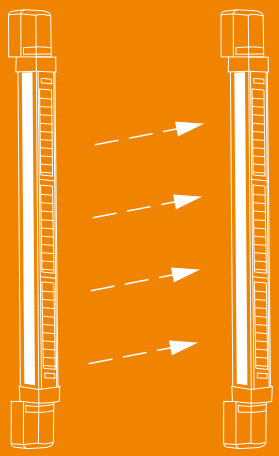
Solar-powered Multi-beam Active Wireless Infrared Grating

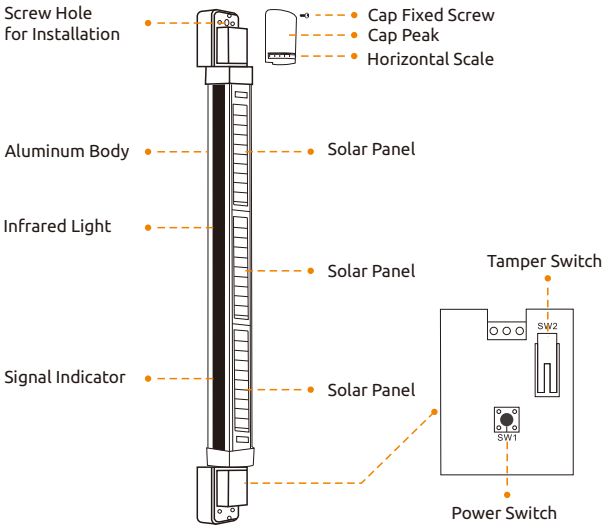
User Manual



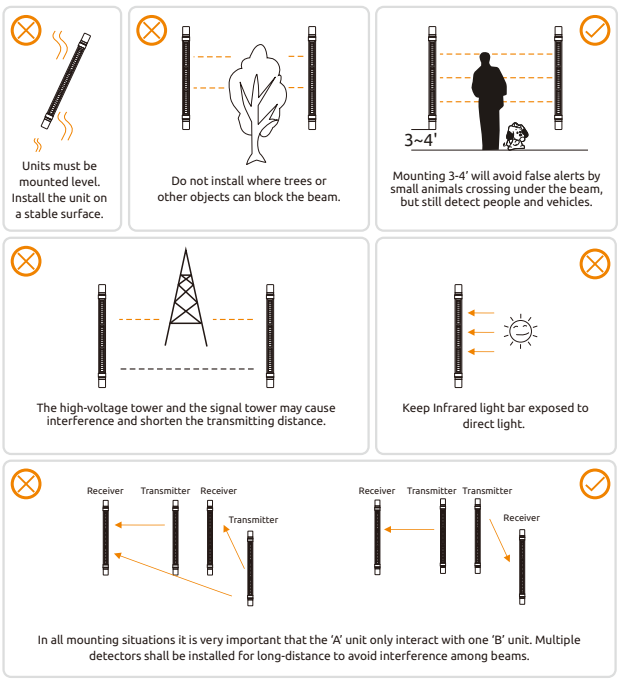
Solar Powered Photoelectric Beams Detector

The wireless solar-powered photoelectric beams detector is made for perimeter protection like courtyard, window, door entrance, garage with range of 20m distance. It incorporates solar powering and infrared technology into its sophisticated design, plus infrared sensing terminals to cut out all burglar activity from your property. This detector is powered by lithium batteries that recharge through built-in solar panels, which means it works 24/7 nonstop for ultimate security protection. It uses active infrared to detect anything passes through the sensor pair and break both beams and sends a signal to alarm panel, no wiring required. It avoids illegal invasion to residential house, home, office, business by courtyard, garage, window, and balcony.

Components



Installation Location



Notice

1.Never install this grating in door access systems, passages, areas prone to trigger an alarm, or area which could trigger an alarm more than 50 times per 24 hours.

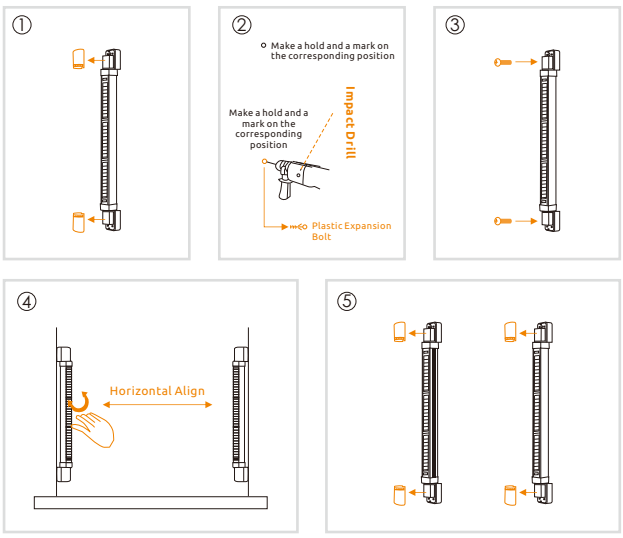
2. This detector is a solar powered wireless product, so it shall not be installed, tested or operated indoors or in any dark place with a sunlight intensity of less than 2200lux. (Raining days with 2200lux sunlight intensity).

3.This product can trigger an alarm less than 50 times under normal sunlight conditions. Never try to test maximum alarm times indoors, otherwise, it may cause batteries subject to low voltage problems, which may impede operation of this product, and even cause damage to this product.

4.Before 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.

Installation Method



1. Remove the caps respectively from the upper and lower ends of the grating.
2. Get the grating prepared for installation, keep it in a horizontal plane, make a mark at the wall surface opposite to screw hole with a marker pen, make a hole with a percussion drill, and then insert a plastic expansion bolt into the hole.
3. Keep the grating aligned with the screw hole, and then mount the grating onto the wall with metal screw.
4. Grating test and calibrate optical axis.
5. Put the caps back on the grating after completing calibration.

Alignment between transmitter and receiver

1. Put the transmitter and receiver in the horizontal place.
2. Open the red cover with a screw, press the SW button for 3-5 times to turn on the grating.
3. After 6 beeps, the receiver and transmitter start interconnecting.
4. Once the receiver's LED indicator lights off, it means aligned successfully.
5. Test if they connected, just need to remove the receiver from the transmitter for 2s, the receiver will be light up.

Note:
Turn off the grating: press SW1 button for 3-5 times.
5-12V power supply for back up.

Other Precautions

1. In normal operation state, when the"on/off" key is pressed twice, a turn-off signal will be sent after an alarm signal is transmitted.
2. If the receiving terminal fails to receive the infrared light pulse emitted by the transmitting terminal, the indicator lamp on the receiving terminal will light up continuously for 30 minutes, and then go out. Once the receiving terminal has received the infrared light pulse emitted by the transmitting terminal, the indicator light at the receiving terminal will light up intermittently, and then flash, which signifies the grating is normally operating.
3. After the grating is normally powered on, if no natural light or light is reflected onto the grating every 100 hours, the grating will be automatically powered off.
4. For the finished grating, the transmitting terminal has been well paired with the receiving terminal. Any unauthorized pairing of the transmitting terminal and the receiving terminal is impermissible. If any special circumstance occurs, please contact the manufacturer immediately.
5. Never put the grating in any dark place or cover the solar panel with any materials at power-on, otherwise, the grating may not be normally powered on.

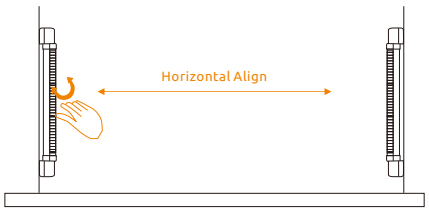
Using Photoelectric Beam

Before using it. the transmitter and receiver should be alianed to each other and enrolled to the alarm control panel.

Enrolled to Control Panel

When the control panel is in enrolling state, there are three ways to enroll:
1: Blocking the grating in the middle more than 1s with a height ⩾28cm thick material and move away quickly.
2. Remove the receiver from the transmitter for 2s, make the receiver and transmitter are staggered from each other.
3. Press the SW1 Power Switch of receiver for 1 time. The sensor will send a signal to the control panel, then control panel will beep once, it shows enrolled successfully.
Receiver lights five seconds, then the indicator light flashes for 30seconds, and off, the detector work again.

Installation & Calibration Precaution and Test Method



The Best Way To Calibrate

1. Transmitter aligns receiver.
2. Adjust the light housing, turn to the left slowly until the alarm lights up, write down the angel. Then slowly turn to the right until the alarm lights up, write down the angel. Two angels of the mid-point of this axis is the best position of the receiver. The same method to debug the transmitters best angel.

Testing

1. Block the grating in the middle more than 1 s with a height ⩾28cm thick material.
2. Manual trigger SW2 button, if the alarm host received the grating's alarm signal, grating match codes successfully.

Check For Abnormality

Failure	Failure Reason	Failure Recovery Method
The grating does not alarm, but the alarm lamp lights up	1.The infrared light holes of the grating are not completely locked up.	Completely block up infrared light holes with thick materials
	2.The host is not armed.	Arm the host by remote control, and then trigger an alarm
	3.The grating has been not automatically learn code with the host.	Keep the grating automatically learn code with the host
The alarm lamp of grating does not light up	1. The grating has been not calibrated for a long time, and battery protection works.	Calibrate the grating again
	2.The battery voltage of the grating is too low, so that the grating automatically runs in battery protection mode.	Charge the grating in a sunny place. Return batteries to the place of purchase if batteries fail to work
	3.If the alarm lamp does not light up, but the grating can alarm, it means the lamp does not work.	Return the grating to the place of purchase inspection and maintenance
The grating does not normally work when powered on	1.Inappropriately powered on	Check if the active in infrared grating work normally when powered on
	2.Not keep the transmitting terminal of the grating	Keep the transmitting terminal of the grating aligned with the receiving terminal of the grating
The grating gives out a prompt sound lasting for 2 seconds when powered on	1.The battery voltage of grating is too low	Charge the grating in a sunny place
	2.When powered on, the grating shall be kept in a shady place or the solar panel of the grating shall be covered with something	Make sure the solar panel of the grating is kept in a sunny place when turning on the grating
The grating does not give out a sound prompt when powered on	1.Any operation error occurs when pressing the ON/OFF button	Press the ON/OFF button is a proper way
	2.The grating does not work	Return the grating to the place of purchase inspection and maintenance

Technology Parameters

Technical Parameter / Product Name / Parameter Items	Solar-powered Multi-beam Active Wireless Infrared Grating
Infrared Distance	20M(outdoor)
Wireless Transmitter	100M
Maximum Alarm Times in 24 hours	Not more than 50 times
Battery Capacity	500mAh(Transmitter)1000mAh(Receiving)
Working Environment Temperature Range	-25℃-65℃
Number of Infrared Beams	4 beams
Operation Voltage	3.3V
Battery Type	LiFep04 battery
Static Operating Current	Transmitter≤0.5mA, Receiving≤0.3mA
Infrared Light Wave Length	940nm±20nm
Solar Electric Panel Output Current	4-beam grating≥1.5mA at a light intensity of 1800LX (Note:The outdoor light intensity in cloudy or rainy days is 2000LX)
Dimension	662X46X60mm