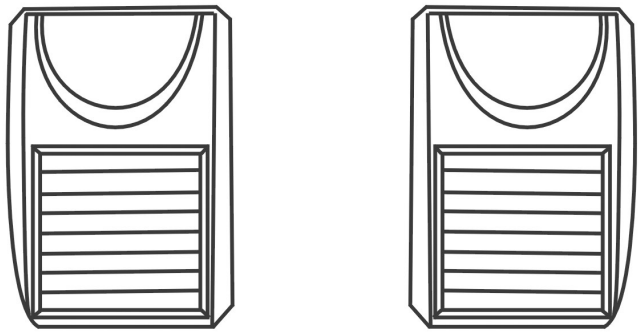
User Manual for Solar-Powered Double-Beam Active Infrared Detector

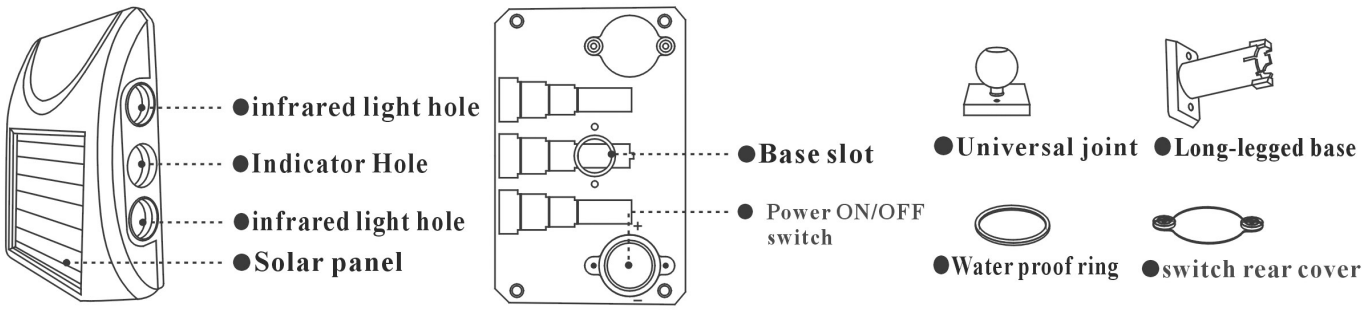


HB-T001A2

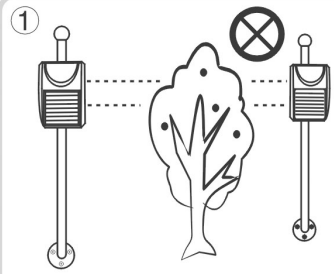
01 Product Overview

The Solar-Powered Double-Beam Wireless Active Infrared Detector for Household Applications is a new-type hi-tech environmentally-friendly product and has obtained national patent. It applies the sun's UV rays to supply power and charge for itself, and adopts the wireless signal transmission device to tran smit alarm signals instead of power cable and signal line, which is widely applied in home, schools and office areas for burglary proof purpose.

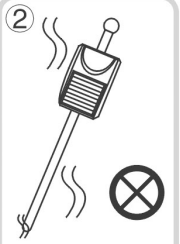
02 Name of Parts



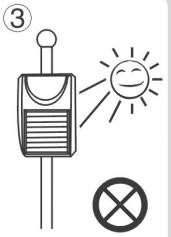
03 Notes of Installation



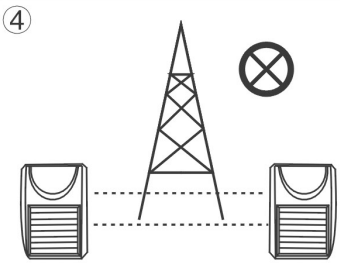
Note 1: Make sure that there is no ob stacle between the transmitting terminal and the receiving terminal.



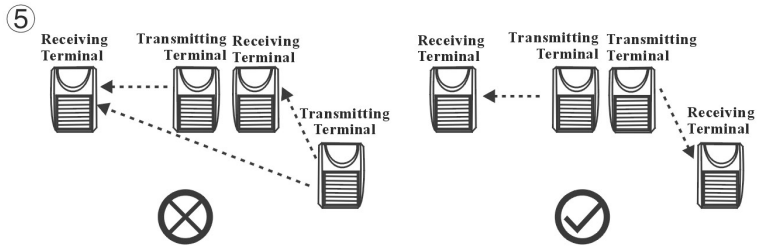
Note 2: Never install the detector at an inclined angle.



Note 3: Keep the infraredlight hole exposed to direct sunlight.



Note 4: The high-voltage tower and the signal tower may influence wireless transmissi



Note 5: Multiple detectors shall be installed for long-distance alarm in accordance with the installation instructions shown in the above-mentioned figure to avoid mutual interference among beams.

Other Important Precautions

①When installing the switch rear cover, do not forget to install the water proof ring to ensure excellent airtightness.
②Before installation, remove the plastic film on the solar panel of the active detector.
③The detector consumes a lot of power when transmitting alarm signals, so it shall not be installed in any areas near door access systems or areas where alarm is frequently triggered.
④This product is a solar-powered wireless product, so it shall not be installed, tested or operated indoors or in any dark place with a sunlight intensity of less than 2200lux.
⑤Before first operating this product, please follow the technical guide provided by the supplier.
Special Statement: Any loss resulting from failure or damage caused by improper use or failure to observe precautions or instruction manual shall be borne by users.

04 Operating Phenomena

HB-T001A2 Type Solar-Powered Double-Beam Wireless Active Infrared Detector

①When the detector is powered on, the infrared light at the transmitting terminal <F> can shine upon the middle of the receiving terminal <S> and the infrared light at the receiving terminal <S> can shine upon the middle of the sending terminal <F>. Keep the transmitting terminal <F> aligned with the receiving terminal <S>.

②After the detector normally starts up, the infrared light at the transmitting terminal <F> and the infrared light at the receiving terminal <S>are on continuously for 30s and then goes out.

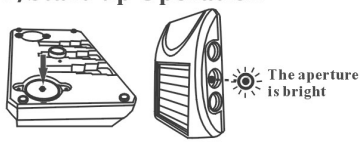
③When the transmitting terminal <F> is aligned with the receiving terminal <S>, in the first 20s, the infrared light at the transmitting terminal <F> and the infrared light the receiving terminal <S> are turned on two times every 10s, and after 10s, the infrared light at the receiving terminal <S>blinks for 5-10s and then goes out, which indicates the detector works normally.

④ When the infrared light holes of the detector are completely blocked up, the infrared light at the receiving terminal <S>blinks 3 times, and the detector transmits an alarm signal. The duration from the time when alarm light lights up to the time when the detector works normally again is 5-10 seconds.

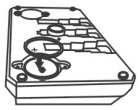
Note: The detector shall be restarted after about 30s after power off. Restarting the detector within the discharge time may cause the detector not to be restarted normally.

05 Installation Procedures

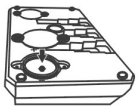
(1)Start-up Operation



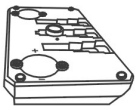
①When pressing ON, the detector indicator lights up.



②Install the water proof rubber ring



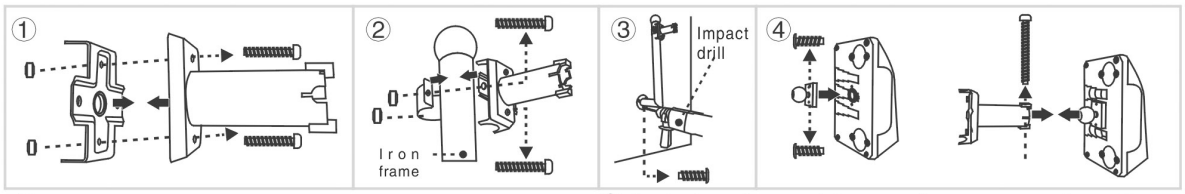
③Close the switch rear cover



④Fix the switch rear cover with screws

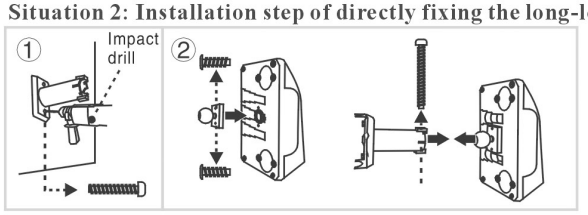
(2)How to Install the Detector

Situation 1: Installation step of fixing iron frame on the wall



①Fix cross iron base and the long-legged base with screws
②Fix the arc iron base and cross iron base in the iron frame
③Fix the iron frame with expansion screws on the wall
④Fix the long-legged base and detector

Situation 2: Installation step of directly fixing the long-legged base on the wall

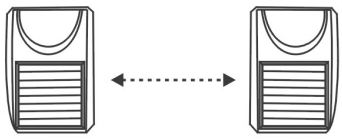


①Fix the long-legged base with expansion screws on the wall
②Fix the long-legged base and detector
【Note】 ①When install the iron frame, mark and punch at the screw hole position of the frame.
②When install the plastic long-legged base, mark and punch at the perforation position of the plastic long-legged base.

06 Installation & Calibration Precautions and Test Methods

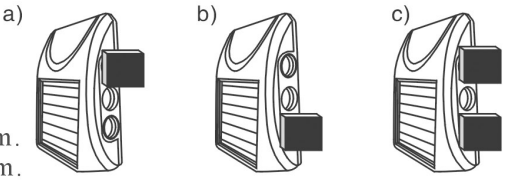
Calibration Method

①Make sure the detector is installed in the same horizontal and vertical plane.
②Rotate the universal joint to ensure both the transmitting terminal and the receiving terminal are in the same horizontal and vertical plane.
③Check if the indicators at the receiving terminal of the detector blink. If these indicators blink, that indicates the transmitting terminal is well aligned with the receiving terminal. If these indicators do not blink, adjust the height of the transmitting terminal and the receiving height until these indicators blink.



Method of Calibration Detection

①Check whether the light of the detector twinkles and enters into working state.
②Plug-hole:
a) Plug the upper infrared rays aperture, and the detector does not alarm.
b) Plug the lower infrared rays aperture, and the detector does not alarm.
c) Plug the two infrared rays apertures, and the detector alarms.



Alarm method

①Infrared light holes are not completely blocked up(Fingers do not completely block up the infrared light holes at the sending terminal and the receiving terminal when keeping the transmitting terminal aligned with the receiving terminal).
②The detector does not alarm if the intruding object moves under free fall.
③The infrared light holes of the grating are completely blocked up for more than 1s by thick materials.

07 Check in Abnormal

Failure Symptoms	Failure Reasons	Failure Recovery Methods
The detector alarm light lights up, but does not alarm	①The light holes of the detector are not completely blocked up.	Completely obstruct with thick things
	②The host is unprotected	Protect with remote controller and then start alarm
	③The antenna of the host is not pulled out and the antenna distance exceeds the product specification	Pull out the antenna
	④The detector does not automatically learn code with the host.	Keep the detector automatically learn code with the host
The detector alarm light does not light up	①The detector has been not calibrated for a long time, and battery protection works.	Recalibrate
	②The detector battery voltage gets low and automatically runs in battery protection mode.	Charge the detector in a sunny place. The battery protection voltage is 2.8V ± 0.1V
	③If the light is not bright but alarms, the indicator light is broken.	Return to the factory to repair
The detector cannot work normally when powered on.	①The switches at the sending terminal and the receiving terminal are not normally turned on.	When powered on, check if the indicator lights up
	②There is some difference among detector codes.	Check the code
	③The voltage of the lithium battery is too low.	If the measured voltage is lower than 2.8V ± 0.1V, the detector shall be placed in a sunny place and then charged.

This device complies with Part 15 of the FCC Rules.Operation is subject to the following two conditions:
(1)this device may not cause harmful interference, and
(2)this device must accept any interference received, including interference that may cause undesired operation.

FCC Warning

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment

FCC Statement

NOTE: This equipment has been tested and found to comply with the Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications..

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
1.Reorient or relocate the receiving antenna.
2.Increase the separation between the equipment and receiver.
3.Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4.Consuit the dealer or an experienced radio/TV technician for help.

08 Technical Parameters

Technical Parameters / Product Name / Parameter Items	Solar-Powered Double-Beam Active Infrared Detector（HB-T001A2）
Infrared Distance	10 m
Wireless Transmitting Distance	100 m
Wireless Transmitting Frequency	FM:433MHz
Maximum alarm times in 24 hours	Not more than 50 times
Battery Capacity	500mA (Transmitting Terminal), 500mA (Receiving Terminal)
Working environment temperature range	–30℃~70℃
Number of infrared beams	2 beams
Operating Voltage	3.3V
Battery Type	LiFePO4 Battery
Static Operating Current	Transmitting terminal≤0.4mA, receiving terminal≤0.4mA
Infrared light frequency	secondary modulation & encoding based on 38KHZ
Infrared light wavelength	940nm ± 20nm
Solar electric panel output current	≥1mA at a light intensity of 1600LX (Note：The outdoor light intensity in cloudy or rainy days is about 2000LX)

09 Product Size