



## SH-PIRCAM-OUT-AM

### FREEWAVE™ TWO WAY WIRELESS OUTDOOR PIRCAM DETECTOR With ANTI-MASKING



INSTALLATION INSTRUCTIONS  
P/N 7103550\_D

## INTRODUCTION

The PIRCAM-OUT-AM is a two-way wireless outdoor double quad motion detector with active Anti-Mask feature. The advanced Double PIR Elements provide two detection areas for superior stability.

The PIRCAM-OUT-AM is designed for outdoor usage in most severe and extreme acclimate conditions that may also accommodate pets.

High reliability is achieved by combining both Dual Quad Sensors with highly sophisticated software as well as an adaptive coverage area, reducing false alarms alerts to zero while maintaining high security standards for the detection of human intruders into protected area.

Rotating mirrors allowing controlling the range distance, so that the effective pattern will be set for every installation environment and protection site, control the detection sensitivity and range. The PIRCAM-OUT-AM is designed to protect large areas and can easily be installed on walls in order to provide a solid protection of the area while rejects interferences.

## PIRCAM OUTDOOR FEATURES

- 2 PIR Motion Sensors with mirrors & CMOS camera
- The mirrors are adjustable to limit the detection area and prevent false alarm.
- The max detection range is 12m and even up to 15m.
- IR LED for operating in low light conditions
- Anti-Masking
- FOTA support
- Freewave2 advanced & secured RF protocol
- GFSK modulation type with 5 frequencies, LBT and AFA (Adaptive Frequency Agility)
- Supervision transmission
- Pet immunity up to 35kgs
- Double Tamper protection against detector opening and wall removal
- 4 x AA size batteries at configuration of 1+1 & 1+1 nominal 3V / 6800mAh.
- Batteries and Wall bracket supplied
- Battery status sent on every transmission
- Communication range up to 1200m open space
- Red LED indicator for Alarm and Trouble state
- Operating Temperature -30°C to +60°C
- IP65 Rating protection
- Easy/Fast installation

FIG. 1- DETECTOR PARTS

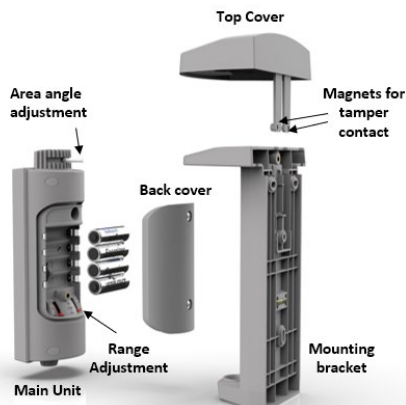


FIG. 1.1 – DETECTOR PARTS (CONT.)

### Detection Range Adjustment



FIG. 1.2 – DETECTOR PARTS (CONT.)

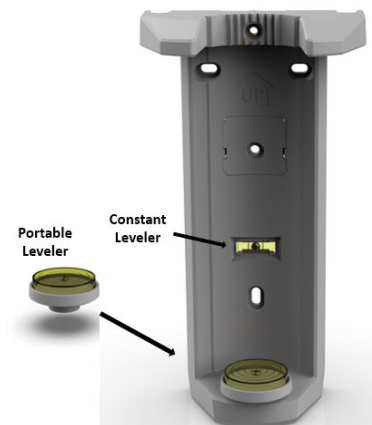
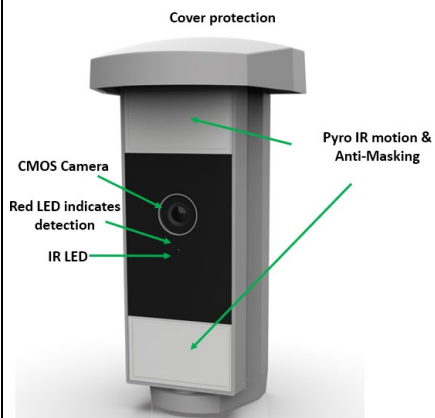
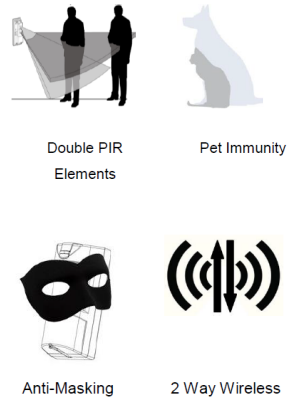


FIG. 2 - PRODUCT OVERVIEW



## PRODUCT OVERVIEW



## OPERATION

### Events transmission:

- **SUPERVISION** – A periodical transmission indicating detector's presence
- **ALARM** – Alarm transmission triggered by the device indicating motion detection.
- **LOW BAT** – A low battery signal will be sent when the battery reaches 2.8V level. When Battery level drops below Cut Off level (2.5V), the device will stop functioning.
- **TAMPER** – when the detector is opened or removed from the wall, a "Tamper alarm" signal is transmitted. When detector is closed or fixed back to the wall "Tamper restore" signal is transmitted.
- **ANTI-MASKING** – Upon an attempt to mask the lens, a trouble alert will show as "Area # Masked zone # "event within 2 minutes after the masking event
- **ANTI-MASKING RESTORE** – On the first detection after removing masking factor.

## LEARNING THE DETECTOR

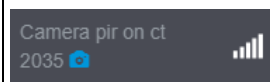
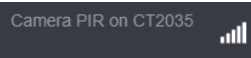
To pair your device, please proceed as follows:

1. Enter into installer mode via the "Installer Webpage" (<https://installer.crowcloud.com>)
2. Go to "Zones" and select the zone # you want to learn.
3. Add Zone - (Reminder: 1.insert Link Type "ISM", 2. device's ID number, 3. Device Type "Camera PIR on CT2035".)
4. Set the device's configuration, and save configuration.
5. Remove the batteries plastic protector to start power-up and learning process.
6. Make sure that the LEDs flash Green and Red alternately for about 1 min, and at the end of learning process the led will turn on steady green for 3 sec. and turn off, this is indication that the learning was successful.
7. If the LED continues to flash red for more than 5 minutes and stops, the learning has failed, please check the PIRCAM settings details, remove batteries and repeat step 5, 6

## RSSI – RF SIGNAL INDICATION

RSSI is visible to an installer of a receiving device. The RSSI displayed in 2 panel program levels,

1. Enter in installer programming mode via installer webpage.
2. Go to ZONE level (see ex. Below)



## SELECT MOUNTING LOCATION

The PIRCAM-OUT-AM installation height should be mounted between 0.8 to 1.2m from ground surface.

Choose a location most likely to intercept an intruder. See detection pattern (see section 12 in this manual).

The detector detects motion crossing the beam; it is more sensitive detecting motion crossing the beams then moving towards the detector.

**AVOID THE FOLLOWING LOCATIONS** to assure a better performance in a constant and stable environment:

- Facing direct sunlight
- Facing areas subject to rapid temperature changes
- Facing metal doors
- Close to direct source of heat or air gust
- Clear all physical obstacles from the detection area
- Clear all light reflecting surfaces from the detection area, as well as water puddles
- Avoid installation on the following types of ground: Thick vegetation, un-mown Grass, Water, Sand and Metal

**TRANSMISSION TESTS**

**Tamper transmission test**

Changing the tamper switch state will cause tamper transmissions to be indicated on the control panel.

**Communication signal test**

Follow RSSI section above to verify the RF Communication level.

**Walk test**

Make sure that the protected area is cleared of all people for at least 3 minutes before starting the walk test.

Initialize "Start Walk test" mode in overview level on your control panel, Verify the LED on the device begins flashing in green color.

Start walking across the detection zone. (the Red Led turns ON when motion is detected). Allow 5 sec. between each test for the detector to stabilize.

**DETECTION PATTERN**

**Range Adjustment**

The OUTDOOR PIRCAM has a 90° top view, Double PIR detection pattern with ability of over 15 m detection Range (when installed at 1.2m above the ground surface)

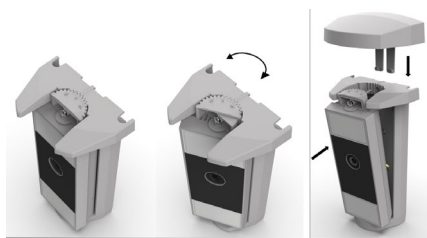


The OUTDOOR PIRCAM has area Angele adjustment rotating housing that can be adjust horizontally, so its 90° coverage may vary between 0° and 180°, See figure 15.

**FIG 3 - DETECTION PATTERN**

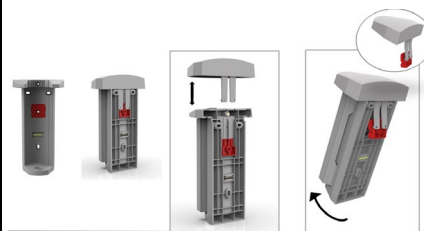


**FIG. 4 CONSTRUCTION**



**WALL BRACKET SPACERS**

Wall spacers are wedge-shaped to help them fit between walls or surfaces that aren't perfectly straight. Used to maintain the expansion gap between installed flooring and walls. Serrated spacers that lock together in the desired thicknesses. Contains 3 pcs with different thickness



**BATTERIES REPLACEMENT**



**4 x 1.5V AA  
6800mAh  
(Li-FeSx)**  
**Approved brands  
SURIKATA  
EXTREME PRO  
1.5V AA  
Energizer L91**

**!!!CAUTION!!!**  
**RISK OF EXPLOSION IF BATTERIES ARE REPLACED BY DIFFERENT TYPES / MODELS**  
**DISPOSE USED BATTERIES ACCORDING TO THEIR INSTRUCTIONS**

**REGULATORY APPROVALS**

The SH-PIR-OUT-AM conforms to the essential requirements set out by:

- RED directive:2014/53/EU
- EMC directive: 2014/30/EU
- Low Voltage directive (LVD): 2014/35/EU

Harmonized Standards applicable to this products are:

- EN 50130-4
- EN 61000-6-3
- EN 301 489-1
- EN 301 489-3
- EN 300 220-1
- EN 300 220-2
- EN 62368-1

Additional Standards and Directives applicable to this product are:

- EN 50130-5



**TECHNICAL SPECIFICATIONS**

<b>Detection Method</b>	Passive infrared with anti-mask and VGA camera
<b>Communication Protocol</b>	FreeWave2™ Two Way ISM GFSK with 5 frequencies & LBT
<b>Frequency Band</b>	868-869MHz or 902-928MHz
<b>PIR Coverage</b>	15 m 96° wide / 16 zones
<b>PIR distance limit</b>	0 to 15 m (9 levels)
<b>Detectable speed</b>	0.2 to 3.0 m/s
<b>Sensitivity</b>	1.8°C at 0.5 m/s
<b>Identification</b>	Unique ID serial number (24 bit)
<b>Event Transmission</b>	Alarm, Tamper, Anti-Mask, Picture(s) Verification, Supervision, Low Bat
<b>LED Indication</b>	Red LED during Alarm and Trouble
<b>Tamper Switch</b>	Detector Opening and Wall Removal
<b>Communication Range in open space</b>	Up to 1200m
<b>Transmit Power</b>	Up to 14 dBm (16dBm EIRP)

**TECHNICAL SPECIFICATIONS (CONT)**

<b>Camera</b>	CMOS camera with VGA or QVGA resolution
<b>Picture Range</b>	15m
<b>CMOS Sensitivity</b>	16VLux/sec
<b>Picture Mode</b>	Configurable B&W / Color
<b>Resolution</b>	Configurable VGA / QVGA
<b>Current Draw</b>	Average 90uA
<b>Warm-up period</b>	45 sec. or less
<b>Environment humidity</b>	95% max
<b>Power</b>	4 x 1.5V AA (Li-FeSx), Total 3V/6800mAh
<b>Mounting height</b>	0.8 to 1.2m
<b>Battery life</b>	Up to 5 years
<b>Low Battery</b>	2.8V (Cut Off at 2.5V)
<b>Operating Temperature</b>	-30°C to +60°C
<b>Dimensions</b>	218mm x 75mm x 87mm
<b>Ingress Protection</b>	IP65

**CROW ELECTRONIC ENGINEERING LTD. ("Crow") - WARRANTY POLICY CERTIFICATE**

This Warranty Certificate is given in favor of the purchaser (hereunder the "Purchaser") purchasing the products directly from Crow or from its authorized distributor. Crow warrants these products to be free from defects in materials and workmanship under normal use and service for a period of 12 months from the last day of the week and year whose numbers are printed on the printed circuit board inside these products (hereunder the "Warranty Period").

Subject to the provisions of this Warranty Certificate, during the Warranty Period, Crow undertakes, at its sole discretion and subject to Crow's procedures, as such procedures are from time to time, to repair or replace, free of charge for materials and/or labor, products proved to be defective in materials or workmanship under normal use and service. Repaired products shall be warranted for the remainder of the original Warranty Period.

All transportation costs and in-transit risk of loss or damage related, directly or indirectly, to products returned to Crow for repair or replacement shall be borne solely by the Purchaser.

Crow's warranty under this Warranty Certificate does not cover products that is defective (or shall become defective) due to: (a) alteration of the products (or any part thereof) by anyone other than Crow; (b) accident, abuse, negligence, or improper maintenance; (c) failure caused by a product which Crow did not provide; (d) failure caused by software or hardware which Crow did not provide; (e) use or storage other than in accordance with Crow's specified operating and storage instructions.

There are no warranties, expressed or implied, of merchantability or fitness of the products for a particular purpose or otherwise, which extend beyond the description on the face hereof. This limited Warranty Certificate is the Purchaser's sole and exclusive remedy against Crow and Crow's sole and exclusive liability toward the Purchaser in connection with the products, including without limitation - for defects or malfunctions of the products. This Warranty Certificate replaces all other warranties and liabilities, whether oral, written, (non-mandatory) statutory, contractual, in tort or otherwise.

In no case shall Crow be liable to anyone for any consequential or incidental damages (inclusive of loss of profit, and whether occasioned by negligence of the Crow or any third party on its behalf) for breach of this or any other warranty, expressed or implied, or upon any other basis of liability whatsoever. Crow does not represent that these products can not be compromised or circumvented; that these products will prevent any person injury or property loss or damage by burglary, robbery, fire or otherwise; or that these products will in all cases provide adequate warning or protection. Purchaser understands that a properly installed and maintained product may in some cases reduce the risk of burglary, fire, robbery or other events occurring without providing an alarm, but it is not insurance or a guarantee that such will not occur or that there will be no personal injury or property loss or damage as a result.

Consequently, Crow shall have no liability for any personal injury, property damage or any other loss based on claim that these products failed to give any warning. If Crow is held liable, whether directly or indirectly, for any loss or damage with regards to these products, regardless of cause or origin, Crow's maximum liability shall not in any case exceed the purchase price of these products, which shall be the complete and exclusive remedy against Crow.