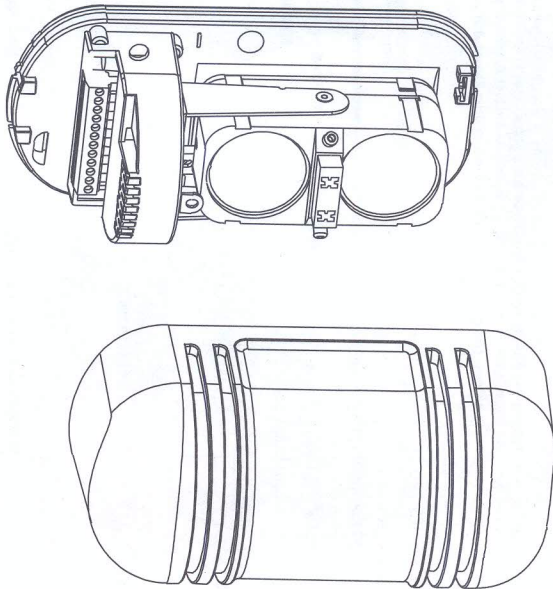


**ABT 2 BEAMS ACTIVE PHOTOELECTRIC DETECTOR
WITH DIGITAL FREQUENCY CONVERSION**

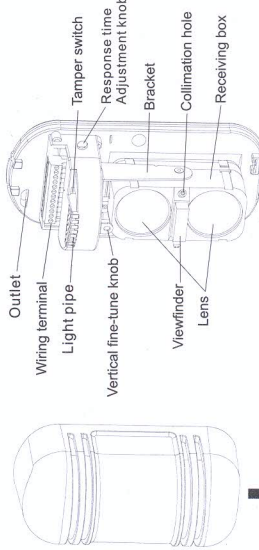
INSTALLATION GUIDE



I. Technical parameters:

Model	ABT-20	ABT-30	ABT-40	ABT-60	ABT-80	ABT-100
Alert distance	20m 60m	30m 90m	40m 120m	60m 180m	80m 240m	100m 300m
No. of beams	2 beams					
Detection mode	2 beams blocked simultaneous					
Optical source	Infrared digital pulse beam					
Response speed	50-240ms					
Alarm output	Relay contact output: NO, NC contact rating: AC/DC30V 30A Max					
Power supply	DC13.8-24V 15W					
Operation temperature & humidity	-25~55 °C 5~95%RH (relative humidity)					
Dimensions	Refer to its diagram					
Tamper output	Contact output: NC contact rating DC24V 0.5A max					
Optical axis adjustment(θ)	180° (±90°)					
Optical axis adjustment(V)	20° (±10°)					
Protection against dew, frost	Calcification housing (optional)					
Material	PC resin					
Gross	658g(receiver + transmitter)					
Net weight	1150g					

II. Parts Name



Signal strength indication (LED5-LED1)	Grade
On on on on on	G10
On on on on twinkle	G9
Off on on on on	G8
Off off on on on	G7
Off off on on twinkle	G6
Off off on on on	G5
Off off off on on	G4
Off off off on twinkle	G3
Off off off off on	G2
Off off off off twinkle	G1
Off off off off off	G0

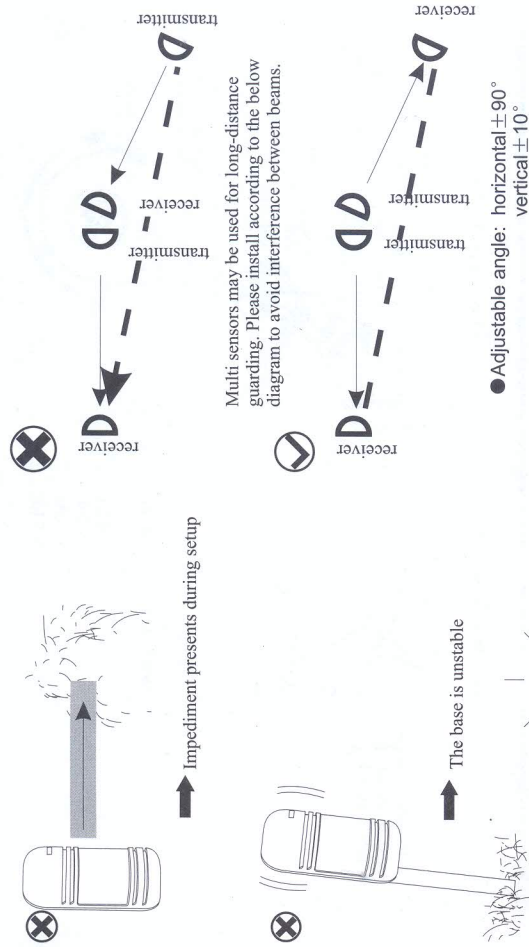
Signal strength indication (11 grades)
Suggested over 7 grades



Switch	TRANSMITTER	RECEIVER
DIP1	Frequency switch	No
DIP2		
DIP3		No
DIP4		
DIP5		Frequency switch
DIP6		
DIP7		
DIP8		

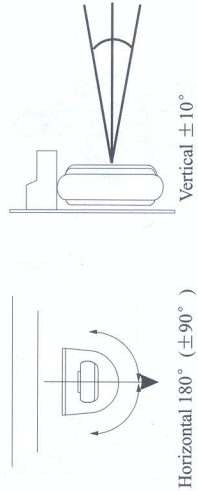
On working mode (non-programming mode), press programming switch, can open or close signal strength indicator. Open signal indicator when adjusting, after that, close indicator for saving power.

III. Precautions for setting

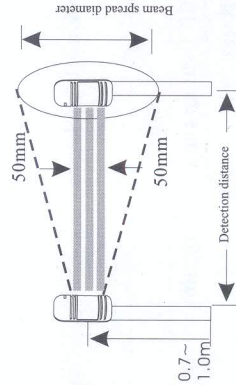


Multi sensors may be used for long-distance guarding. Please install according to the below diagram to avoid interference between beams.

● Adjustable angle: horizontal ±90°
vertical ±10°



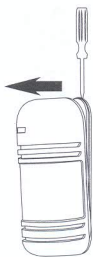
Horizontal 180° (±90°)
Vertical ±10°



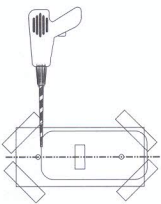
Style	Guarding distance	Beam spread diameter
ABT-20	20m	0.6m
ABT-30	30m	0.7m
ABT-40	40m	1.0m
ABT-60	60m	1.5m
ABT-80	80m	1.8m
ABT-100	100m	2.1m

IV .Setting procedure

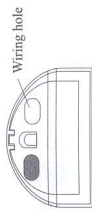
1. Remove the cover



2. Attach the paper stencil onto the location where the equipment is to be mounted, and drill the holes in the positions on its mark.



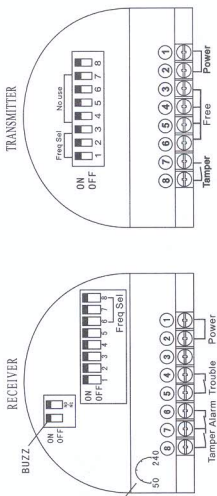
3. Put the cable through the hole for wiring.



4. Fix the main body onto the wall



5. Connect the cable to the wire terminal.



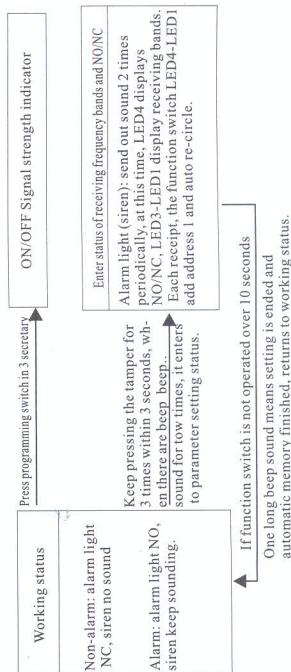
6. Setting of transmitter data



7. Setting of receiver data

Receiver adopts electronic memory chip to store data so it is not with DIP switch. Setting of receiving frequency and NO/NC. During operation status, press the tamper switch by 3 times within 3 seconds, when there are two long beep sound, it enters to parameter setting status, in this status, siren and alarm light will send out 1 sounds periodical-ly in order to mention that it is in the part of parameter setting.

7.1 Status shift diagram

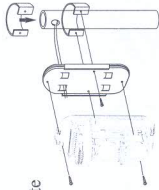


Note: when power is supplied, equipment address and frequency bands setting data for 10 seconds automatically, and alarm light (siren) will offer relevant indication. And then it enters to operation status. Please set the same band for RX and TX, otherwise detector cannot work normal.

8. Put on the cover after adjusting the response time of the beam.

● Installation of fixed bracket

8.1. Drill a hole on the bracket and extend out the cable from it.

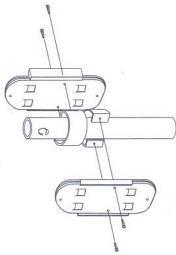


8.3. Fasten the base-plate to the bracket.

8.2. Remove the cover.

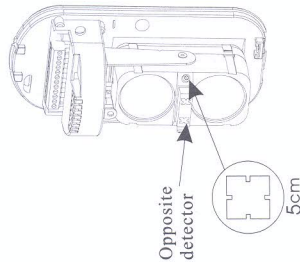


(Back-to-back installation guiding diagram)

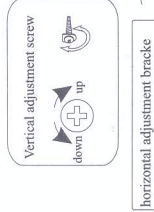


V. Beam alignment

5.1. Observe the collimation effect at a distance of 5cm from the collimation hole.



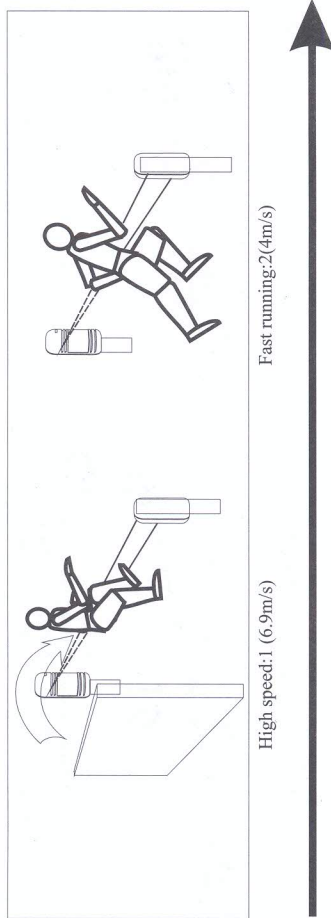
5.2. Adjust the vertical adjustment screw and the horizontal angle adjusting wheel in order that the image of opposite detector falls into the central part of the viewing hole. At this time, the GOOD indicator of receiver shall light up; if not, adjust it repeatedly.



VI. Beam response time adjustment



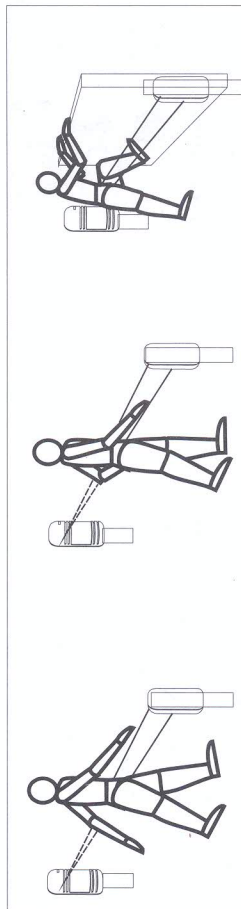
Please see the diagram to adjust the response time of the receiver. Usually, the time set shall be less than the time when the intruder crosses the guarding area.



Fast walking(1.2m/s):3

Normal walking(0.7m/s):4

Slow walking(0.4m/s):5



VII. Physical test

Walking test is required after the setting, physical test in accordance to below diagram.

	State	Signal
Transmitter	Transmitting	Green LED light up shows transmitting
Receiver	State LED on, alarm LED off	Normal state
	State LED off, alarm LED on	Beams are blocked, alarm state
	State LED on, alarm LED on	Transmitter and receiver are not in same frequency
	State LED off, alarm LED off	In anti-fog state

IX. Trouble checking

Fault	Cause	Solution
The LED of the transmitter doesn't light up	Power failure (open circuit, short-circuit, etc.)	Check the power wiring
The LED of the receiver doesn't light up	Power failure (open circuit, short-circuit, etc.)	Check the power wiring
The LED of the receiver doesn't light up when the light is blocked	1. By reflecting, or light from other sources enter the receiver 2. Both beams are not blocked at the same time 3. Response time is set too short	1. Remove the reflecting object or change the direction of beam 2. Block both beams at the same time 3. Prolong the response time
The receiver alarm indicator ON after the beam is blocked, but there is NO alarm signal output	1. Broken circuit or short-circuit of the wiring 2. Poor contact	1. Check the wiring and contact 2. Connect the cable
The alarm indicator of the receiver is constantly ON.	1. The beam doesn't match closely 2. There is obstacle presents between the transmitter and the receiver 3. The cover is polluted.	1. Re-adjust the beam 2. Remove the obstacle 3. Clear the cover
Intermittent alarm signal output	1. Improper wiring 2. The supply voltage does not reach 13V or higher 3. The potential obstacle appears to block the beams due to the effect of wind and rain 4. The installation base unstable 5. The beam coincidence accuracy is inadequate 6. Beams blocked by other moving objects 7. Response time too short 8. Level 5 LED does not light up before the cover is put on	1. Check the wiring 2. Check the supply power 3. Remove the obstacle or change the location 4. Select a site with a stable base 5. Re-adjust the optical axis 6. Adjust the shade time or change the install location 7. Re-adjust the response time 8. Re-adjust the optical axis, and make the signal reception reaches its top.

X. Recommended installation guide & physical appearance and dimension

