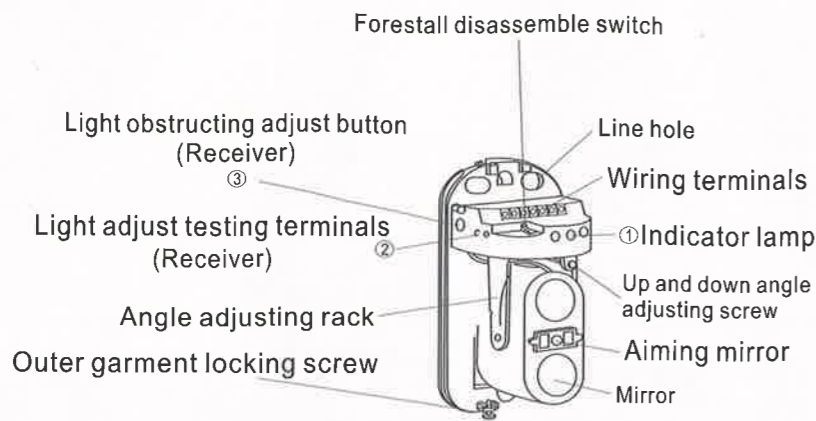
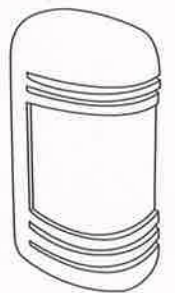


# Part name

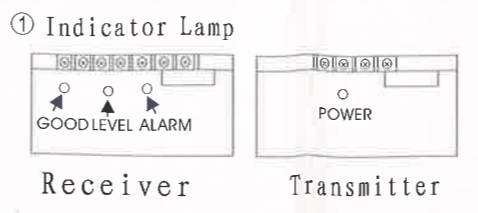


Outer garment

The body

# ACTIVE INFRARED DETECTOR Usage manual

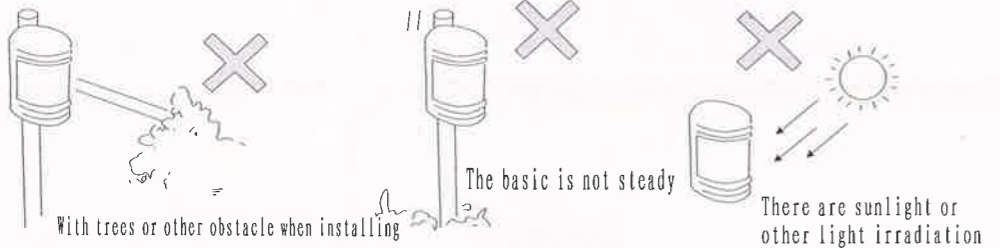
- double beam -20
- double beam -30
- double beam -40
- double beam -60
- double beam -80
- double beam -100
- double beam -150
- double beam -200



- ① Indicator Lamp
- LEVEL: Indicator lamp (red) The brightness will be changed according to the different precision of the light shaft
- ALARM: The light will be on when alarming
- GOOD: Indicator lamp (green), the green lamp will be on when the light shaft is in the right direction, otherwise the lamp will not be on.
- ② Use it when check the precision of the light shaft (Please refer to the using instruction)
- ③ Use it when set light obstructing time (Please refer to the using instruction)

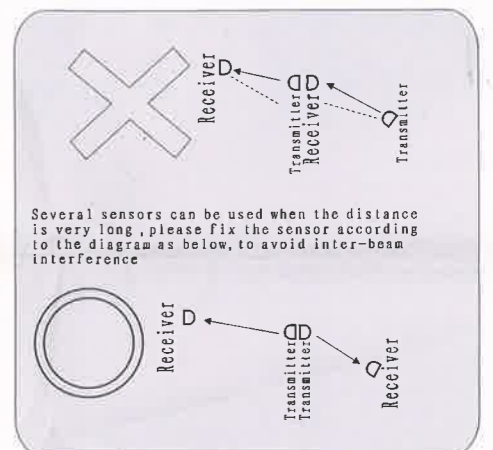
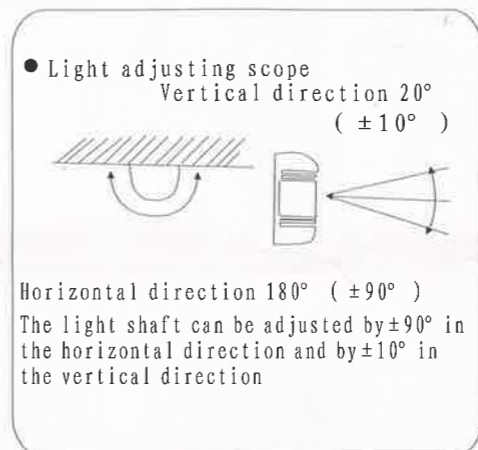
## 2 Attention

• Please don't install the sensor in the following situations



• The fix height and the alarm distance

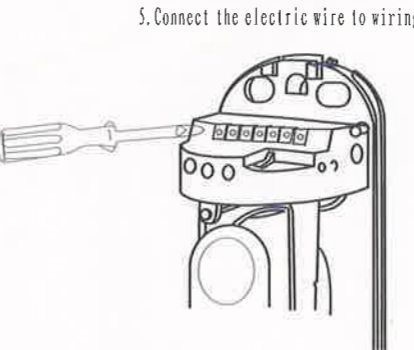
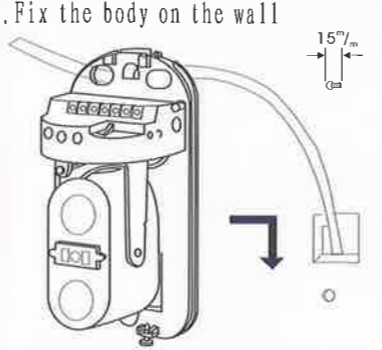
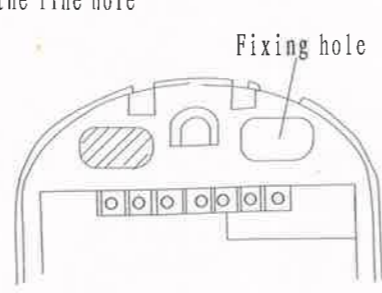
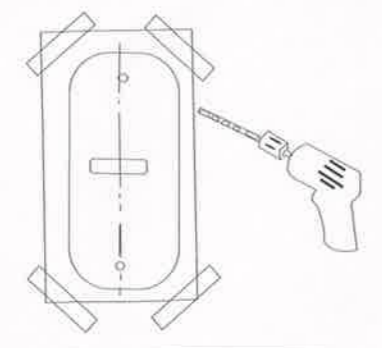
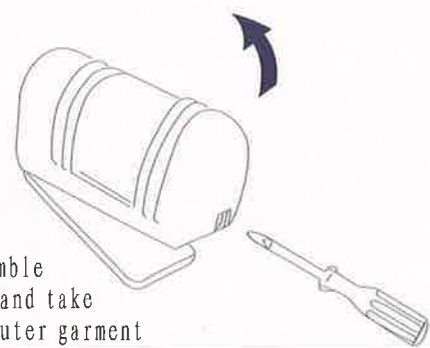
| Model | Alarm distance | Light angle |
|-------|----------------|-------------|
| 20    | 20m            | 0.8m        |
| 30    | 30m            | 0.9m        |
| 40    | 40m            | 1.5m        |
| 60    | 60m            | 1.8m        |
| 80    | 80m            | 2.4m        |
| 100   | 100m           | 3.0m        |
| 150   | 150m           | 3.6m        |
| 200   | 200m           | 4.2m        |



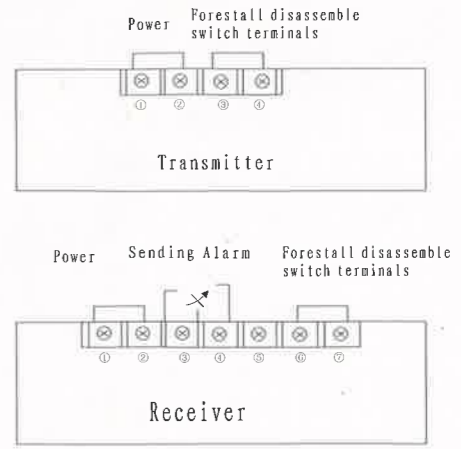
## 3 Fixing way

• Wall fixing way

2. Fix the body and make holes on the wall
3. Pierce the electric wire through the line hole
4. Fix the body on the wall
5. Connect the electric wire to wiring terminals



Line distributing terminals

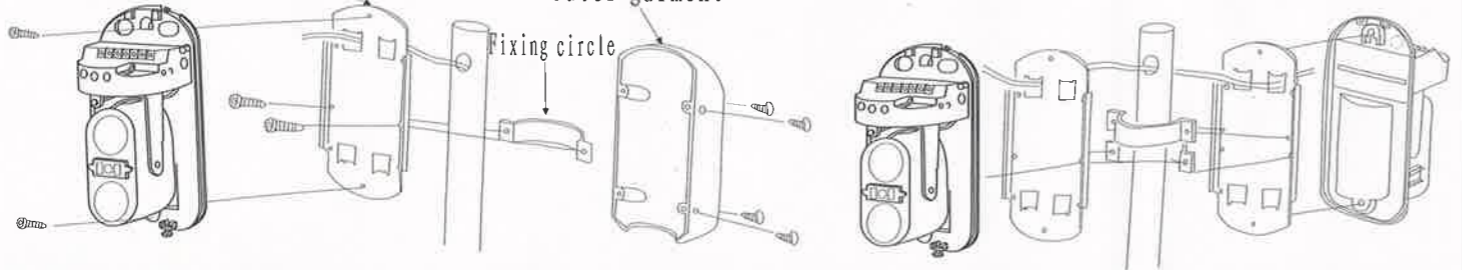


• The way to fix the steady trestle

1. Make holes in the trestle and pierce the line through it.

2. Take down the outer garment
3. Fix the basic board on the trestle

• Refer to the following picture when fixing back to back



6. Fix the outer garment after finishing adjusting the light shaft obstructing time

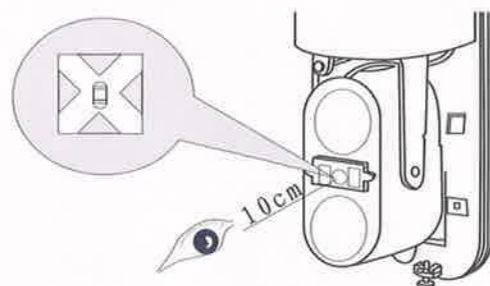
The line distributing distance from detector to signal receiving instrument

| Line diameter                 | Voltage |        |
|-------------------------------|---------|--------|
|                               | DC12V   | DC 24V |
| 0.5mm <sup>2</sup> ( φ 0.8 )  | 300m    | 600m   |
| 0.75mm <sup>2</sup> ( φ 1.0 ) | 400m    | 800m   |
| 1.25mm <sup>2</sup> ( φ 1.2 ) | 700m    | 1400m  |
| 2.0mm <sup>2</sup> ( φ 1.6 )  | 1000m   | 2000m  |

# 4 Adjust the lights

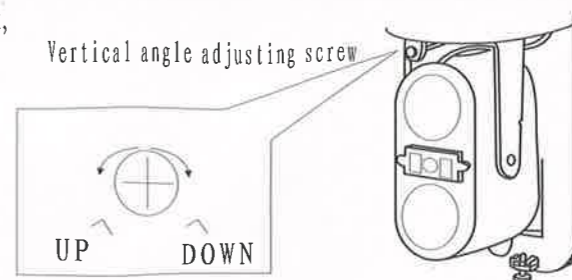
1. Take down the outer garment and input power

2. Check the effect from the aiming mirror on the right about 10cm away.



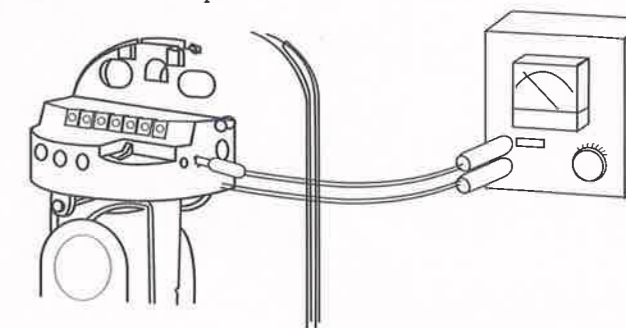
3. Adjust the up and down angle adjusting screw and horizontal adjusting rack, make the opposite detector image into middle of the aiming mirror. Meanwhile the GOOD indicator lamp will be on (otherwise please keep adjusting the light axis)

The brighter of red LED, the higher precision of the light shaft aiming.



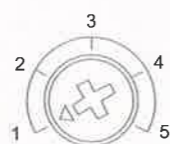
•The best light adjusting way-measurement test hole output

1. Plug the test pen into the test hole  
2. First adjust horizontal angle, until reach the maximum output voltage of the test hole, then adjust vertical direction, the way is the same with horizontal angle.  
3. If can't get the voltage of 3.8V or higher, then need to adjust the transmitter and receiver again.



# 5 Adjust the time of obstructing light

The obstructing time of receiver can be adjusted according to the picture. Generally setting time should be a little less than the invading time.



Adjust the light obstructing time

|                       |                        |                            |                              |
|-----------------------|------------------------|----------------------------|------------------------------|
| 1.  Fast run (6.9m/s) | 2.  Fast walk (1.2m/s) | 3.  Ordinary walk (0.7m/s) | 4.  Slow motion (0.3~0.5m/s) |
|-----------------------|------------------------|----------------------------|------------------------------|

# 6 Test

After fixing the detector, the walking test should be taken. Please process motion confirmation according to the chart.

|             | Condition          | Condition           |
|-------------|--------------------|---------------------|
| Transmitter | Transmitting light | Green LED light on  |
| Receiver    | Alert              | GOOD-LEVEL light on |
|             | Alarm              | Alarm light on      |

# 7 Check the unusual condition

| Trouble   | Reason  | Countermeasure  |
|---|---|---|
| The transmitter indicating lamp is not bright   | Unsuitable power voltage (break or short circuit)   | Check the power line  |
| The receiver indicating lamp is not bright  | Unsuitable power voltage (break or short circuit)   | Check the power line  |
| The receiver indicating lamp is not bright when light interrupted                                   | 1. Reflected or other transmitter light enter into receiver<br>2. Two beams of light are not interrupted at the same time<br>3. Interrupting time is too short  | 1. Remove reflected object or change light axis direction<br>2. Interrupt two beams of light at the same time<br>3. Extend the covering time  |
| After interrupting light, alarm indicator lamp of receiver is bright, but no output of alarm signal | 1. The line is break or short circuit<br>2. The line point is insensitive   | Check line and line point   |
| The alarm indicator lamp is always bright   | 1. The light axis is misaligned<br>2. There are obstacle between transmitter and receiver<br>3. The outer garment is polluted   | 1. Adjust the light axis again<br>2. Get rid of obstacle<br>3. Clean the outer garment  |
| There are output of alarm signal off and on.  | 1. The line is not good<br>2. The power voltage is changeable<br>3. There are moving obstacle between transmitter and receiver<br>4. Installation base is not stable<br>5. Light axis coincidence precision is insufficient<br>6. Other moving object interrupt the light | 1. Check the line<br>2. Check the power<br>3. Get rid of obstacle or change the installation site<br>4. Choose well-grounded site<br>5. Adjust light axis again<br>6. Adjust obstructing light time or change installation site |

# 8 Technology parameter

| Model                             | 20   | 30       | 40       | 60       | 80   | 100  | 150  | 200  |
|-----------------------------------|--|----------|----------|----------|------|------|------|------|
| Alarm distance                    | Outdoor  | 20m      | 30m      | 40m      | 60m  | 80m  | 100m | 200m |
|                                   | Indoor   | 60m      | 90m      | 120m     | 180m | 240m | 300m | 600m |
| The number of light               | Two  |          |          |          |      |      |      |      |
| Detection way                     | Interrupt two light beams at the same time                         |          |          |          |      |      |      |      |
| Light source                      | Infrared LED   |          |          |          |      |      |      |      |
| Response speed                    | 50~700msec   |          |          |          |      |      |      |      |
| Alarm output                      | Relay contact output: NO or NC; Contact capacity: AC/DC30V 0.5Amax |          |          |          |      |      |      |      |
| Power voltage                     | DC12~24V AC11~18V  |          |          |          |      |      |      |      |
| Current consumption               | 65mA max   | 65mA max | 70mA max | 70mA max |      |      |      |      |
| Temperature scope                 | -25°C~+55°C  |          |          |          |      |      |      |      |
| Size                              | Refer to the outer shape   |          |          |          |      |      |      |      |
| Tamper output                     | Contact output: NC; Contact capacity: DC24V 0.5Amax                |          |          |          |      |      |      |      |
| Light adjusting angle(horizontal) | 180° (±90°)  |          |          |          |      |      |      |      |
| Light adjusting angle(vertical)   | 20° (±10°)   |          |          |          |      |      |      |      |
| Deal with frost and fog           | Ultrasonic wave implement  |          |          |          |      |      |      |      |
| Other attached implement          | Receiving light indicator, OK indicator, testing terminals         |          |          |          |      |      |      |      |
| Material                          | PC   |          |          |          |      |      |      |      |
| GW                                | 1000g  |          |          |          |      |      |      |      |

# 9 The size of outer shape

