



Covert Color Camera in Working PIR Motion Detector Case

Operation Instructions

Model No. **ECMD200**

Please read this manual first for correct installation and operation. This manual should be retained for future reference. The information in this manual was current when published. The manufacturer reserves the right to revise and improve its products. All specifications are therefore subject to change without notice.

PRECAUTIONS

1. Do not install the camera near electric or magnetic fields.

Install the camera away from TV/radio transmitters, magnets, electric motors, transformers and audio speakers since the electromagnetic fields generated from these devices may distort the video image or otherwise interfere with camera operation.

2. Never disassemble the camera beyond the recommendations in this manual nor introduce materials other than those recommended herein. Improper disassembly or introduction of corrosive materials may result in equipment failure or other damage.

3. Try to avoid facing the camera toward the sun.

In some circumstances, direct sunlight may cause permanent damage to the sensor and/or internal circuits, as well as creating unbalanced illumination beyond the capability of the camera to compensate.

4. Keep the power cord away from water and other liquids and never touch the power cord with wet hands. Touching a wet power cord with your hands or touching the power cord with wet hands may result in electric shock.

5. Never install the camera in areas exposed to oil, gas or solvents.

Oil, gas or solvents may result in equipment failure, electric shock or, in extreme cases, fire.

6. Cleaning

For cameras with interchangeable lenses, do not touch the surface of the sensor directly with the hands. Use lens tissue or a cotton tipped applicator and ethanol to clean the sensor and the camera lens. Use a damp soft cloth to remove any dirt from the camera body. Please do not use complex solvents, corrosive or abrasive agents for cleaning of any part of the camera.

7. Do not operate the camera beyond the specified temperature, humidity or power source ratings.

This camera is suitable for indoor operation only. Use the camera at temperatures within -10°C~50°C (14°F~122°F) and humidity between 20%~ 80%; this device is not rated as submersible. The input power source is 12VDC. **Be sure to connect the proper + / - polarity and voltage, as incorrect polarity or too high a voltage will likely cause the camera to fail, and such damage is not covered by the warranty. The use of properly fused or Class 2 power limited type supplies is highly recommended.**

8. Mounting

Use care in selecting a solid mounting surface which will support the weight of the camera plus any wind, snow, ice or other loading, and securely attach the camera to the mounting surface using screws and anchors which will properly support the camera. If necessary (e.g. when mounting to drop ceilings) use a safety wire to provide additional support for the camera.

OVERVIEW

The ECMD200 is a working PIR motion detector with a hidden color camera which utilizes a Sony 1/3" Super HAD II CCD Sensor and advanced DSP solution for excellent light sensitivity. providing well defined color and B/W video for surveillance applications. The PIR sensor can be connected to an alarm system, light control, recording device or other application. The camera is concealed within the device and enables surveillance of the monitored area without revealing the fact that the area is under camera surveillance. The two security systems combine to give improved protection in the desired area. A stylish design combined with low current consumption delivers an excellent combination of intrusion detection protection, image quality, value and performance.

FEATURES

Camera:

- Color camera with SONY 1/3" Super HAD II CCD sensor
- Employs Digital Signal Processor (DSP) chip-set for high quality images
- High Resolution over 600TVL
- High sensitivity, low smear, high anti-blooming and high S/N ratio for high performance video.
- Built-in functions: Auto Electronic Shutter (AES), Auto Gain Control (AGC), Auto Trace White Balance (ATW) Digital Wide Dynamic Range (DWDR), 2D Noise Reduction (2DNR).
- DC power cable and video cable and power pigtail provided
- Built-in anti-aliasing function to improve perceived video image quality

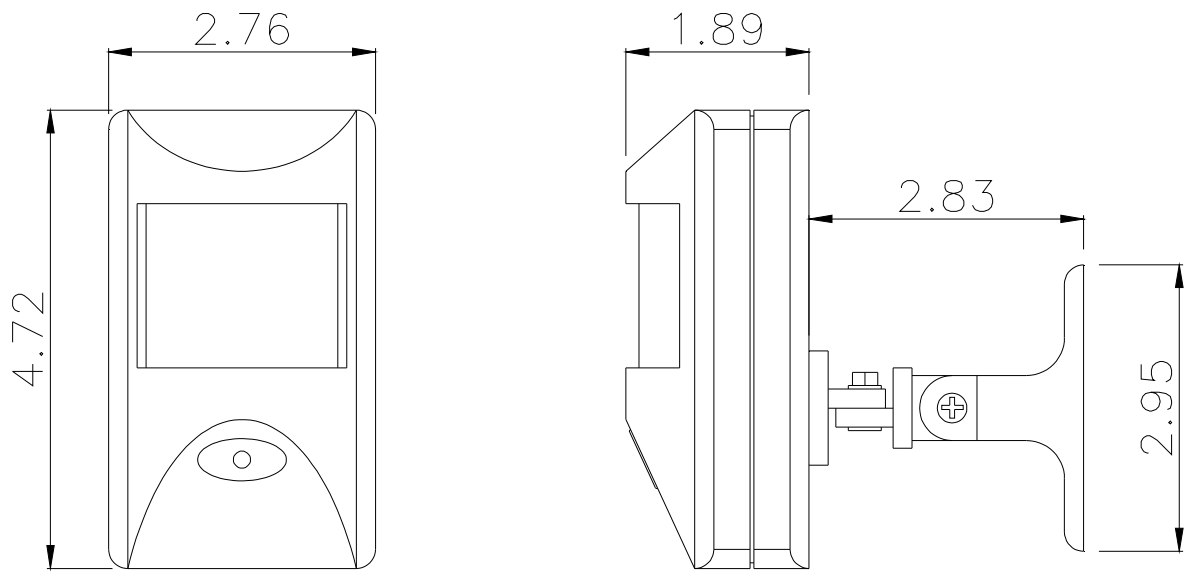
PIR Motion Detector:

- PIR motion sensor for intrusion protection with minimum false alarm ratio.
- Adjustable sensitivity level
- Adjustable relay time 2-40 sec.
- Selectable 2 choices for pulse detection options
- Built-in anti tamper switch

PACKAGE CONTENTS

- PIR Detector with Hidden Camera Unit x 1
- Mounting Bracket x 1
- Operation Instructions (this document) x 1
- Power adapter pigtail x 1
- Screws x 2

DIMENSIONS



UNITS : inch

SPECIFICATIONS

Camera	
Model	ECMD200
Image Pick-up Device	SONY 1/3" Super HAD II Color CCD
Effective Picture Elements	NTSC: 768*494
Horizontal Resolution	600 TV lines
Minimum Illumination	0.05LUX @ F2.0
S/N Ratio	More than 52 dB
Auto Electronic Shutter	NTSC: 1/60s~1/100,000s, PAL: 1/50s~1/110,000s
Gamma Characteristic	0.45
Lens Furnished	Pinhole lens 3.7mm / F2.0
Gain Control	Automatic
White Balance	ATW (2,000°K~10,500°K)
Digital Wide Dynamic Range	DWDR ON
2D Noise Reduction	2DNR ON
Synchronous System	Internal
Video Output	BNC-F; 1 V p-p Composite Video / 75 ohm
Operating Temperature	-10°C to 50°C (14°F to 122°F)
Humidity	20%~ 80% non-condensing
Power Requirements (camera only)	12VDC regulated; 100mA
PIR Motion Detector	
PIR Detection Angle	Horizontal = 100° / Vertical = 45°
PIR Detection Range	10m
PIR N.C/N.O Relay Output	2A @ 24 AC/DC
PIR N.C/N.O Alarm Time	Adjustable from 2 to 40 sec.
Case Open Tamper Switch	Built-in switch; trips alarm relay <u>once</u> if PIR case is opened. Relay operation on switch activation is same as if a PIR motion alarm is detected: single relay event as per VR2/J4 settings. This is NOT a separate 'day zone' or '24 hour zone' type independent/continuous tamper output.
Power Supply (separate from Camera)	DC 12V; Standby current: 1mA; Working current: 25mA
Overall Mechanical	
Dimensions	4.72 x 2.76 x 1.89 inches
Weight	130 g / 0.29 lbs

INSTALLATION

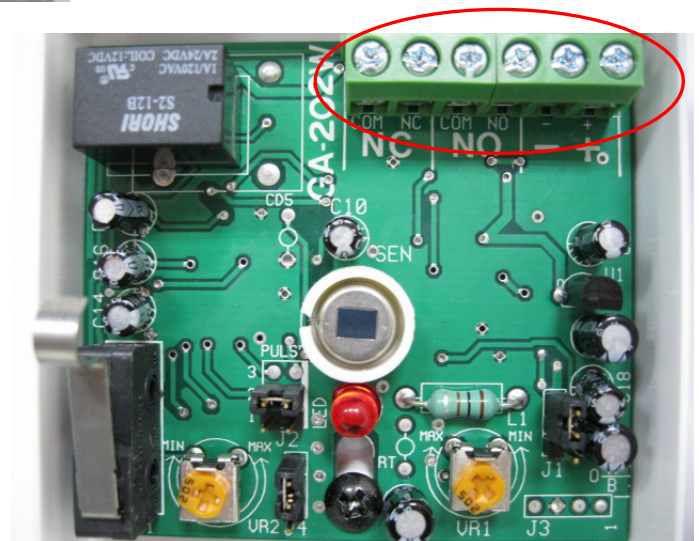
Warning:

To prevent electrical shock, turn off the electrical power before making electrical connections.

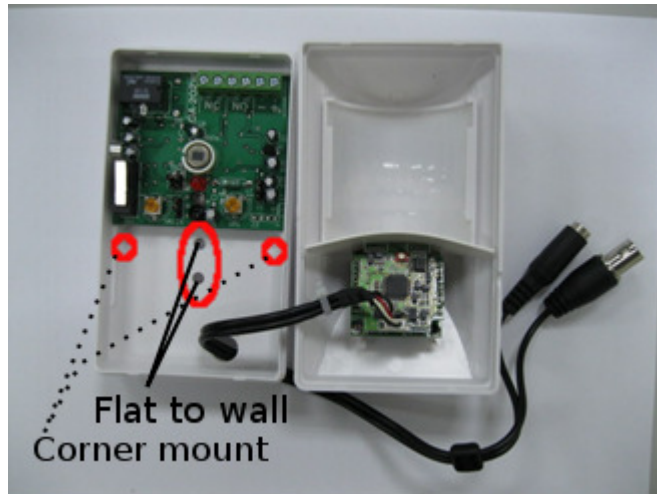
1. Locate the desired mounting location; position housing with PIR detector and camera pointed generally in the desired direction and mark location.
2. Select hole locations for direct installation or bracket mount installation. Drill pilot holes and insert plastic anchors into holes after drilling. If wires will be hidden drill a minimum 5/8" diameter hole for the power and video cables. Open the PIR detector casing by gently pulling the front and back covers in opposite directions. Pass the motion detector power and contact wires through the hole in the back of the case.



3. Connect the PIR detector power, N.O and N.C wires. Also separately connect to the camera coaxial power and BNC video connectors (observe polarity for power – connecting reverse polarity will damage the camera and void the warranty).



4. If not using the bracket provided (not recommended), attach the PIR detector back cover to the mounting surface with the screws provided (Do not over tighten the screws). If corner mounting the unit, drill a hole $\sim 3/16''$ diameter in each edge, just below the motion detector PCB. **NOTE: If the bracket is NOT used, there is no way to change the camera direction/aim the camera.**



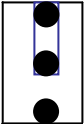
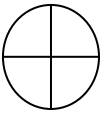
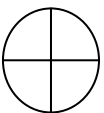
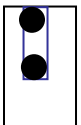
5. If you are using the mounting bracket (**recommended**), attach the bracket to the mounting surface with the screws provided, then attach the PIR detector to the mounting bracket by pressing the brackets plastic pins into the mounting holes in the back until they fit into place

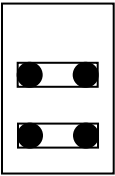
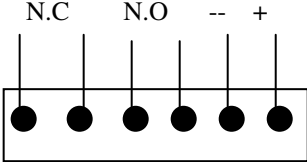


6. Assemble the front cover to the back cover by pressing them together to lock them in place

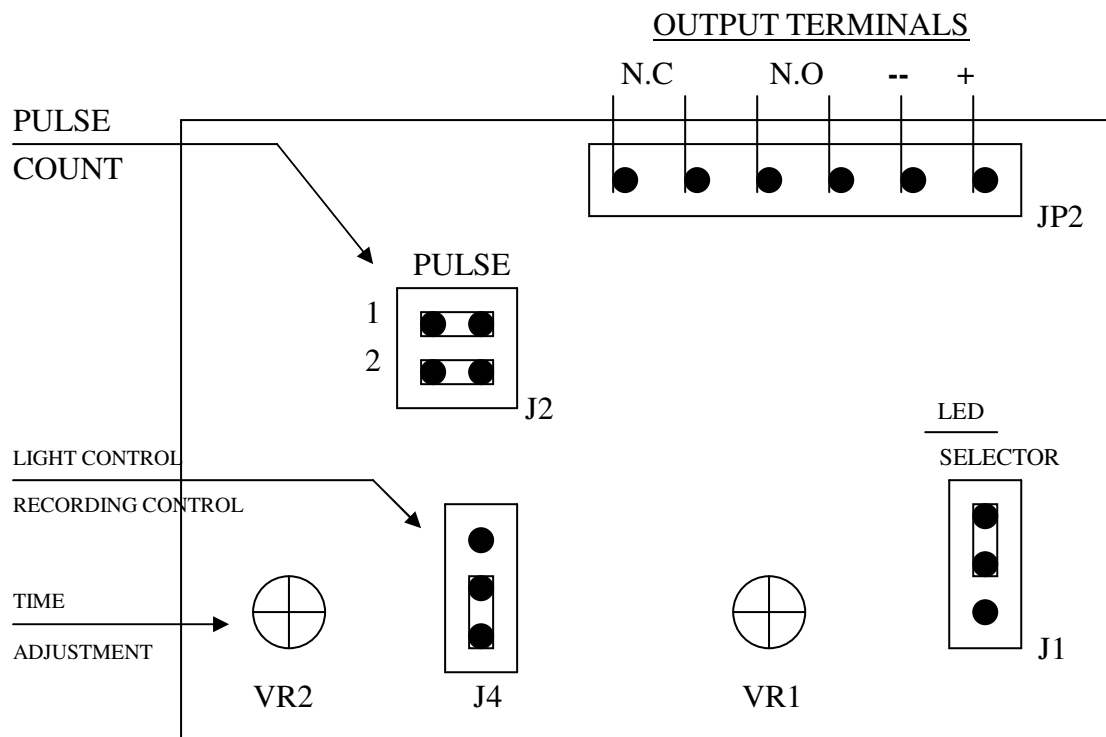


PIR DETECTOR CONFIGURATION

<p>1. LED Selector:</p>  <p>J1</p> <p>(3 PINS: Top, Center, Bottom)</p>	<p>A) Top+Center w/black jumper:- testing mode: Light Blinking</p> <p>B) Center+Low w/black jumper: Normal detection mode: No light blinking while detecting</p>
<p>2. Sensitivity Adjustment:</p> <p>MAX MIN</p>  <p>VR1</p> <p>Detection range: 100 ° Wide angle/58 beams in 3 levels/Maximum coverage area: 35'x35'</p>	<p>1. To raise sensitivity turn clockwise</p> <p>2. To lower sensitivity turn counter clockwise</p> <p>Note: While adjusting you need to position LED selector as indicated in (A)</p>
<p>3. Dwell Time Adjustment:</p> <p>MIN MAX</p>  <p>VR2</p> <p>Adjustable from 2 to 40 sec</p>	<p>To determine the time period of N.C/N.O relay to the alarm panel/device</p> <p>A) Max time: Turn counter clockwise</p> <p>B) Min time: Turn clockwise</p> <p>Top + Center pins of "J4" must be selected to adjust the time setting.</p>
<p>4. External Device Control: (N.O or N.C)</p>  <p>J4</p> <p>(3 PINS: Top, Center, Bottom)</p>	<p>A) Top + Center w/black jumper: Operate with "VR2" to adjust time. (Sets the relay output to the alarm system, DVR or other accessory according to individual preference or application.</p> <p>B) Center + Bottom w/black jumper: Relay output set for a fixed 2 seconds.</p> <p>Note: N.C/N.O relay output current: 2A24VDC, 2A 24VAC</p>

<p>5. Pulse Control: Once or twice PULSE</p>  <p>4 PINS 2 PAIRS w/Jumper connector</p>	<p>Position 1: Set to "ONCE" for instant reaction when PIR detects movement, the connected device/alarm will be triggered immediately.</p> <p>Position 2: Triggering will start after the PIR detects movement twice within 15 seconds.</p>
<p>6. Terminals:</p> 	<p>N.C: Normally closed N.O: Normally open contacts Input power (see below) Relay output current: 2A 24VAC, 2A 24VDC</p>
<p>7. Power:</p>	<p>12V DC Standby current: 1mA Working current: 25mA</p>
<p>8. Caution:</p>	<p>Do not place in direct sunlight or reflected sunlight.</p>

Jumpers and wiring terminals of PIR Detector:



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