

# OSD-40DP

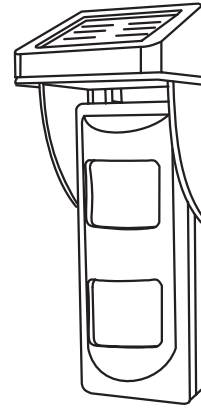
## Installation Instructions

Wireless Intelligent 2 PIRs Outdoor Motion Detector With Solar Power

### 1. INTRODUCTION

OSD-40DP is a dual pir outdoor wireless detector with intelligent solar charging technology. This detector adopts intelligent multi-grade digital recognition technology and unique SLT calculation to process the 2-way special pir signal and 1 way environmental temperature signal to reach the topgallant detection and lowest false and missing alarm. It can recognize waving object and real human motion; resist direct or reflective sunshine and accommodate the false alarm caused by speedy hot and cool air.

OSD-40DP can operate in outdoor severe environment for long term. 8 bands of sensitivities for option, can take on the weather difference caused by rain, snow, hail, strong sunshine, gale etc, it is a purely high-class outdoor detector worthy of selection and usage.



### 2. BRIEFINTRODUCTION

- 2 Dual PYRO Sensors
- VLSI based electronics with movement speed spectrum analysis.
- 8 bands of sensitivities for option ;
- Anti direct or reflective sunshine;
- Anti strongly mutative hot/cool air;
- Pet immunity  $\geq 25\text{KG}$
- Digital environmental temperature detection ;
- Intelligent solar charging technology ;

- Purely wireless transmitting structure, easy installation ;
- Tamper&low voltage alarm;
- IP65 water proof, high-strength optical system;
- Lens for option: long range, curtain, pet immunity ;
- Installation way: wall mount, corner mount, ceiling mount ;
- Transmission frequency for option: 315MHZ 433MHZ
- Mounting Bracket adjustment options:  $90^\circ$  (h) and  $30^\circ$  (v)

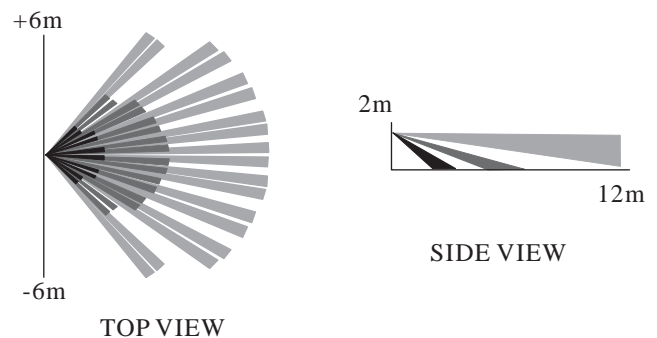
### 3. SPECIFICATIONS

Power supply: 3\*1.2V AAA Ni-MH Chargeable battery  
 Current: Static ---200uA Alarm ---15mA  
 Warm up period: 40s  
 Install high: 1.5m.-2.4m  
 Alarm time: 2s  
 Anti RFI/EMI: 0.1-500MHz/3V/m  
 Anti-white light: >100000LUX  
 Low battery alarm: 3.3V

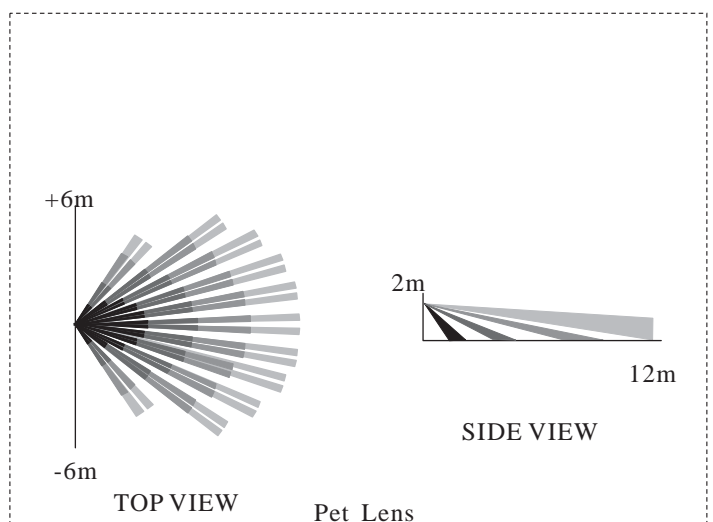
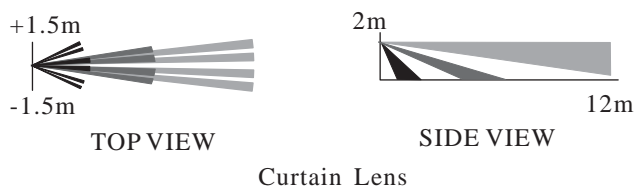
Temp compensation: intelligent digital compensation

Temperature:  $-10^\circ\text{C}/+55^\circ\text{C}$   
 Humidity(RH): 95%  
 Sensitivity: 8 grades adjustable  
 Detect speed: 0.2m/s to 3.5m/s  
 Radio emission :  $\geq 200\text{m}$  (Open space)  
 Frequency: 315/433MHz etc.  
 Encoding: PT2262  
 Dimensions: 160mm\*65mm\*50.5mm  
 Coverage: 12m\*12m  $110^\circ$  (Standard Lens)

12m\*3m  $12^\circ$  (Curtain Lens)  
 12m\*12m  $110^\circ$  (Pet Lens)

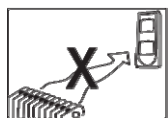


Note: the factory lens is standard lens, but we have 3 other lenses for option: pet immunity; curtain & long range!

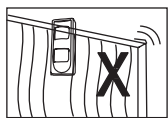


## 4. INSTALLATION GUIDE

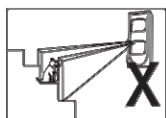
Even though OSD-40DP can accommodate outdoor severe environments, the following factors shall be avoided during installation in order to get the reasonable detection:



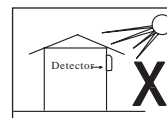
No direct facing cold /hot source



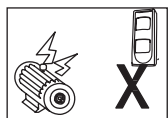
Mount on a secure and stable base/object



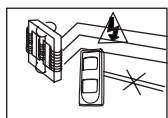
Incorrect Installation (with pet immunity lens)



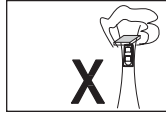
Place without enough sunshine such as eave and umbrage etc



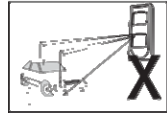
Keep away from strong electrical interferences



Keep away from high pressure power



Don't install on the tree, wire fence etc



Avoid moving vehicles

## 5. WALL FASTENING

In order to get the best detection and signal covering scale, the detector should be installed at 1.5-2.4 meters (height) and in a correct direction as Figure 1. Ensure that there are no obstacles, trees which could obstruct the wide angle detection view.

Release the screw and remove the front cover gently by hand. If too tight, use a screw driver to prize the opening slot between front cover and the base from the bottom side near to the screw

Loosen the fixing screw on the PCB refer to figure 3, break through the relevant blind holes according to spot requirement and installation way (For example, blind holes for corner installation must be broken through during corner installation; and those for wall mount must be broken through during wall mounting), and then fasten the solar bracket onto the wall together, be attentive that the screws holes on bottom bracket and solar bracket shall be complies on same position, don't be dislocated or devious.

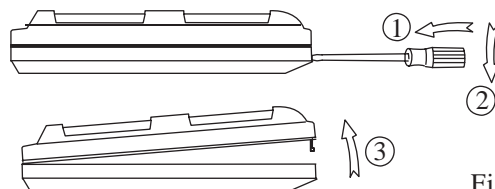


Figure 1

Procedure for opening the cover:

1. Release the screw on the external cover
2. Insert the blade screw driver into the opening slot, press it and wind it to the arrow direction, so that the external cover can be opened.

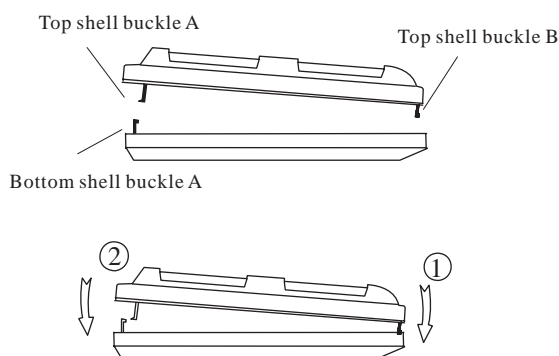


Figure 2

Procedure for closing the cover:

Face the B shell buckle of upper cover to the slot of lower cover, and face A shell buckle of upper cover with A shell buckle of lower cover. Press the upper cover down to close the detector.

Fasten the wall mount accessory bracket to a stable surface at the correct installation height. Insert and twist the connection accessory into the bracket section mounted on the wall. Fasten the bracket section to the PIR housing. ( Figure 4)

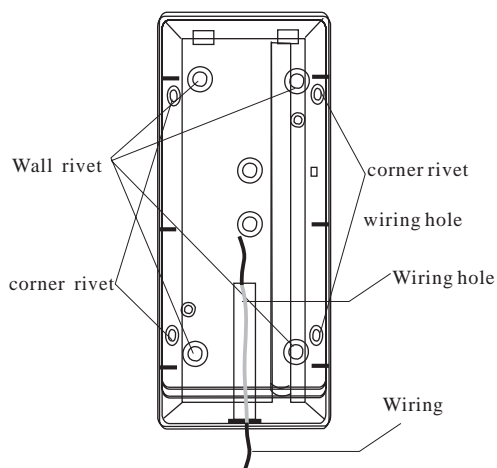


Figure 3

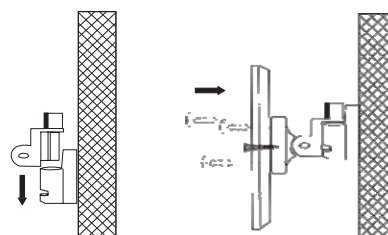
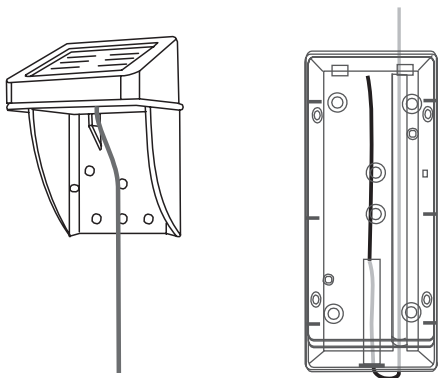


Figure 4

installation figure for wall mount bracket

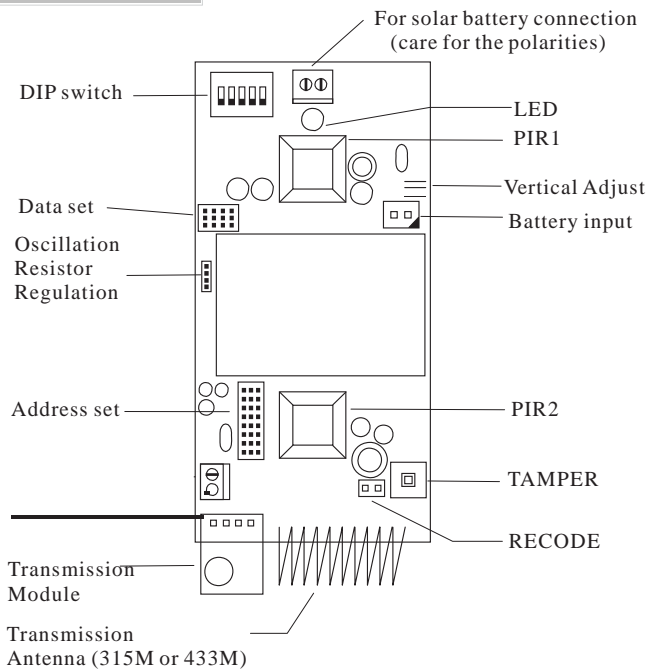
## 6. INSTALLATION OF SOLAR BATTERY CABLE



Refer to the figure, cross the solar battery cable from the cable-lead slot on backside of the detector bottom cover, and then go across from the cable-lead hole on bottom; connect it to the relevant extremities on PCB (Pay attention to the polarities)  
Note: must lead the cable according to the guide lines above, never cross the cable from top of detector by hand, for it may damage the air proof and cause false alarm or invalidation.

**Warning:** if want to charge the battery by DC through the solar battery input extremity, the voltage must be limited within 0.8-2.0V, overload will damage the detector!  
Do keep in mind!

## 7. PCB LAYOUT



Note: Don't touch the transmission module, transmission antenna or PIR on PCB.

## 8. SETTING

### Dip switch setting

DIP 1 When dip switch 1 is "OFF", detector is in high sensitivity mode;  
When dip switch 1 is "ON", detector is in low sensitivity mode.

DIP2 when dip switch is "OFF", detector is in normal "operation mode", ie, in order to reach the purpose of energy saving, in "operation mode", when detector is triggered alarm, the 2<sup>nd</sup> alarm shall be performed 3 minutes later.

When dip switch 2 is "ON", detector is in "TEST MODE", ie, detector can be triggered when any alarm signal accord with alarm conditions is detected.

This is for the convenience of installation and adjustment.

### DIP3 DIP4

DIP3 DIP4 is combined switch mode

It is for detection of different pulse setting.

ts makeup is as below

DIP3	DIP4	Pulse Mode
OFF	OFF	2 Pulse
OFF	ON	3 Pulse
ON	OFF	4 Pulse
ON	ON	5 Pulse



Suggestion: during operation in different environments, please adjust the detector to relevant setting in order to fulfill its best function.

### DIP5 LED control

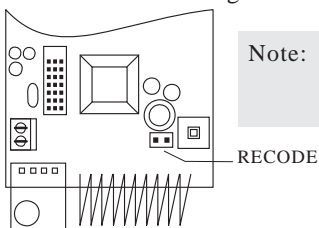
When it is "OFF" LED is turn off to reach the purpose of energy saving and concealed installation.

When it is "ON", LED is turn on.

Note: Strongly suggest that Dip switch 2 & 5 must be set to "OFF", or battery life will be shortened greatly!

### Encoding operation (communication with control panel)

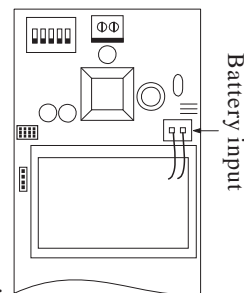
40 seconds after power warm up, set the control panel to "detector zone record mode" and then draw out the RECODE jumper from OSD-40DP, at this time, detector will send an alarm signal to control panel, please confirm the encode is successful according to relevant operation on control panel



Note: jumper cap doesn't need to insert back after encode succeeds, if not, tamper function will disappear.

### Installation of chargeable battery

1. Switch DIP5 to "0N" position.
2. Open the metal cap on battery box, connect the 3\*AAA battery group (for option) to the mother base on detector and take care of its polarities. After battery connection, LED doesn't flash, states that the polarity is wrong or battery is bad. Draw it out and make a converse connection, if LED doesn't light, must make a careful check and solve the problem before the 3<sup>rd</sup> connection.



### Walk test

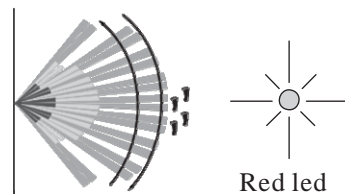
Preparation:

after power connection, set DIP2 & DIP5 to "0N" position.

1. Set different pulse modes refer to different environments. Detector is with 8 kinds of operation modes as below:

DIP1	DIP3	DIP4	Mode	Relevant environment
OFF	OFF	OFF	High sensitivity & 2 Pulse	Very High Risk
OFF	OFF	ON	High sensitivity & 3 Pulse	High Risk
OFF	ON	OFF	High sensitivity & 4 Pulse	Risk
OFF	ON	ON	High sensitivity & 5 Pulse	Low Risk
ON	OFF	OFF	Low sensitivity & 2 Pulse	Risk
ON	OFF	ON	Low sensitivity & 3 Pulse	Low Risk
ON	ON	OFF	Low sensitivity & 4 Pulse	Noisy Area
ON	ON	ON	Low sensitivity & 5 Pulse	Extreme Noisy Area

2. Close the front cap, when LED indication is off, perform a transverse movement to check the PIR performance through the red LED, this can avoid the dead angle of PIR detection. PIR is in highest sensitivity when movement is transverse to the detector.



## Setting of compliance with other control panels

### Oscillation resistor set:

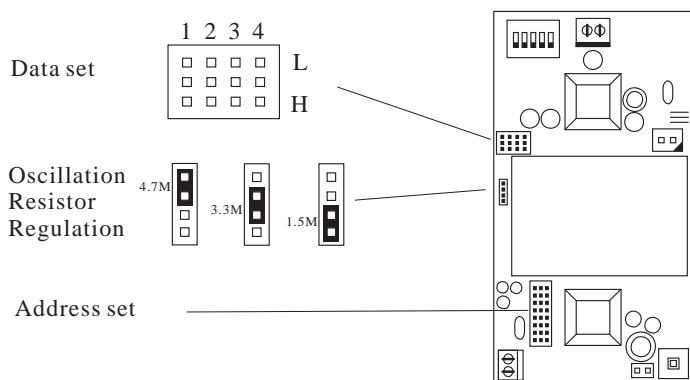
Compliance with other control panels can be reached through regulation of oscillation resistance on encoding chips. Refer to below figure, our oscillation resistance is with 3 modes: 4.7M, 3.3M, 1.5M

### Data set:

Can be set by the jumpers as figure "DATA SET", among which 1=D3(A8);2=D2(A9);3=D1(A10);4=D0(A11), please set it correlatively according to the requirement of control panel

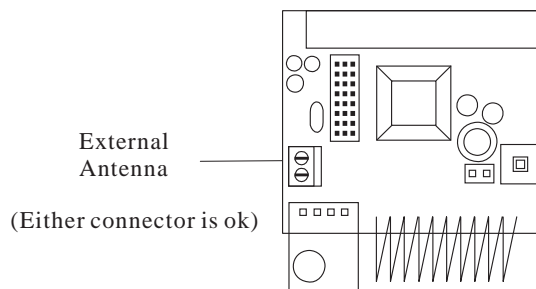
### Address set:

Can be set by the jumpers as figure "ADDRESS SET" in order that control panel can distinguish different zones

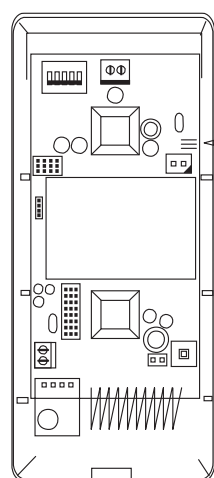


## External transmission antenna

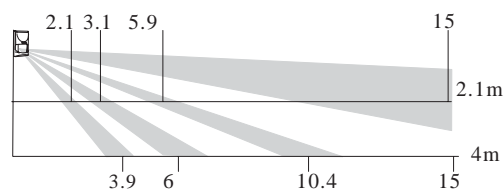
User can not take the liberty of enlarging the wireless transmission distance by connecting an external antenna without the authorization of manufacturer. It is not permitted by the FCC and may cause uncompliance with the relate provisions of FCC regulation. Such modifications could void the user's authority to operate the equipment. Please find the FCC NOTE in this manual.



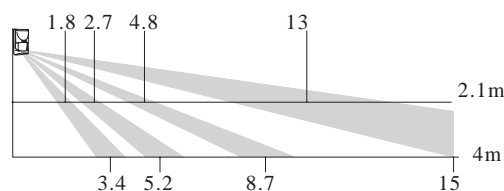
## 9. VERTICAL ADJUST



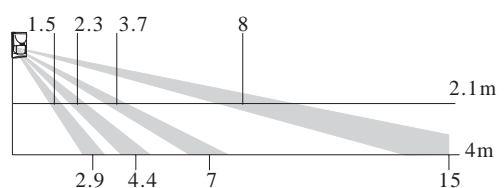
-1  
1  
+1



-1  
1  
+1



-1  
1  
+1



## 10. NOTES AND WARNINGS

Even the most sophisticated detectors can sometimes be defeated or may fail to activate due to: DC power failure/improper connection, malicious masking of the lens, tampering with the optical system, decreased sensitivity in ambient temperatures near that of the human body and unexpected failure of a component or circuit. The above list includes the most common reasons for failure and it is recommended that the detector and the entire alarm system be checked weekly to ensure proper performance.

An alarm system should not be regarded as a substitute for insurance. Home & property owners or renters should be prudent enough to continue insuring their lives & property even though they are protected by an alarm system.

**WARNING!** Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the warranty. This device has been tested and found to comply with the limits for a Class B digital device, pursuant harmful interference in residential installations. This equipment generates and uses or radiates radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio and television reception. There is no guarantee that interference will not occur in a particular installation. If this device does cause such interference, which can be verified by turning the device off and on, the user is encouraged to eliminate the interference by one or more of the following measures:

- Increase the distance between the detector and the electrical/electronic equipment.
- Connect the device to a different power socket which supplies power to the detector.
- Consult the dealer or an experienced radio/TV technician

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FCC NOTE: This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and;
2. This device must accept any interference received, including interference that may cause undesired operation.

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.