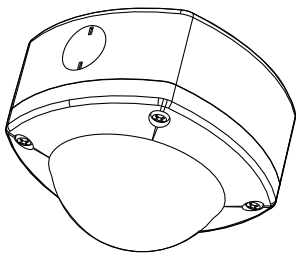


Instruction Manual

VANDAL RESISTANT DOME CAMERA

HIGH RESOLUTION 1/3" CCD BLACK & WHITE
HIGH RESOLUTION 1/3" CCD COLOR DSP



Surface Mount Type

Please read this manual thoroughly before use, and keep it handy for future reference.

ISSUE 1 - AUGUST 2003

LIMITATION OF LIABILITY

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FCC COMPLIANCE STATEMENT

INFORMATION TO THE USER : THIS EQUIPMENT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR A CLASS A DIGITAL DEVICE, PURSUANT TO PART 15 OF THE FCC RULES. THESE LIMITS ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST HARMFUL INTERFERENCE WHEN THE EQUIPMENT IS OPERATED IN A COMMERCIAL ENVIRONMENT. THIS EQUIPMENT GENERATES, USES, AND CAN RADIATE RADIO FREQUENCY ENERGY AND IF NOT INSTALLED AND USED IN ACCORDANCE WITH THE INSTRUCTION MANUAL, MAY CAUSE HARMFUL INTERFERENCE TO RADIO COMMUNICATIONS. OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA IS LIKELY TO CAUSE HARMFUL INTERFERENCE IN WHICH CASE THE USER WILL BE REQUIRED TO CORRECT THE INTERFERENCE AT HIS OWN EXPENSE.

CAUTION : CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

THIS CLASS A DIGITAL APPARATUS COMPLIES WITH CANADIAN ICES-003.

CET APPAREIL NUMÉRIQUE DE LA CLASSE A EST CONFORME À LA NORME NMB-003 DU CANADA.

INTRODUCTION

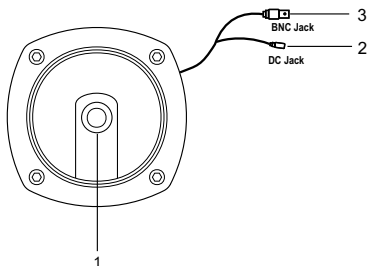
These 1/3" B/W and Color cameras combine the high performance and dependability of a miniature camera design with the strength of a mini ruggedized housing.

The camera housing is made with impact-resistant materials intended for both indoor and outdoor applications.

FEATURES

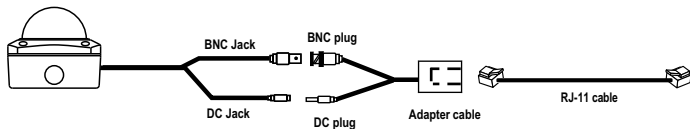
- Durable, impact and vandal-resistant housing
- Indoor/outdoor (IP66 rated)
- B/W : 1/3" CCD
- Color: 1/3" CCD DSP
- High Resolution 768(H) x 494(V) pixel CCD
- 570 TVL B&W / 470 TVL Color Resolution
- Equipped with 4-8mm Vari-focal DC Auto-iris lens
- RJ11 connections for use with Observation monitoring systems
- 12V - 15VDC operation
- Manual pan and tilt adjustment
- Tamper resistant hardware included

CAMERA CONTROLS



1. **Lens** - Allows a wide area to be monitored.
2. **Power Input** - 12-15VDC (center → +)
3. **Video output** - connect to a monitor.

* If used with observation monitoring systems, connect as shown.



REMINDER:
Never aim the camera directly into the sun.

BASIC CAMERA INSTALLATION

Unpack and identify the following parts from the shipping container:

- A. Camera B. Mounting hardware C. Desiccant bag
D. Electrical box cover plate E. Instruction manual



Note : *Make sure power is turned off when connection power adaptor cable.*

INSTALLING & ADJUSTING CAMERA MODULE

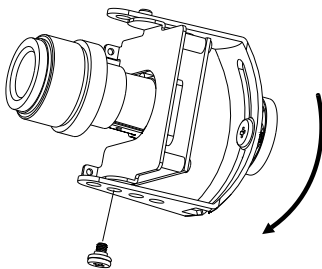


Figure 1 -- Adjusting camera angle.

Adjust the camera angle by sliding the slot back and forth until you have the desired angle. (See Figure 1.)

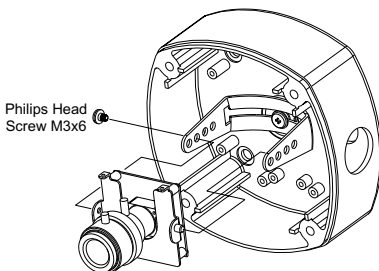


Figure 2 -- Adjusting camera tilt.

Adjust the camera tilt until you have the desired setting. (See Figure 2.)
Once it is set correctly, tighten the screw.

BASE INSTALLATION

CAUTION : When installing the camera outdoors, the following instructions must be followed closely.

1. Loosen the four Torx screws on the housing cover. Do NOT remove the screws from the cover. (See Figure 3.)
2. Drill holes for the four mounting screw anchors. Insert the screw anchors and attach the housing to the screw anchors. (See Figure 4.)
3. Wrap the conduit fitting threads with Teflon tape before installing them. (Teflon tape is not supplied.) (See Figure 4.)

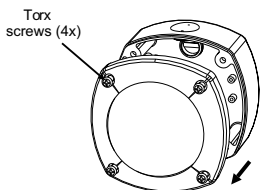


Figure 3 -- Torx screws.

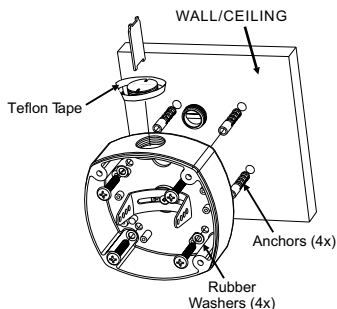


Figure 4 -- Mounting housing to wall or ceiling.

MOUNTING HOUSING TO ELECTRICAL BOX

The housing can also be mounted on a dual-gang electrical box by attaching it to the cover plate of the electrical box. (See Figure 5.)

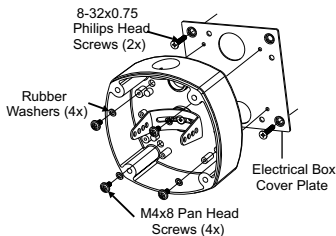
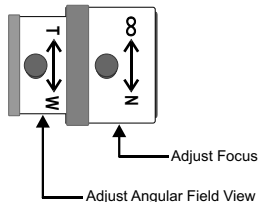


Figure 5 -- Mounting to an electrical box.

LENS ADJUSTMENT

Field of view: Adjust setting from Telephoto (T) to wide (W) field of View.

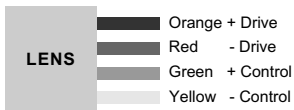
Focus: Adjust lens focus from near (N) to infinity (∞).



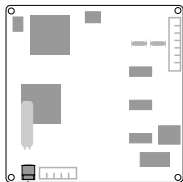
DC AUTO IRIS LENS & ADJUSTMENT

Adjust the auto iris lens for an optimum picture using the IRIS Level control located on the printed circuit board next to the auto-iris board connector.

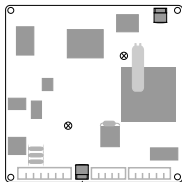
Image Size	1 / 3" CCD
Focal Length	4.0-8.0mm \pm 5%
Aperture Ratio	1 : 2.0 \pm 5%
Angular Field of View	DIAGONAL 4mm : 81° 8mm : 38.6°



B/W



COLOR



IRIS LEVEL

TROUBLESHOOTING

If you experience difficulties operating your camera, refer to the following. If the guidelines do not enable you to solve the problem, contact an authorized technician.

PROBLEM	CHECK
Nothing appears on the screen.	<ul style="list-style-type: none">• Is the cable connected between the camera and monitor?• Is there power to the monitor?
The image on the screen is dim.	<ul style="list-style-type: none">• Is the lens dirty? If so, clean the lens with a soft, clean cloth.
The contrast on the screen is too weak.	<ul style="list-style-type: none">• Adjust the contrast feature of the monitor.• Is the camera exposed to strong light? If so, change the camera position.
The image on the screen flickers.	<ul style="list-style-type: none">• Does the camera face directly into the sun or fluorescent lighting? If so, reposition camera.

PREVENTIVE MAINTENANCE

Following the preventive maintenance schedule allows detection and correction of minor faults before they become serious and cause equipment failure.

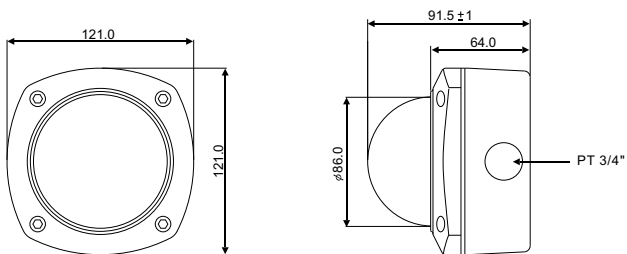
Every three months, perform the following:

1. Inspect all connecting cables for deterioration or other damage.
2. Clean components with a clean damp cloth.
3. Verify that all the mounting hardware is secure.

SPECIFICATIONS

	BLACK & WHITE	COLOR
Power		
Power source	12-15VDC \pm 10%	12-15VDC \pm 10%
Power consumption	2.0 Watts max	2.5 Watts max
Camera Information		
Image sensor	1/3" B/W CCD	1/3" COLOR CCD
Picture element	768(H) x 494(V)	768(H) x 494(V)
Unit cell size	6.35 μ m(H) x 7.4 μ m(V)	6.4 μ m(H) x 7.5 μ m(V)
Scanning system	2 : 1 interlace	2 : 1 interlace
Scanning frequency	15.75 KHz(H), 60 Hz(V)	15.734 KHz(H), 59.94 Hz(V)
Sync system	Internal	Internal
Video		
Signal format	525 lines EIA	525 lines NTSC
Resolution	570 lines	470 lines
Minimum illumination	0.15 lux (F2.0, 50IRE)	3.3 lux (F2.0, 50IRE)
Video output	1.0Vp-p, 75 ohms	1.0Vp-p, 75 ohms
S/N ratio	48dB (AGC OFF)	50dB (AGC OFF)
BLC	Center	Center
Sync level	40 IRE	40 IRE
White balance	**	Auto
AGC	Internal, automatic	Internal, automatic
Connectors & Mechanical		
Video output	BNC jack	BNC jack
Power input	DC jack	DC jack
Lens mount	Fixed mount	Fixed mount
Lens	4-8mm, F2.0 - 2.8 Vari-focal DC AI	4-8mm, F2.0 - 2.8 Vari-focal DC AI
Dimensions	See dimensional outline	See dimensional outline
Weight	1.54 lb (700 g)	1.54 lb (700 g)

EXTERNAL DIMENSION



Unit: mm

VANDAL RESISTANT DOME CAMERA

HIGH RESOLUTION 1/3" CCD BLACK & WHITE
HIGH RESOLUTION 1/3" CCD COLOR DSP

50301701A