

# Installation Guide of FT-89R

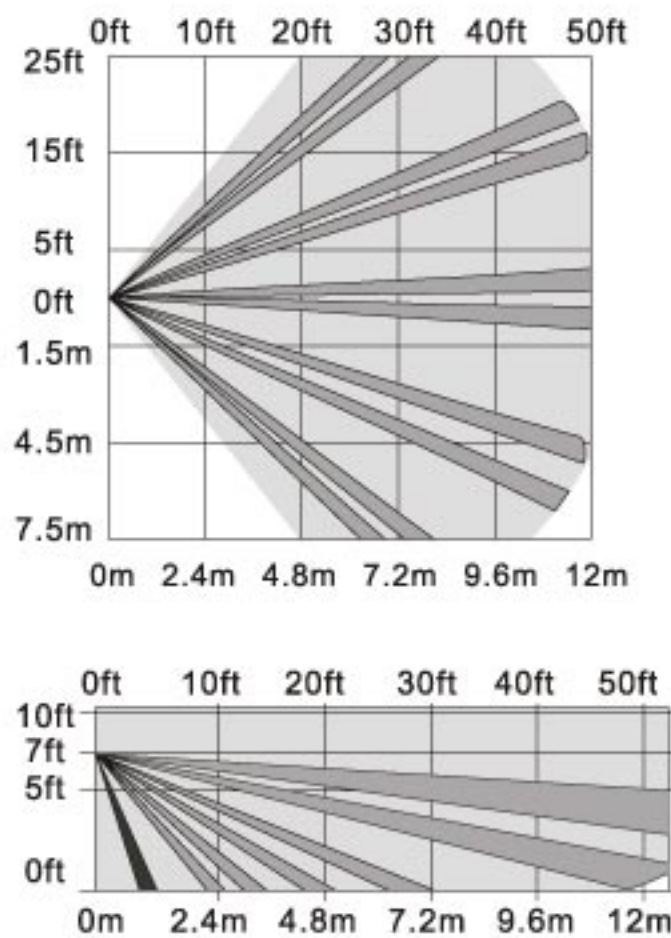
## PIR & MW Intelligent Detector

### 1. Introduction

FT-89 is the best indoor/outdoor motion detector with passive infrared and microwave. It's water proof and all weather resistant with two layer stable housings. FT-89 combines a variety of detection techniques which enable it to work in the most difficult environment where needs high security while maintaining immunity to false alarm. The infrared sensor adopts nice lens produce three-dimensional thermal imaging of the protected area. Combining the four-element microwave scanning contributes to an amazing detection capacity. Using this technique allows high sensitivity but lowest false alarm. FT-89 is equipped with unique protection mechanisms against any attempt to damage or to disable its operation.

### 2. Specification

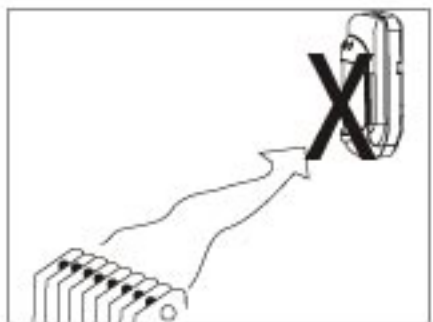
External powered DC12V  
 Static current consumption:  $\leq 18\text{mA}$   
 Alarm current consumption:  $\leq 30\text{mA}$   
 When powered, the green LED light for 3 seconds and flicker 2 seconds and off the red LED flicker about isseconds, after 3 minutes, the detector comes into work states.  
 Alarm mode: Red LED light about 3S  
 Relay output: NC  
 Wireless transmitting distance: 150m  
 Transmitting frequency: 433MHz/868MHz  
 The max recharge caurrent:  $\leq 120\text{mA}$   
 Detection range: 12m(25°C)



**Internal battery-powered**  
 Low battery ararm: 2t will send Low battery report when the detectoy low battery and send battery resume report when the battery resume  
 Relay outpnt: N/O (when external power disconnect, the Rely output will convert to N/O from N/C afert powered by battery about 2 minutes, external power resume by contrary.)  
 Static current consumption:  $\leq 18\text{mA}$   
 Alarm current consumption:  $\leq 80\text{uA}$

### 3. Installation

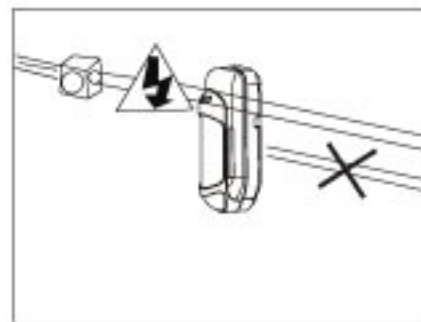
#### 3.1 Guide



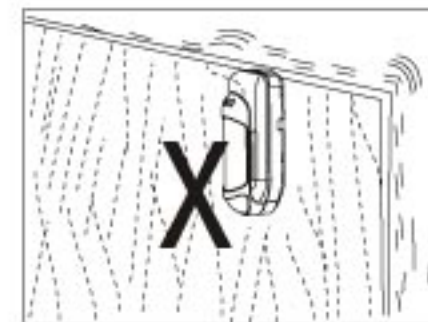
Do not face to cold or heat source



Do not fact to sun light



Keep away from high-voltage wire



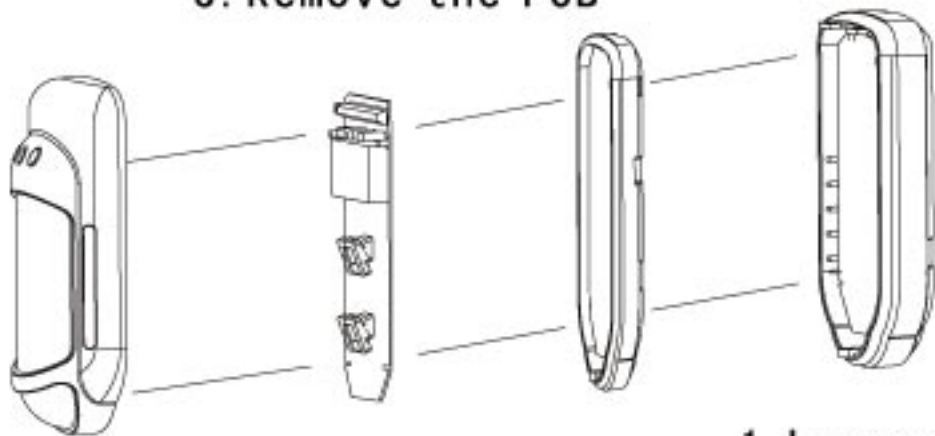
Installation base should be stable



Do not face to metal wall

#### 3.2 Disassemble guide

3. Remove the PCB



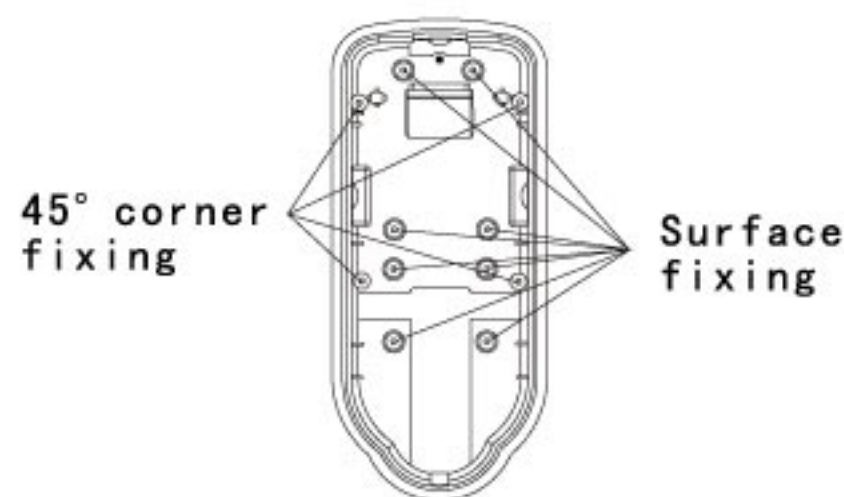
1. Loose screw

2. Pull out the bottom of the cover

4. Remove the middle case

#### Enstarlation

Suggest installation height: 2-3 meters from ground



Suggest corner installation

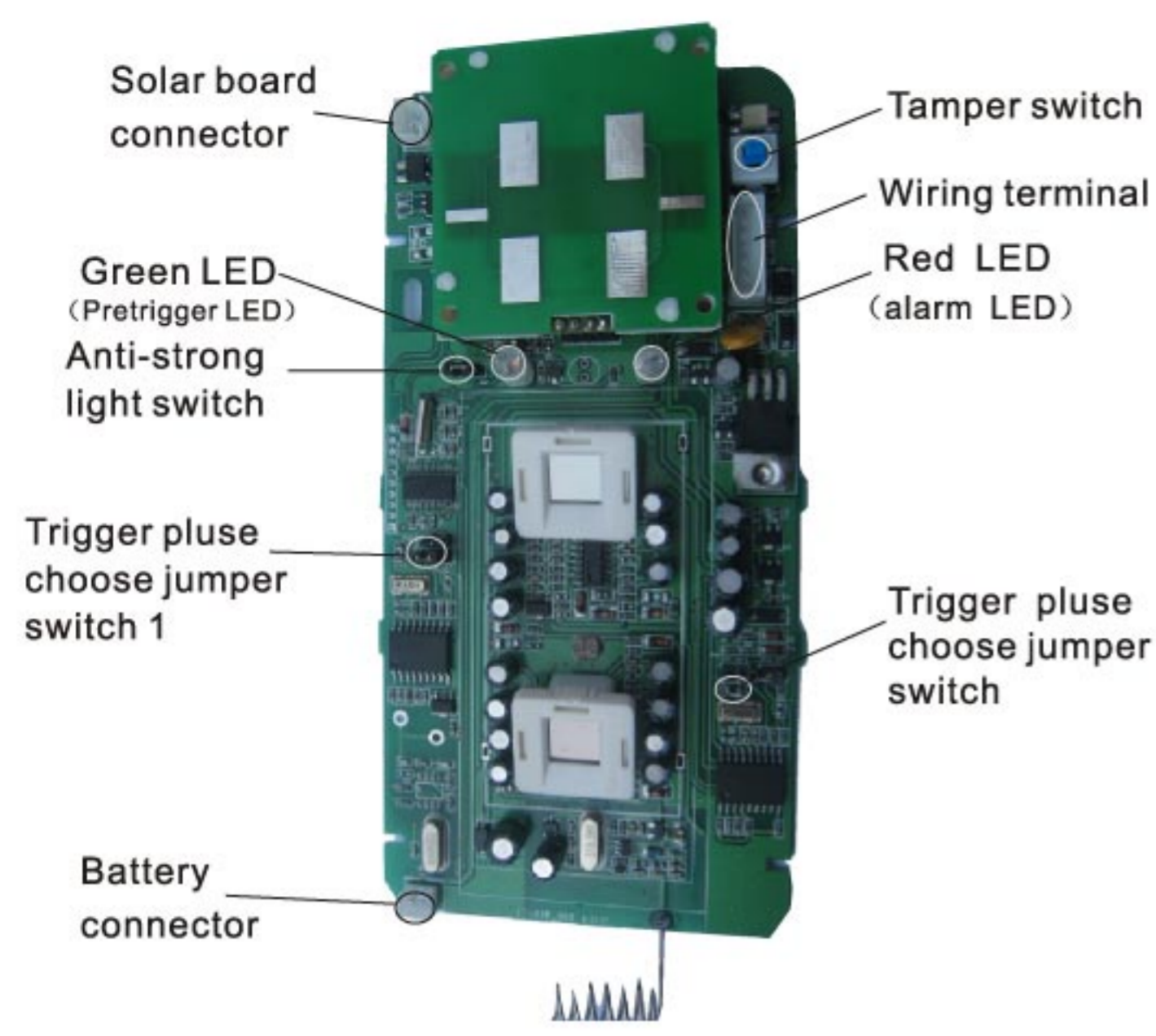
A. Mark the drilling points and make holes.

B. Draw the cable from back channel

C. Fix the base cover on the wall with two screws.

D. Put the PCB back on the cover with clips and fasten screws.

### 3.3 Function explanation:

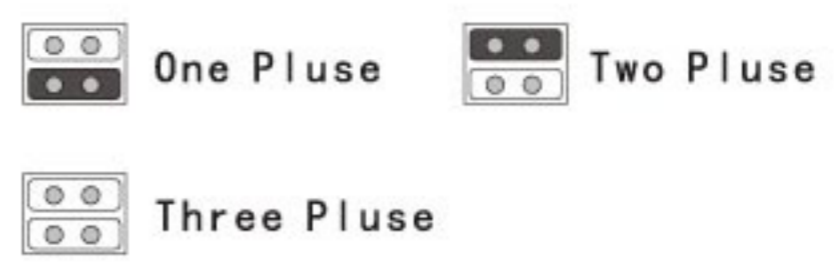


### 3.6 Coding

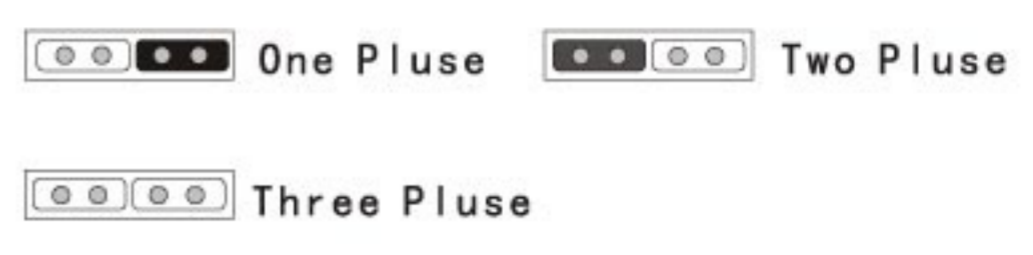
When the alarm panel enters coding mode, please press the tamper switch of FT-89R for 3 seconds, immediately then loose, when you can hear a hign sound from panel, which means coding successfully.

### 3.4、Function of jumper switch:

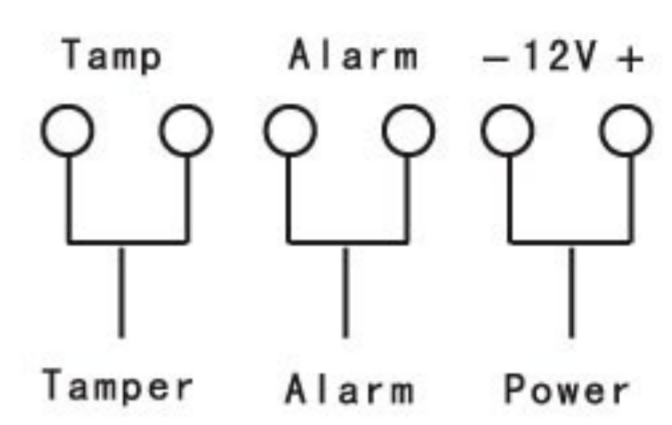
Trigger pluse count, choose jumper switch 1, accroding to infrnred sensor 1



Trigger pluse connt, choose jumper switch 2, accroding to infrnred sensor 2



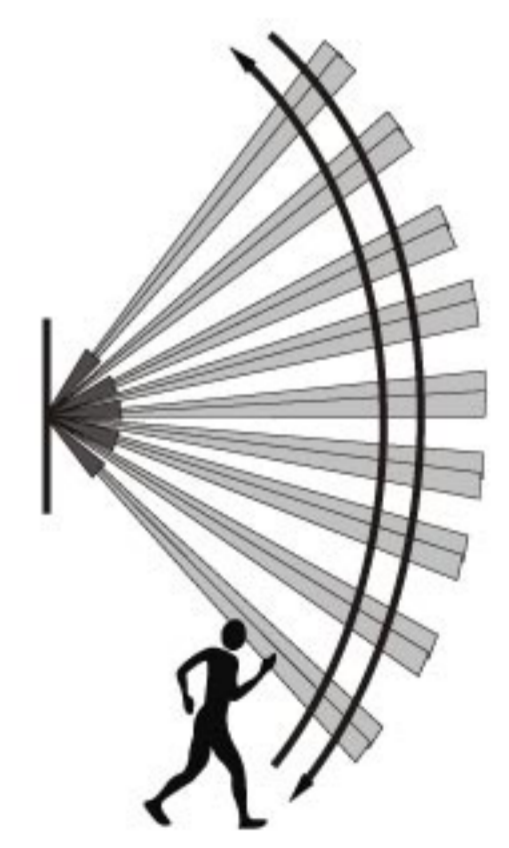
### 3.5、Wiring terminal



Alarm: When the external power supply for 2-10 minutes, Alarm output is N/C  
 Alarm: When the external power disconnect about 2-10 minutes, Alarm output convert to N/O on wireless mode

### 3.8、Perform motion test to the detection area: install the cover and close the fasten part (refer to the right diagram)

1. Start the test at least 2 minutes after power supply
2. Crossing to any direction of the detection area, your walking with 0.75m/s will cause the LED indicator to light for 2-3 seconds (refer to the right diagram)
3. Perform motion test from contrary directions in order to confirm the boundary of two sides. Make confirmed that detection center pointing to the center of protected area.
4. Away from the detector 3 to 6 m, raise slowly your arm and reach into the detection zone, mark the lower limit of PIR detection. Do the same step to confirm the upper limit.
5. the center of detection zone should not uphill incline. To obtain a good detection range, please adjust the vertical detection range, en-sure the detector is in a correct position.
6. After MW sensitivity or detection angle are adjusted, walking test must be performed according to the above steps.



### 3.7. Stand-by battery replacing and using

When battery is lower power, it will send related signal to control panel, so user should replace battery with same spec. (as right fig.)

On BUS working mode, if this model of detector more than 4pcs in the system, you need put battery inside to assure the system will not overload.

