ABT DUAL-BEAM ACTIVE PHOTOELECTRIC INTRUDER DETECTOR WITH DIGITAL FREQUENCY CONVERSION

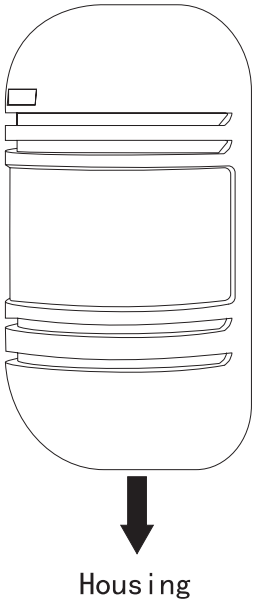
INSTALLATION GUIDE

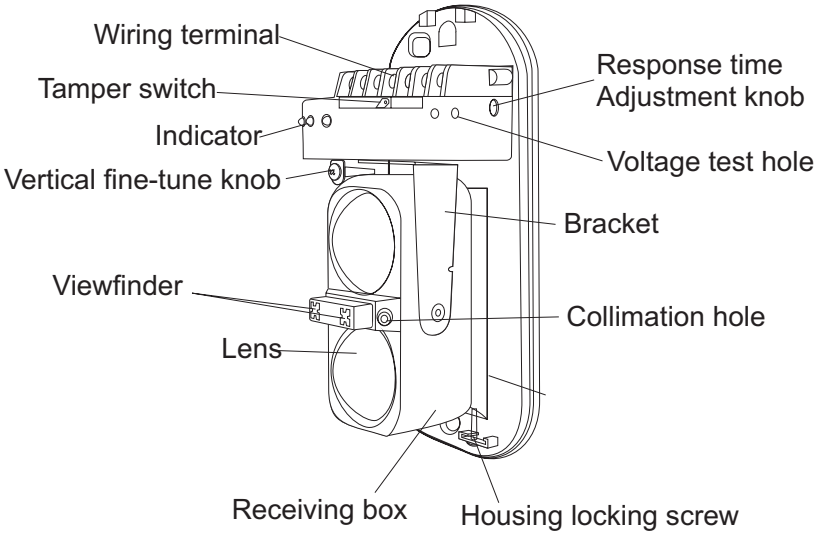
SPACE TELEVISION

Model:

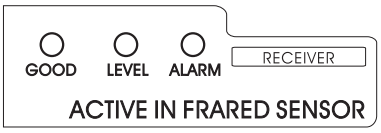
ABT-20	**(Outdoor 20m, Indoor 60m)**
ABT-30	**(Outdoor 30m, Indoor 90m)**
ABT-40	**(Outdoor 40m, Indoor 120m)**
ABT-60	**(Outdoor 60m, Indoor 180m)**
ABT-80	**(Outdoor 80m, Indoor 240m)**
ABT-100	**(Outdoor 100m, Indoor 300m)**

Ⅰ. Part Name



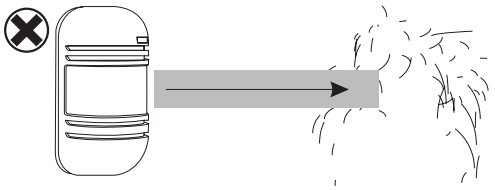


●POWER: Transmitting indicator

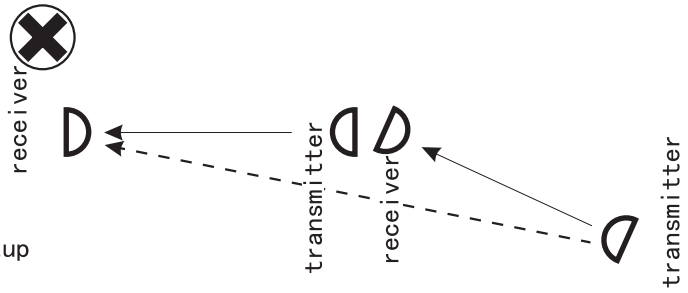


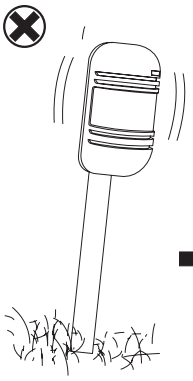
●LEVEL: Lightness of the indicator increases with the accuracy of beam alignment.
●ALARM: The indicator turns on when alarm presents.
●GOOD: The green indicator turns on when the beam aligns with the receiver. If fails to align, the indicator will off.

II. Precautions for setting



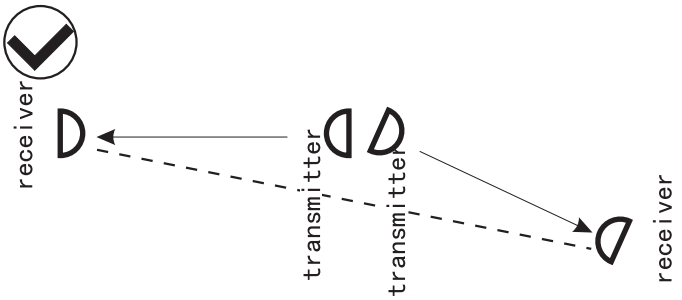
Impediment presents during setup

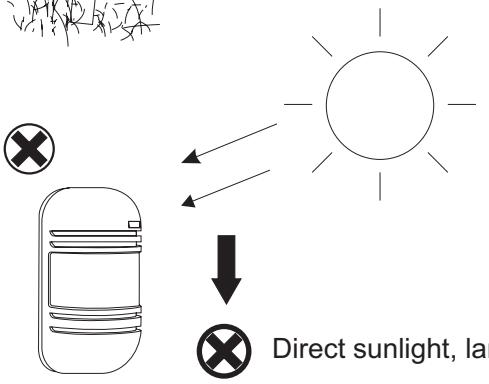




The base is unstable

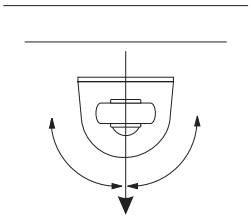
Multi sensors may be used for long-distance guarding. Please install according to the below diagram to avoid interference between beams.



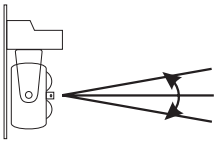


Direct sunlight, lamplight etc.

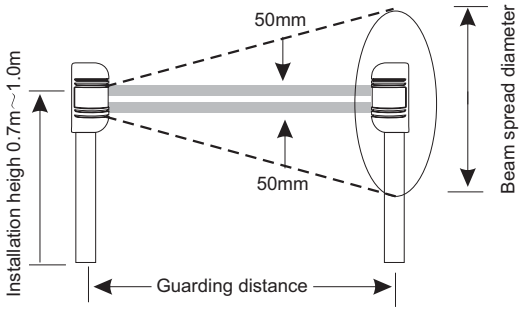
●Adjustable angle: horizontal±90°
vertical±10°



Horizontal±180°（±90°）



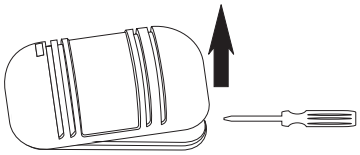
Vertical ±10°



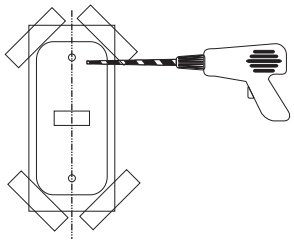
Style	Guarding distance	Beam spread diameter
ABT-20	20m	0.6m
ABT-30	30m	0.7m
ABT-40	40m	1.0m
ABT-60	60m	1.5m
ABT-80	80m	1.8m
ABT-100	100m	2.1m

III Setting procedure

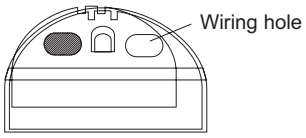
1.Remove the cover



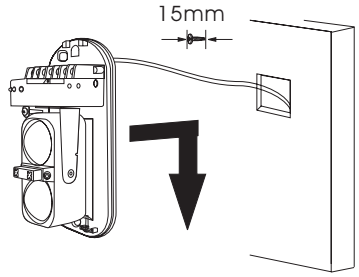
2.Attach the paper stencil onto the location where the equipment is to be mounted, and drill the holes in the positions on its mark.



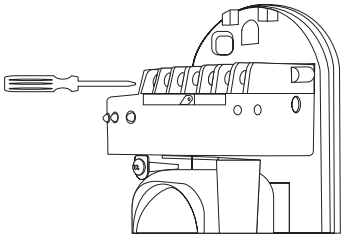
3.Put the cable through the hole for wiring.

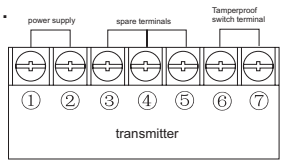


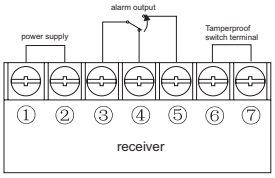
4.Fix the main body onto the wall



5.Connect the cable to the wire terminal.



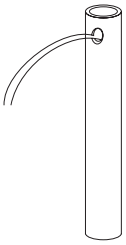




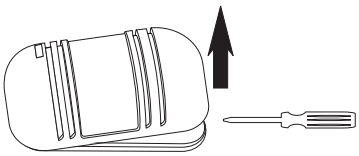
6.Put on the cover after adjusting the response time of the beam.

● Installation of fixed bracket

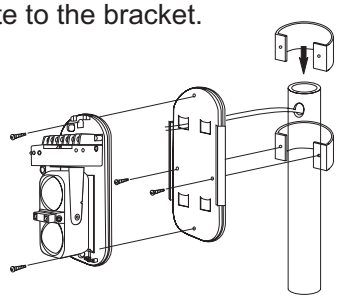
1.Drill a hole on the bracket and extend out the cable from it.



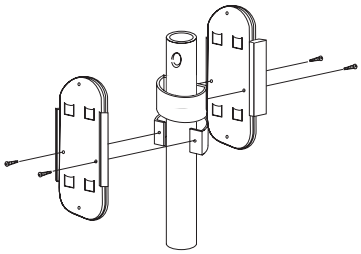
2.Remove the cover.



3.Fasten the base-plate to the bracket.



(Back-to-back installation guiding diagram)



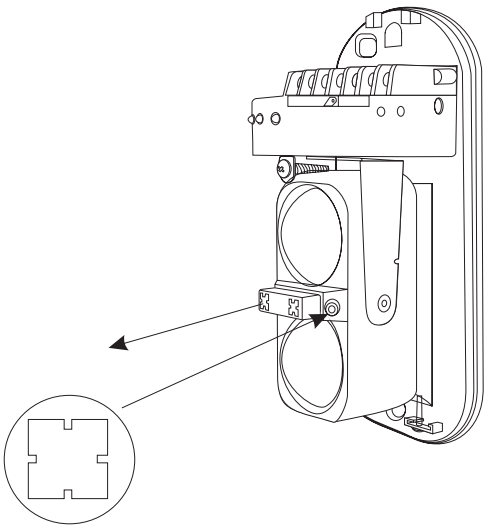
Wiring distance between transmitter and receiver

voltage / wire size / distance	DC13.8V	DC24V
0.5mm² (Φ0.8)	300m	300m
0.75mm² (Φ1.0)	400m	800m
1.25mm² (Φ1.2)	700m	1400m
2.0mm² (Φ1.6)	1000m	2000m

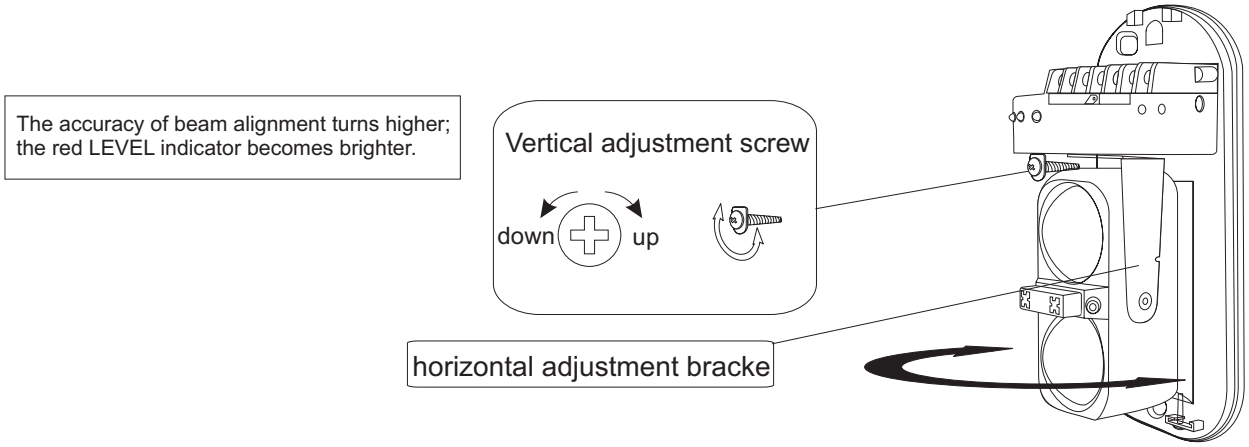
IV Beam alignment

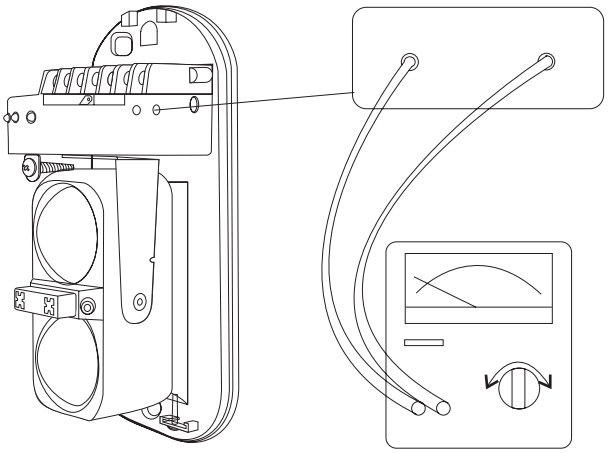
1.Remove the cover and connect power.

2.Observe the collimation effect at a distance of 5cm from the viewfinder.



3.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.

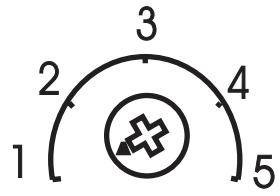




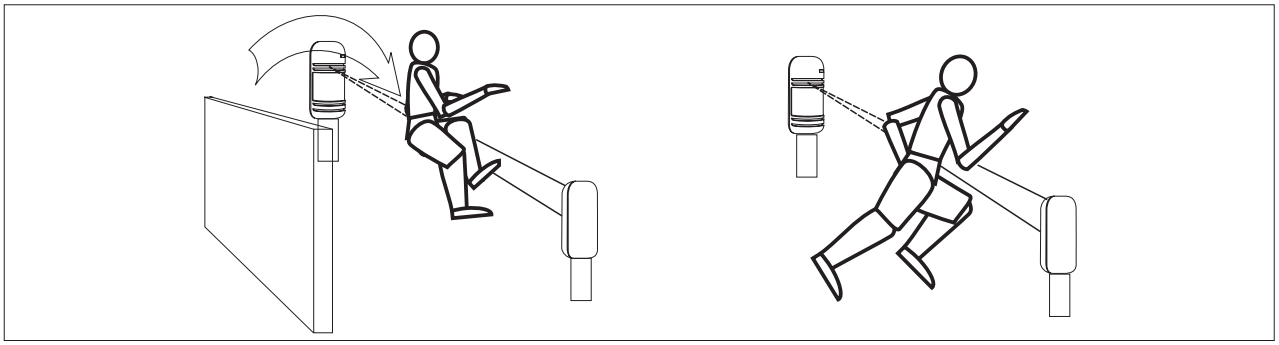
1. Insert the test pen into the test hole (please note the +,- polarity)
2. First adjust the horizontal angle until the test hole voltage output maximize. Then adjust the vertical angle by the same way till the voltage reaches the value above that of below diagram.
3. If it can't reach 1.1V or higher voltage, the transmitter and receiver shall be regulated again.

Multimeter selects DC 10V

V Beam response time adjustment

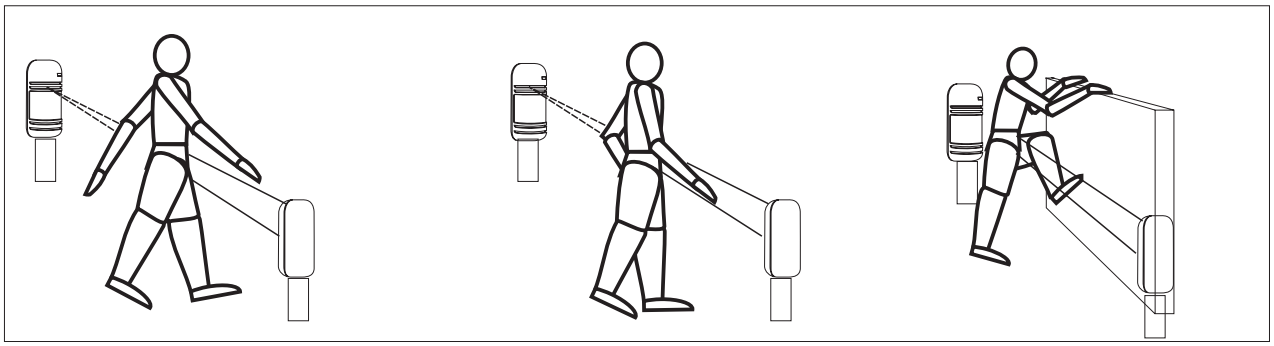


Please see the diagram to adjust the response time of the receiver. Usually, the time set shall be less than the time when the intruder crosses the guarding area.



High speed:1 Fast running(6.9m/s):2

Fast walking(1.2m/s):3 Normal walking(0.7m/s):4 Slow walking(0.4m/s):5



VI.Physical test

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

	State	Signal
Transmitter	Transmitting	The 2 indicators of green LED light up
Receiver	Guarding	GOOD LEVEL indicators light up
	In alarm	The red ALARM indicator light up

Ⅶ. Trouble checking

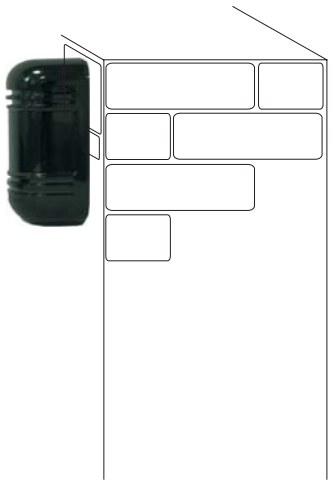
Fault	Cause	Solution
The LED of the transmitter doesn't light up	Power failure (open circuit, short-circuit, etc.)	Check the power wiring
The LED of the receiver doesn't light up	Power failure (open circuit, short-circuit, etc.)	Check the power wiring
The LED of the receiver doesn't light up when the 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.

Ⅷ. Technical parameters:

Model		ABT-20	ABT-30	ABT-40	ABT-60	ABT-80	ABT-100
Alert distance	Outdoor	20m	30m	40m	60m	80m	100m
	Indoor	60m	60m	120m	180m	240m	300m
		200m	350m	450m	650m	900m	1100m
No. of beams		2 beams					
Detection mode		2 beams blocked simultaneous					
Optical source		Infrared digital pulse beam					
Response speed		50～700msec					
Alarm output		Relay contact output: NO. NC contact rating: AC/DC30V 0.5AMax					
Power supply		DC13.8～24V AC11～18V P≥15W					
Power consumption		40mAmax	40mAmax	55mAmax	55mAmax	65mAmax	65mAmax
Operation temperature & humidity		-25℃-55℃ 5%-95%RH(relative humidity)					
Dimensions		Refer to its diagram					
Tamper output		Contact output: NC contact rating DC24V 0.5Amax					
Optical axis adjustment(H)		±180°(±90°)					
Optical axis adjustment(V)		20°(±10°)					
Protection against dew, frost		Calefaction housing (optional)					
Material		PC resin					
Net weight		658g(receiver +transmitter)					
Gross		1150g					

IX. Recommended installation guide & physical appearance and dimension

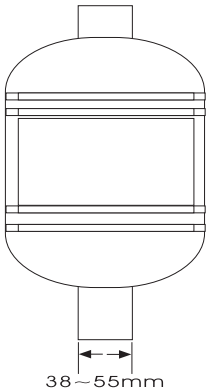
Recommended installation

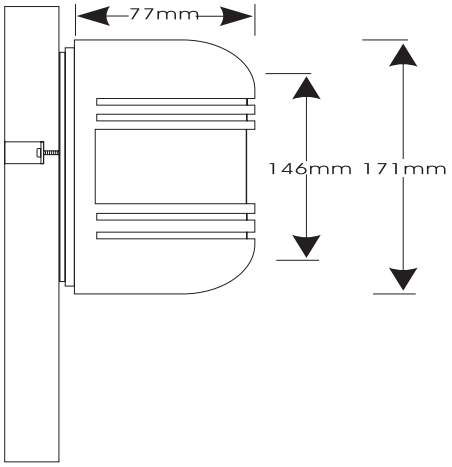


T-shaped bracket
T-100
100×120mm

T-200
200×120mm

Dimensions





The product has got the 3C and CE approval already and is now applying for the UL approval.