ABL SERIES BARRIER USER MANUAL

1. Features

- The enclosed external wiring structure design (patented) innovatively draws inspiration from the inverted design of the "bottle cap", allowing for external wiring while also ensuring the waterproof performance of the grating;
- Adopting digital frequency conversion technology and 32-bit high-speed MCU control for greater stability;
- Adopting a high-end aluminum alloy shell;
- Supports two working modes: asynchronous and synchronous (default to asynchronous working mode at the factory);
- Two frequency channels are optional (default to A-frequency operating mode at the factory) to avoid interference.
- Support setting up simultaneous block two beams to alarm, which can effectively prevent false alarms caused by small animals, birds, etc.
- The detection distance can be adjusted in three levels:
- Strong anti-interference ability: can be used in outdoor environments with wind, frost, rain, snow, fog, tide, and oblique sunlight;
- Independent tamper switch, designed to be more reasonable and reliable, ensuring that the barrier is not damaged by disassembly;
- Support buzzer calibration prompts;
- Has passed 3C, CE, and ROHS certifications;

2. Parameters

- Detection distance: 0-100 meters for synchronous operation and 0-80 meters for asynchronous operation
- Beam: 2/4/6/8/10/12 beams
- Power supply voltage: DC9-30V
- Current consumption: 50-120mA
- Working temperature: -30~70 ° C
- Alarm output: NO, NC optional (factory default NC), contact capacity 30V2A
- Detection method: Simultaneously block two adjacent beams (single beam alarm can be set)
- Alarm duration:>1 second (instant alarm can be set)
- Tamper output: NC output
- Reaction time: ≤ 40ms
- Optical axis adjustment angle: horizontal 180 °, vertical non adjustable·
- Material: aluminum+plastic

3. Product structure

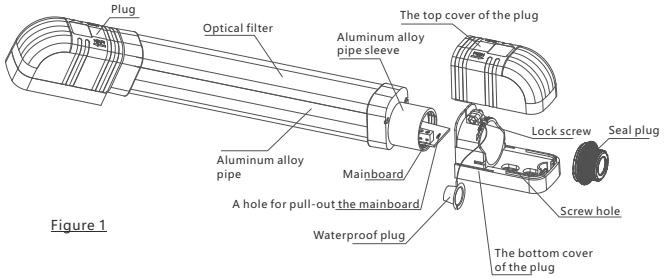

Figure 1

4. Installation introduction

4.1 Before installation, if you want to set the device, disconnect the device from the power supply, as show in figure 2, open the tube plug, pull out the mainboard, and set the device (do not use force to avoid damaging the device). After the Settings are complete, reinstall it.

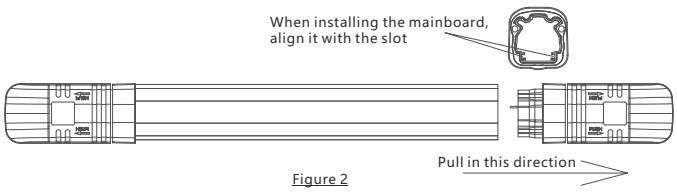

Figure 2

4.2 Open the top cover(Show as figure 3)

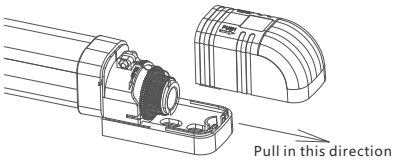

Figure 3

4.3 Fix the barrier with screws as shown in Figure 4

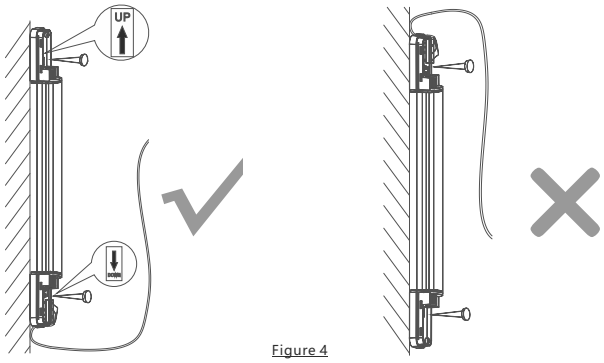

Figure 4

4.4 Take out the PCB board

Pull out the waterproof plug(show as figure 5)

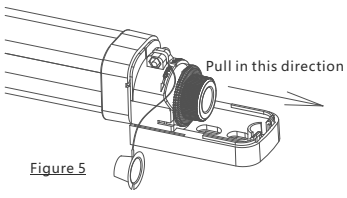

Figure 5

Turn counterclockwise to open the seal cover (show as figure 6)

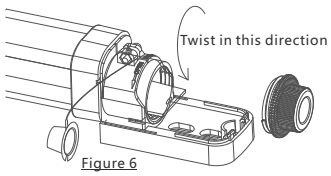

Figure 6

Clamp the hole with a tool and gently pull out the mainboard(show as figure 7)

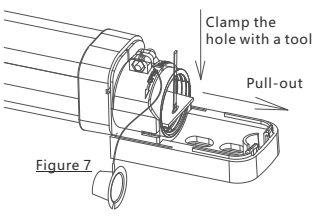

Figure 7

4.5 Function setting

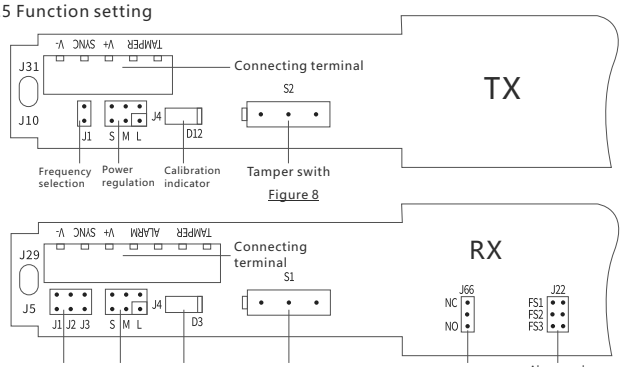

Figure 8

Figure 9

TX device pin introduction		
J10	J1	Connect it means work in A frequency(The RX need to be set in A frequency at the same time)
		Disconnect it means work in B frequency(The RX need to be set in B frequency at the same time)
J4	L	Connect it means work in "High power" mode
	M	Connect it means work in "Medium power" mode
	S	Connect it means work in "Low power" mode
		All disconnect means work in "Micropower" mode
RX pin introduction		
J5	J1	Disconnect it means work in B frequency(The TX need to be set in B frequency at the same time)
		Connect it means work in A frequency(The TX need to be set in A frequency at the same time)
	J2	Disconnect it means work in sync mode(If more than three pairs of barriers are installed in the same direction, the synchronization cable must be connected and the sync mode must be used)
		Connect it means work in async mode
	J3	Disconnect it means the buzzer won't work
		Connect it means the buzzer will work
J4	L	Connect it means work in "High power" mode
	M	Connect it means work in "Medium power" mode
	S	Connect it means work in "Low power" mode
		All disconnect means work in "Micropower" mode
J66	NC	Connect it means NC output
	NO	Connect it means NO output
J22	J22 is for special function, factory default it is disconnect	
	FS1	Connect it means alarm at once when dual beams is blocked
	FS2	Connect it means alarm when single beam is blocked
	FS3	Connect it means alarm at once when single beam is blocked

5. Wiring

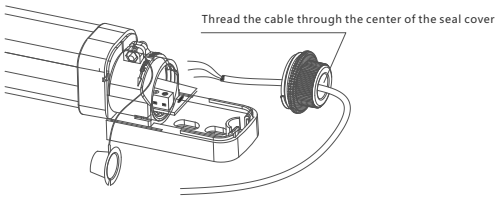

Figure 10

Sync mode wiring

Work with one power supply(figure 11)

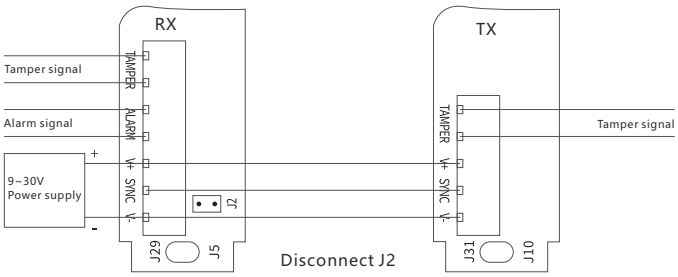

Figure 11

Work with tow power supplies(figure 12)

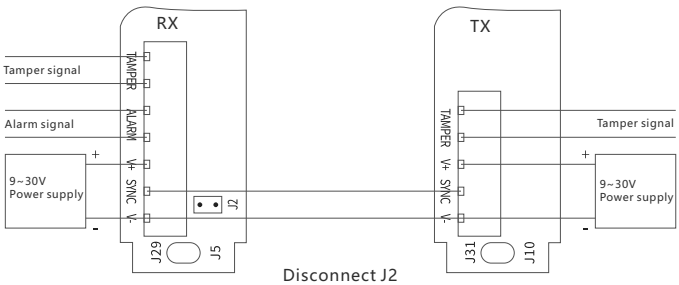

Figure 12

6. Alignment and debugging

1. First visually align the device, power on, slowly rotate the RX, when the calibration indicator is all off and the RX buzzer is no longer ringing, it is correct.
However, in general, the RX is slowly rotated to the left to just the alarm position (left critical direction), and then slowly rotated to the right to just the alarm position (right critical direction), and finally the barrier is adjusted to the position of the Angle bisector between the two positions (the best receiving direction)(Figure 13).

2. Tighten the steering lock screw of the upper/lower tube plug of the infrared barrier, and then screw the sealing cover to tighten.

3. Check whether the function of the barrier is normal, when block the infrared beams, if the RX buzzer of the barrier rings, and the calibration indicator if is on, and the relay input if changes from NC to NO (Figure 14).

4. Make sure that the steering lock screws and height positioning screws of the upper and lower fixing seats of the barrier and the TX device are tightened and the protective cover is firmly covered; Slowly put on the PC tube, taking care not to touch the internal infrared barrier.

5. Check whether the infrared barrier function is normal again.
Note: in order to more quickly and accurately install the barrier, it is recommended to use a level for horizontal positioning.

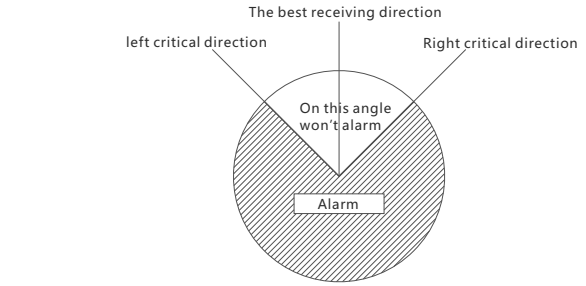

Figure 13

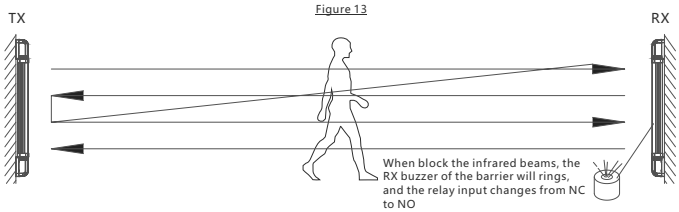

Figure 14

7. FAQ

Q1:
Why both the RX and the TX LED indicator keep on and the buzzer keep ringing?
A:
1)The beam is blocked;
2)It's too far away and low power mode is used;
3)The RX and the TX device doesn't work in the same frequency;
4)The power supply doesn't meets the standards. If work in sync mode, maybe the sync cable is broken.;
5)Temper switch connection error;

Q2:
Why are only the RX's LED blinking and the buzzer ringing?
A:
1)The power supply doesn't meets the standards;
2)The infrared emission from the TX is abnormal, and the beam may be missing;

Q3:
Why is the RX LED blinking and the buzzer ringing, while the TX LED is on?
A:
1)The power supply doesn't meets the standards;
2)The infrared emission from the RX is abnormal, and the beam may be missing;

Q4:
Why is it hard to trigger the alarm?
A:
1)The beam is not blocked properly;
2)The infrared signal is bouncing. We need to readjust the barrier;
3)The infrared transmitting power is too high;

Q5:
Why is the alarm output abnormal?
A:
1)The alarm output line is short circuit or open;
2)The resistance between the RX and the siren is incorrect. Use the correct resistance.