Note: if multi-directional bracket is used, detection range will be different from description above.

11. Common trouble & solutions

Trouble	Possible reasons	Solution
Power LED doesn't light	1. Battery low voltage (below 3.3V) 2. Poor contact between battery clip and battery	1. Check battery voltage and change new battery 2. Re-install battery or polish contact
Detection less than 12m	1. Improper installation height 2. Improper installation angle	1. Re-adjust installation height (1.8-2.4m) 2. Adjust installation angle
Short battery life	The installation point lacks sun irradiation	1. Five hours of charging via USB port 2. Install the detector in a sunny place
Not compatible with control panel	1. Different protocol 2. Improper resistance 3. Wrong data set	1. Select proper codes and protocol 2. Select proper resistance 3. Select proper data set
Short wireless distance	Control panel can not receive alarm signal from detector after alarm is triggered.	1. Change detector position 2. Pull out antenna on control panel to longest position 3. Select high sensitivity control panel 4. Add a repeater 5. Environment is not suitable for wireless control panel installation
False alarm	1. Periodical alarm, 1 alarm each 60 minutes 2. Strong interference nearby 3. Pets' height and weight more than detection limitation 4. Strong environment interference	1. Low battery voltage, change it 2. Keep detector away from strong interference 3. Pay attention to big animal's intrusion 4. Set sensitivity to 3P

Note: In case of product upgrade, parameters and specifications are subject to change without prior notice.

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