

# MULTI-BEAM INFRARED BARRIER(V1.4)

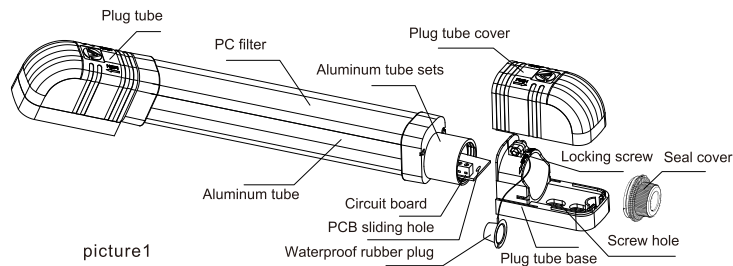
## 1.Description

The multi-beam infrared barrier adopts updated intelligent high technology for outdoor and indoor use, easy installation, convenient adjustment, elegant appearance, suitable for offices, schools, villas, factories, garage entry and perimeter protection, effectively ensuring your family safety and avoiding property damage.

## 2.Features

- 1.Integrated and fully sealed, real full external lines, frequency selection, 360 rotated infinitely, tamper switch and power options.
- 2.Utilizing the digital variable frequency and CPU microprocessor digital control technology. More stability and higher reliability, stronger anti-interference ability.
- 3.Adopting high-grade aluminum alloy shell with tamper and anti-interference function.
- 4.Two frequencies are optional, completely solving the adjacent interference.
- 5.Dual-beam identification function can effectively prevent the false alarm caused by small animals, birds, etc.
- 6.High sensitivity,adjustable preventive alert distance ,AGC circuit
- 7.Resistant to rain, snow, fog and frost.
- 8.Detection distance: 10-100 meters
- 9.Beams :2-12beams.

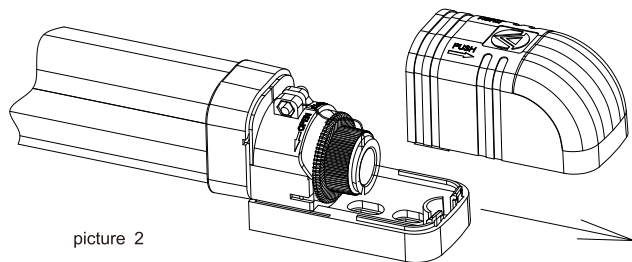
## 3.Product diagram



picture 1

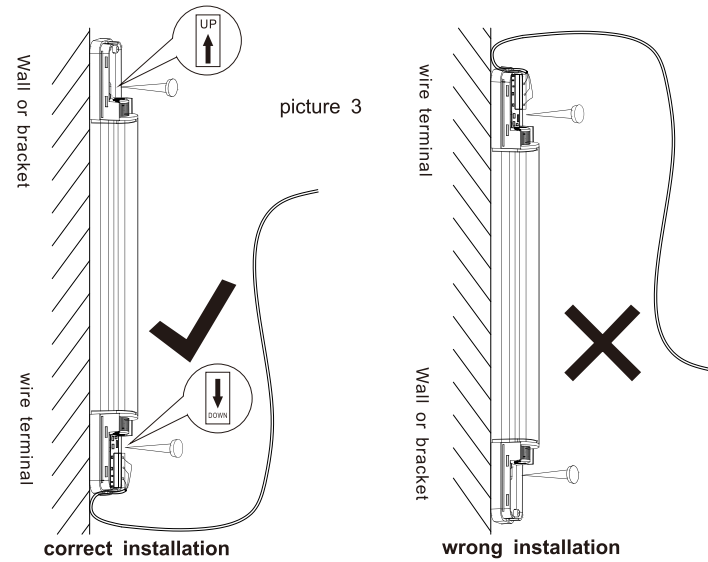
## 4.Installation Instruction

1. Open plug tube cover along the picture 2 showed direction



picture 2

2.Use  $\Phi 6$  drill to make mounting holes on the wall and nail small plastic pole(packed in part package) into it, then fix plug tube on screw hole position through screws.(as picture 3 showed)



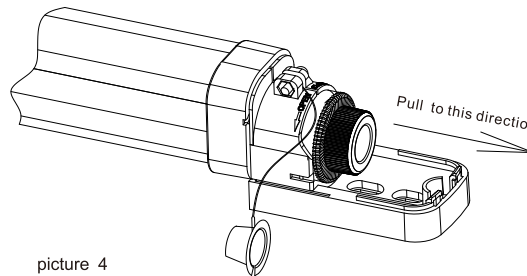
picture 3

Note:

- 1.The transmitter (abbr TX) and receiver(abbr RX) of infrared barrier needs to be installed on the same horizontal level and vertically to the ground
- 2.The wired terminal must point to the ground, or rain will enter into it and make short circuit.

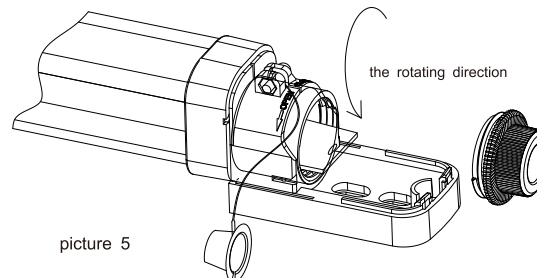
3. Function setting

(1).Open waterproof rubber plug. (as picture 4 showed)



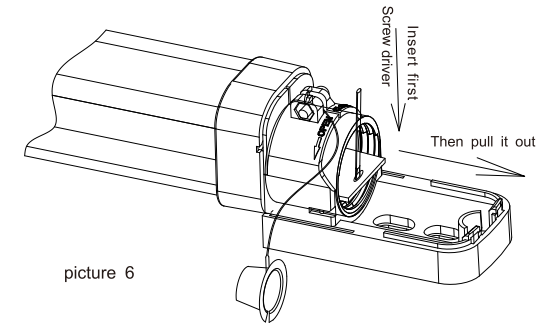
picture 4

(2).Counterclockwise rotate to open the seal cover. (as picture 5 showed)



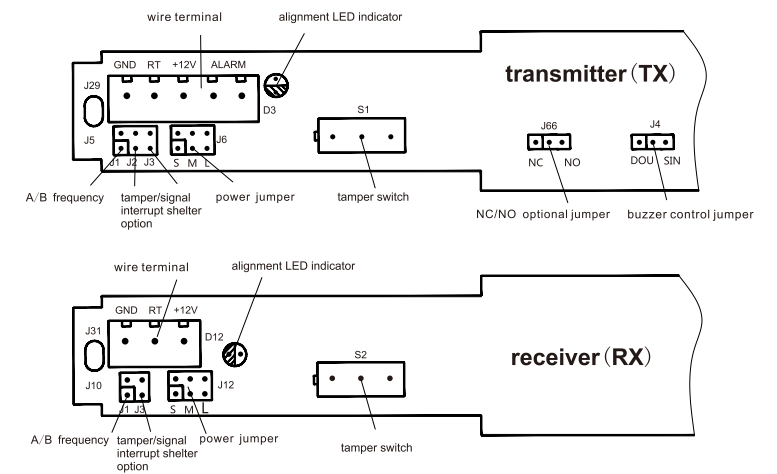
picture 5

(3). Insert screwdriver at the sliding hole on PCB board and pull it to take the PCB board out. (as picture 6 showed)



picture 6

(4). Function setting on PCB board

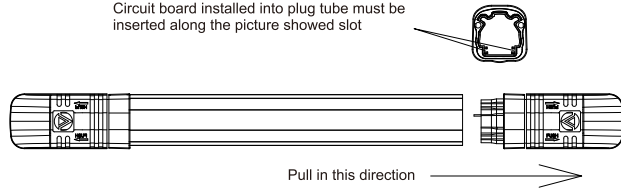


Transmitter	J5	J1	Insert jumper cap, A frequency (RX also A frequency)
		J3	Pull the jumper cap out, it becomes B frequency (RX also B frequency)
	J6	L	High operating power
		M	Middle operating power
		S	Low operating power
	J66	NC	NC normally close (defaulted)
		NO	NO normally open
	J4	SIN	Put jumper cap on "SIN", trigger any one infrared beam, the buzzer sounds "di di di" short ringing. Without triggering alarm within 30 min, it will automatically shift into "DOU" status
		DOU	Put jumper cap on "DOU", the buzzer sound over 1.5s when alarm signal outputs

Receiver	J10	J1	Insert jumper cap,A frequency(same as TX )
			Pull the jumper cap out,it becomes B frequency (same as TX )
		J3	Insert jumper cap,TX tamper switch does not work for test use
		Pull the jumper cap out,TX tamper switch work normally	
	J12	L	High operating power
		M	Middle operating power
S		Low operating power	
		Micropower without jumper cap	

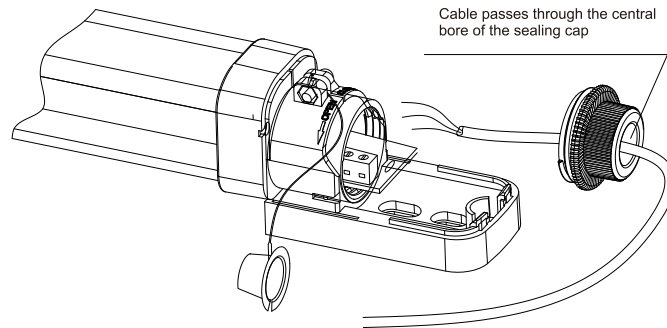
(5). Put the PCB board back to shell

Circuit board installed into plug tube must be inserted along the picture showed slot

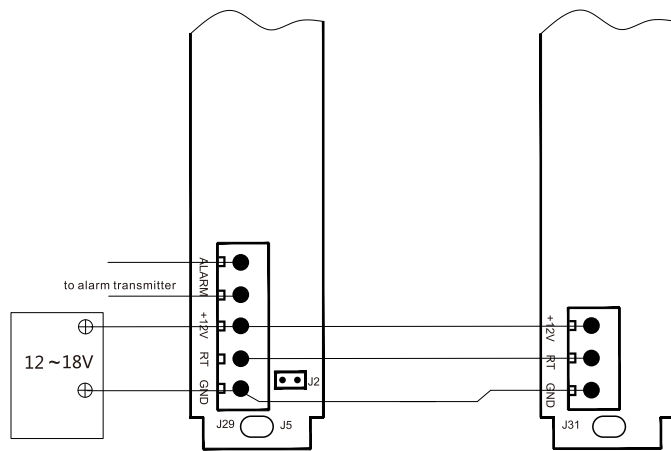


## 5.Wiring

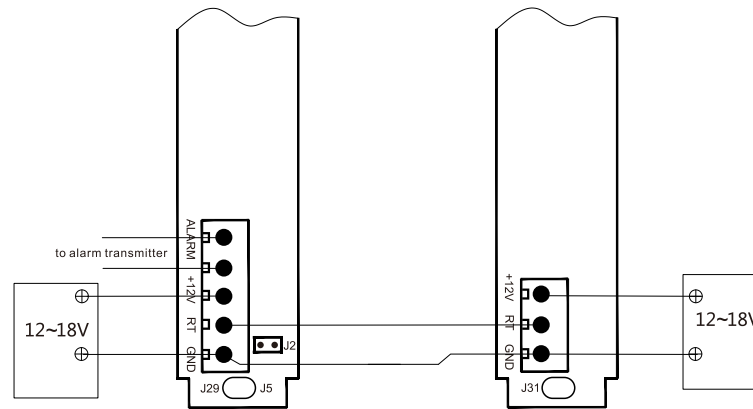
1.Cable passes through the central bore of the sealing cap



2.Wiring method



Dual power supply, synchronous wiring work method

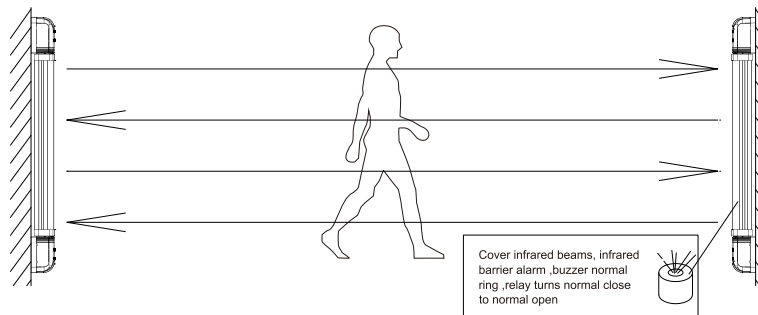
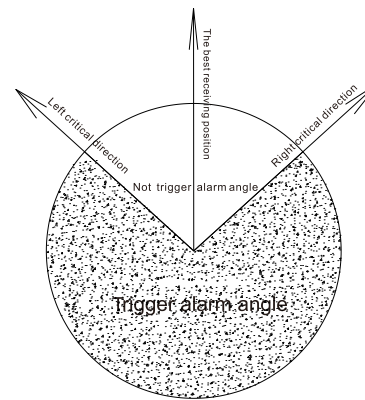


Single power supply, synchronous wiring work method

(1). Adjust the position of RX and TX,make them in horizontal level . The method as follow: left rotate TX slowly until trigger alarm(Left critical direction), right rotate TX until trigger alarm(right critical direction),then rotate TX to the position of middle of left and right critical direction(picture 12). The adjusting job down when the calibration LED are off and buzzer does not make sound.

(2).Tighten the steering lock screw of infrared barrier's up/down plug and closures,then use silicone waterproof plug squeeze in the closure ,finally cover the up plug of device.

(3). Infrared barrier functions checking.Cover infrared beams,if the buzzer of TX ring,the calibration LED turn on,relay turns NC to NO,the device work normally.



Notes:

- No installing under following situations
  - Obstacle between TX and RX
  - Unstable base
  - Direct sunshine, or strong light
- The voltage allowed DC10-18V
- Keep out of corrosive objects
- Fix plug tube,avoid water entering inside

## 6.Technical Parameter

Detection distance	With sync cord 10-100m; No sync cord 10-80m
Beams	2-12 beams
Current	50-100mA
Power supply	DC 10-18V
Working temperature	-30°C-70°C
Alarm output	NC. Contact capacity 30V 2A
Reaction speed	≤ 40ms
Answer speed	≥ 1s

## 7.Troubleshooting

1.LED of TX and RX are always on, meanwhile buzzer is always ringing when do alignment (in alarm state)

A.Check the TX and RX simultaneously selected as A or B frequency

B.Check the power of RX,check it is well connecting.

C.Reinsert tamper switch jumper J3 of TX and RX.

D.Check whether the TX and RX are beyond the max detection distance,whether the power is too low

E. Check whether there are obstacles between TX and RX

F. Reinsert the jumper of power

G. Check whether the lens bracket on main board is loose or broken

2.LED of TX is flashes, LED of RX is off and the buzzer intermittent short ringing when do alignment(in the warning state did not really alarm)

A.Check the power supply of RX

B.Using hand do block receivers of RX one by one, find out the abnormal adjacent beams when buzzer always ringing. Or using cameras(cell phone cameras)to check if there are some non-light beams

3.LED of TX flashes, LED of RX is always on and the buzzer intermittent short ringing when do alignment(in the warning state did not really alarm)

A.Check the power supply of TX

B. Using hand do block receivers of TX one by one, find out the abnormal adjacent beams when buzzer always ringing. Or using cameras (cell phone cameras)to check if there are some non-light beams

4.Alarm sensitivity is low or even cannot trigger alarm when blocking the beams

A.Block two adjacent beams

B.Remove the obstacles

C. Adjust jumper "J6" and "J12" to "M" or "S" (please keep the same operation power of RX and TX)

5.Alarm output signal abnormal

A. Checking if the buzzer of TX long ringing or not, if yes, then check it according to trouble 1, if not sound long ringing when blocks the beams, it means the RX works well, then check it as follows:

B.Using universal electric meter to check the relay of TX have the signal changes or not when blocks the beams, if not change, then something wrong with relay, otherwise goes to next step

C.Checking if the cable between alarm control panel and "ALARM" on the signal output terminal of infrared barrier is right connection, avoid short circuit and broken circuit

D.Checking if the terminal resistance between signal cable and alarm control panel is right connection.

E. The distance between infrared barrier and alarm control panel is too long and resistance is too large, please change with suitable terminal resistance