

# SWAN CAM

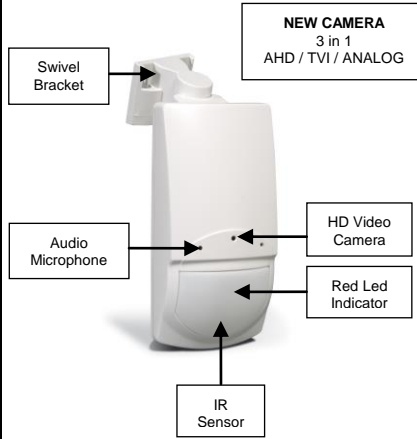


**Combined PIR Motion Detector and HD Video Camera**



**INSTALLATION INSTRUCTIONS**  
7101574 Rev G D.Z

## PRODUCT OVERVIEW



## SWAN CAM FEATURES

- Quad (four element) PYRO sensor
- ASIC based electronics with movement speed spectrum analysis.
- User-friendly installation with swivel bracket.
- Bi-directional temperature compensation.
- Environmental immunity.
- Pet immunity up to 25Kg. Pet active below 1m.
- Height installation free from 1.8m to 2.4m.
- Wide range operating voltage.

## VIDEO DEVICE FEATURES

- 1/2.9" 2.3 Mega Pixel SONY CMOS
- Lens 4.3mm Pinhole
- Full HD video transmission up to 500m over Coaxial cable
- 1920x1080 25p/30p, 1280x720 50p/60p
- DNR (Digital Noise Reduction: 3D + 2D)
- WDR (Wide Dynamic Range)
- Defogging video image capacity
- Day & Night AUTO / COLOR / B&W / EXT
- Smart IR ON / OFF
- OSD Complete on-screen configuration (16 languages)

## SELECT MOUNTING LOCATION

Choose a location most likely to intercept an intruder. (Our recommendation is a corner installation). See detection pattern fig.3.

The quad-element high quality sensor detects motion crossing the beam; it is slightly less sensitive detecting motion toward the detector.

The SWAN CAM performs best when provided with a constant and stable environment and background.

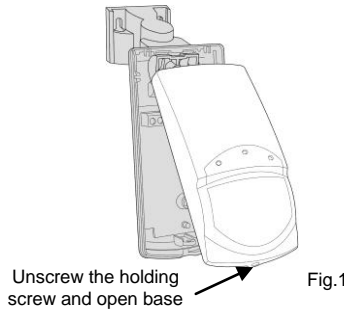
### AVOID THE FOLLOWING LOCATIONS:

- Facing direct sunlight.
- Facing areas that may change temperature rapidly.
- Areas where there are air ducts or substantial airflows

## DETECTOR INSTALLATION

The detector can either be wall, corner or ceiling mounted by using special bracket base for the bracket mounting. Refer to bracket description Fig. 6.

1. To remove the front cover, unscrew the holding screw and gently raise the front cover.



## DETECTOR INSTALLATION (CONT)

2. Insert wire through the bracket and holes "A" and "B". (See fig.2)
3. Mount the bracket base to the wall or to the ceiling with the suitable adaptor. Hold the detector base in front of the protected area and tighten the bracket screw.

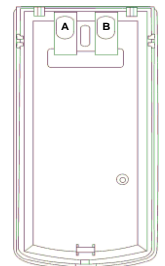


Fig.2

## DETECTOR INSTALLATION (CONT)

4. Insert the wires through the bracket and connect the wires to the terminal block.

### WIRE SIZE REQUIREMENTS

Use #22 AWG (0.5 mm) or wires with a larger diameter. Use the following table to determine the required wire gauge (diameter) depending on the length of wire between the detector and the control panel.

Wire Length	m	200	300	400	800
Wire Diameter	mm	0.5	0.75	1.0	1.5
Wire Length	ft.	800	1200	2000	3400
Wire Gauge	#	22	20	18	16

5. Replace the cover by inserting it back in the appropriate closing pins and screw in the holding screw.

## BRACKET INSTALLATION OPTIONS

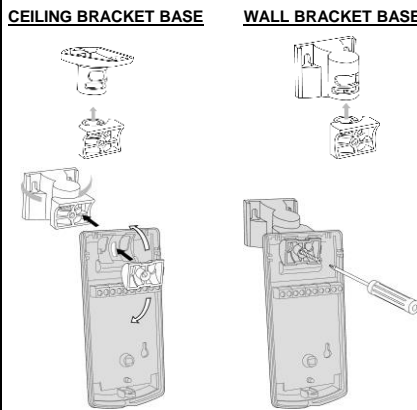


Fig.3

## CAMERA MODULE CONNECTION

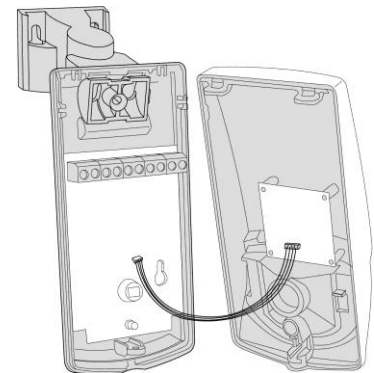


Fig.4

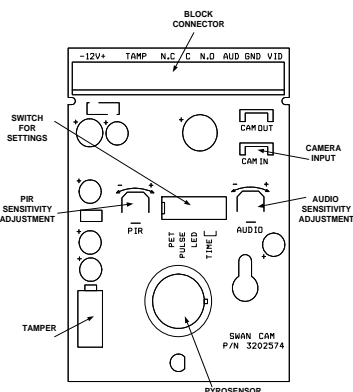
Connect the camera module to the main PCB

## DETECTOR CONNECTION

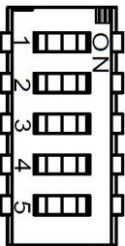
Please refer to "Wire Size Requirements" before connecting detector to achieve optimal operation.

1	⊖	-12V+ TAMP NC C NO AUD GND VID	<b>Terminal 1</b> Marked " - " (GND)	Connect to the negative supply voltage output
2	⊕		<b>Terminal 2</b> Marked " + " (+12V)	Connect to a positive supply voltage output of 9.6 -16Vdc source
3	⊖		<b>Terminals 3 &amp; 4</b> Marked " TAMP "	Connect these terminals to a 24-hour normally closed zone. If the front cover of the detector is opened, an immediate alarm signal will be sent to the control unit.
4	⊕			
5	⊖		<b>Terminals 5,6 &amp; 7</b> Marked " N.C, C & N.O "	These are the output relay contacts of the detector. Connect to a normally closed or normally opened zone in the control panel
6	⊕			
7	⊖			
8	⊖		<b>Terminals 8 &amp; 9</b> Marked " AUD "& " GND "	This is the audio signal output. These two terminals should be connected to an audio input.
9	⊕			
10	⊖		<b>Terminals 9 &amp; 10</b> Marked " GND "& " VID "	This is the video signal output. These two terminals should be connected to video input.
	⊕			

**SETTING UP THE DETECTOR**



**DIP SWITCHES**



**SWITCH 1 - PET IMMUNITY SETTING**

Use for setting the pet immune function - up to 15kg or 25kg, depending on the pet size.  
Position Up (ON) – Immunity up to 15kgs  
Position Down (OFF) – Immunity up to 25kgs

**SWITCH 2 – PIR PULSE COUNT ADJUSTMENT**

Use for setting the count function to provide PIR sensitivity control according to the environment.  
Position Up (ON) – High Sensitivity for stable environment  
Position Down (OFF) – Low Sensitivity for harsh environment

**SWITCH 3 – LED SETTINGS** (this setting does not affect detector operation)

Use for setting LED Enable / Disable  
Position Up (ON) – LED Enable (activated by motion detection)  
Position Down (OFF) – LED Disable

**SWITCH 4 & 5 – N.O RELAY – TIME DELAY SETTINGS**

Use for setting the time delay of the N.O relay terminals 6 & 7

There are 4 options:

SWITCH 4	SWITCH 5	N.O RELAY TIME RELAY
ON	ON	2 Sec. Contact Closed
ON	OFF	15 Sec. Contact Closed
OFF	ON	60 Sec. Contact Closed
OFF	OFF	240 Sec. Contact Closed

The N.C Relay (Terminal 5 & 6) opens for 1.8 to 2 seconds when an alarm occurs.

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**POTENTIOMETERS ADJUSTMENT**

There two potentiometers located on the PCB device to set the optimal sensitivity of the detection and the audio.

**PIR SENSITIVITY ADJUSTMENT**

Use the Potentiometer marked "PIR" to adjust the detection sensitivity between 15% and 100% according to walk test in the protected area. (Factory setting to 57%).  
Rotate the potentiometer clockwise to increase range, counter-clockwise to decrease range

**AUDIO SENSITIVITY ADJUSTMENT**

Use the potentiometer "AUDIO" to adjust the audio sensitivity.  
Rotate the potentiometer clockwise to increase sensitivity.  
Rotate the potentiometer counter-clockwise to decrease sensitivity

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**TECHNICAL SPECIFICATION**

<b>Detection Method</b>	Quad Element PIR Sensor
<b>Power Input</b>	9 to 16 Vdc
<b>Current Draw</b>	Standby: 8mA (± 5%) Active: 10mA (± 5%)
<b>Temperature Compensation</b>	Yes
<b>Pulse Width</b>	Adjustable
<b>Alarm Period</b>	2 sec (± 0.5sec)
<b>Alarm Output</b>	N.C 28VDC 0.1 A with 10Ohm series protection Resistors
<b>Tamper Switch</b>	N.C 28Vdc 0.1A with 10 Ohm series protection resistor - open when cover is removed
<b>Warm Up Period</b>	1 min
<b>LED Indicator</b>	Red LED is ON during Alarm
<b>Dimensions</b>	123mm x 61mm x 38mm
<b>Weight</b>	135g

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

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.

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**TESTING THE DETECTOR**

Wait one minute after applying power and warm up time.  
Conduct testing with the protected area cleared of all people.

**Walk test**

1. Remove front cover.
2. Set LED to ON position.
3. Reassemble the front cover.
4. Start walking slowly across the detection zone.
5. Observe that the LED lights whenever motion is detected.
6. Allow 5 sec. between each test for the detector to stabilize.
7. After the walk test is completed, you can set the LED to OFF position.

**NOTE:**

Walk tests should be conducted, at least once a year, to verify proper operation of the detector.

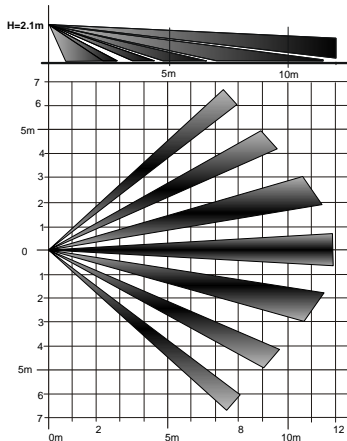
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**VIDEO SPECIFICATION**

<b>Image Devices</b>	1/2.9" 2.3 Mega Pixel SONY CMOS
<b>Resolution</b>	AHD: 1080P 25/30FPS, 720P 50/60FPS TVI: 1080P 25/30FPS, 720P 50/60FPS CVBS: 1280H
<b>Min. Illumination</b>	Color DSS: 0.002 Lux B&W DSS: 0.001 Lux
<b>S/N Ratio</b>	≥80dB
<b>Day &amp; Night</b>	Auto / Color / B&W / EXT
<b>D-Zoom</b>	x1 ~ x8
<b>Privacy</b>	ON / OFF (16 points)
<b>Video Output</b>	AHD / TVI / CVBS
<b>Lens</b>	4.3mm Pinhole Lens
<b>Power</b>	DC 7V~25V

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**FIG 3 - DETECTION PATTERN**



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**VIDEO SYNCHRONIZATION**

The video module has the ability to Auto Detect the DVR or Screen which it is connected.

In case of the video is not transmitted, please perform a reset by following steps according to your DVR model:

**1. For CVBS:**

Push the OSD button to LEFT for 5 to 10 seconds. The camera automatically turn OFF and ON. Then you will see the analogue CVBS mode.

**2. For AHD to TVI / TVI to AHD:**

Cursor on EXPOSURE -> RIGHT RIGHT RIGHT (3 times) then ENTER. -> You will see the system in the hidden menu.

**3. For PAL & NTSC:**

It is in the OSD menu. ADJUST -> VIDEO OUT

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**VIDEO MODULE SPECIFICATION**

The Swan Cam is equipped with the latest and advanced video module SONY CMOS 2.3 Mega Pixel with Full HD video transmission up to 500M over Coaxial cable.



For more information on features, specs and full configuration of the video module, please visit the Swan Cam page on our website

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