



Extreme CCTV®
SURVEILLANCE SYSTEMS

Precision Engineered Opto-Electronics™

INSTALLATION INSTRUCTIONS

EX27

All-Weather Camera



www.ExtremeCCTV.com

Toll free: 1-888-409-2288

MAN-27-04



IMPORTANT

For best results, please read this Instruction Booklet prior to installing the **EX27** camera.



WARNING !

CSA Certified / UL Listed CLASS 2 power adaptors must be used in order to comply with electrical safety standards.



Extreme CCTV®
SURVEILLANCE SYSTEMS

Made in Canada

12 Vdc, 9W(max)

24 Vac, 60 Hz, 9 W(max)



C 189936 US

Certified to:

UL 50 / UL 2044

CSA C22.2 No. 1-M94

CSA Type 4X / NEMA 4X

NEC Class 2 Limited Power Circuit See Installation

Instructions For Proper Connections

CSA C22.2 No. 0-M1991

CSA C22.2 No. 94.M91

CSA C22.2 No. 94-M91



EU Directives covered by this declaration:

72/9/EC Low Voltage Directives

89/336/EEC Electromagnetic Compatibility Directive

This installation should be made by a qualified service person and conform to all local codes.

EXTREME CCTV™ will not be responsible for injuries or damages resulting from the improper installation or use of any camera sold by **EXTREME CCTV™**, their agents, distributors or dealers.

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DESCRIPTION

The **EX27** integrated camera is an all-weather system that includes all of the best features of a “plug and play” camera without compromise to CCD optics and lens quality.

Full size “Vari Focal” auto-iris lenses are integrated as standard equipment to ensure that a picture is received under extreme outdoor lighting conditions.

The **EX27** is rugged, compact, power protected, weather sealed, easily installed and designed for use in industrial applications.

A voltage regulator circuit automatically allows for *12V dc* or *24V ac* operation without any wiring changes. Its wider voltage range also provides protection from voltage surge, transient spikes, and reverse voltage.

The **EX27** is available in several models to meet individual requirements or specific needs.

Contact Extreme CCTV® for information.

- sales@ExtremeCCTV.com
- Tel: 1-888-409-2288 (Toll free NA)

See the Light. Get the Picture.™

UNPACKING

Care should be taken when unpacking. Check the parts list and confirm all items have been located. Inspect the equipment thoroughly to ensure nothing was damaged in transit.

Contact Extreme CCTV® if a problem is noted.

- quality@ExtremeCCTV.com
- Tel: 1-604-420-7711 or

see the rear of the booklet for contact numbers.

PARTS LIST (items supplied with unit)

- *EX27* camera assembly
- Installation Instructions
- Universal type pan/tilt mounting bracket with
1/4 - 20 captive nut
- 3mm Allen key

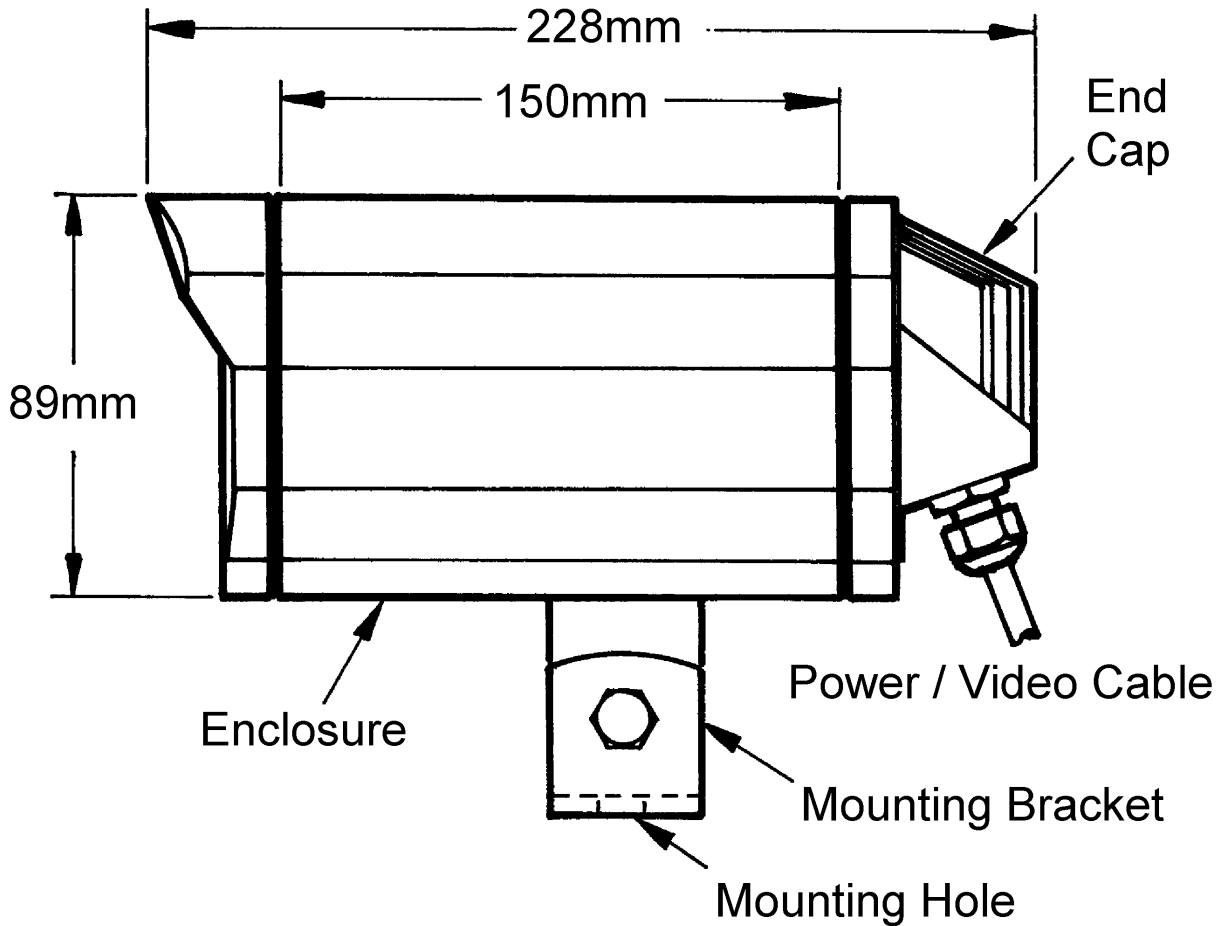
ITEMS REQUIRED FOR INSTALLATION

(not supplied with unit)

- Phillips screwdriver
- Optional heavy duty “L” mounting bracket or die-cast aluminum mounting bracket (contact Extreme CCTV® for details and prices)
- Hardware for camera mounting (bolts, etc.)

MECHANICAL SPECIFICATIONS

(See Section 5 - General Specifications, for additional information)



INITIAL PREPARATIONS

- Determine the operating voltage at the installation site.
- All cameras have been tested prior to shipment.

Select a suitable location that is protected from accidental damage, tampering, and environmental conditions exceeding the camera's specifications.

Caution: The selected mounting location should not place the camera in a situation where its environmental specifications could be exceeded. Ensure the selected location is protected from falling objects, accidental contact with moving objects, and unintentional interference from personnel. Follow all applicable building codes.



The following installation guidelines must be followed:

- Locate the camera such that it cannot be easily interfered with, either intentionally or accidentally.
- Select a mounting surface capable of supporting the combined weight of the camera and mounting hardware under all expected conditions of vibration and temperature.
- Secure all cabling.
- Installations on drywall must use a 1/4" bolt and drywall butterfly type anchor or superior connection.

GUIDELINES

Three basic requirements must be met before the *EX27* can be installed.

1. Voltage Setting
2. Camera Wiring & Settings
3. Video Auto-Iris, CS-mount Lens

Sections 1 to 3 will guide the installer through these settings and adjustments.

1. VOLTAGE SETTING

The camera unit is pre-connected with an electrically isolated power board for 24V ac or 12V dc operation with no wiring change or wiring polarity. See diagram below for wiring details.

Note: Input voltage is 10.5VDC to 40VDC for DC input. The AC input range is 12VAC to 28VAC.

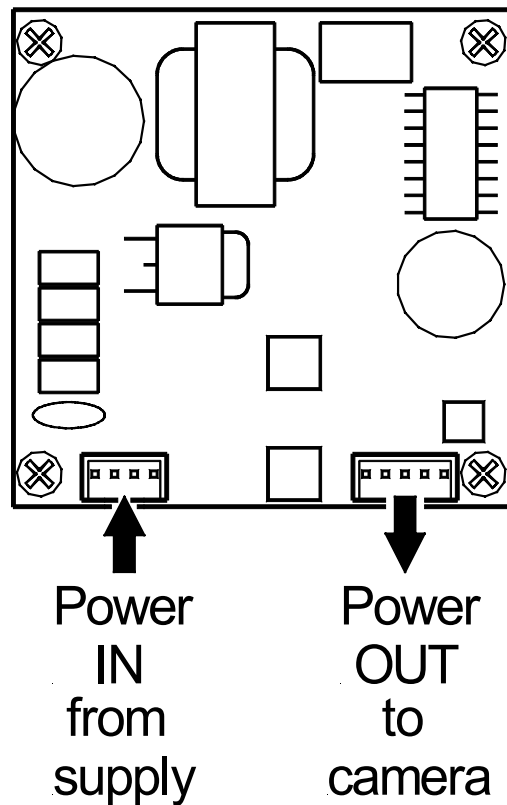


FIGURE 1 – 1
12VDC or 24VAC
Electrically Isolated Board

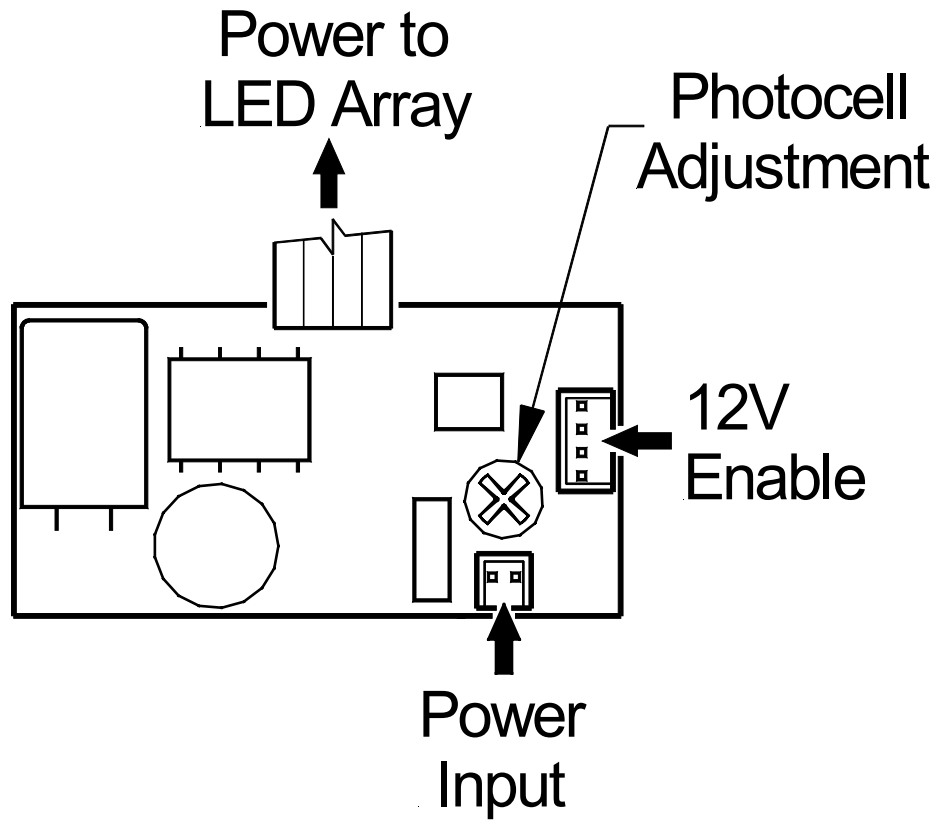


FIGURE 1 – 2
LED Array Power Board

2. LENS SETTING

The following steps show the installer how to access the camera board and the camera lens.

- Step 2.1 - Disconnect the power source to the camera and the video signal at the BNC connector.
- Step 2.2 - Remove the four cap screws with a 3mm Allen key. See **Figure 2-1** on page 9.
- Step 2.3 - Carefully slide out the rear housing from the main enclosure. Make sure the gasket remains with the rear section.
See **Figure 2-2** on page 10.
- Step 2.4 - Make any necessary adjustments as per **Figure 3-2** on page 13.
- Step 2.5 - Carefully slide the rear section into the main enclosure and tighten the cap screws.

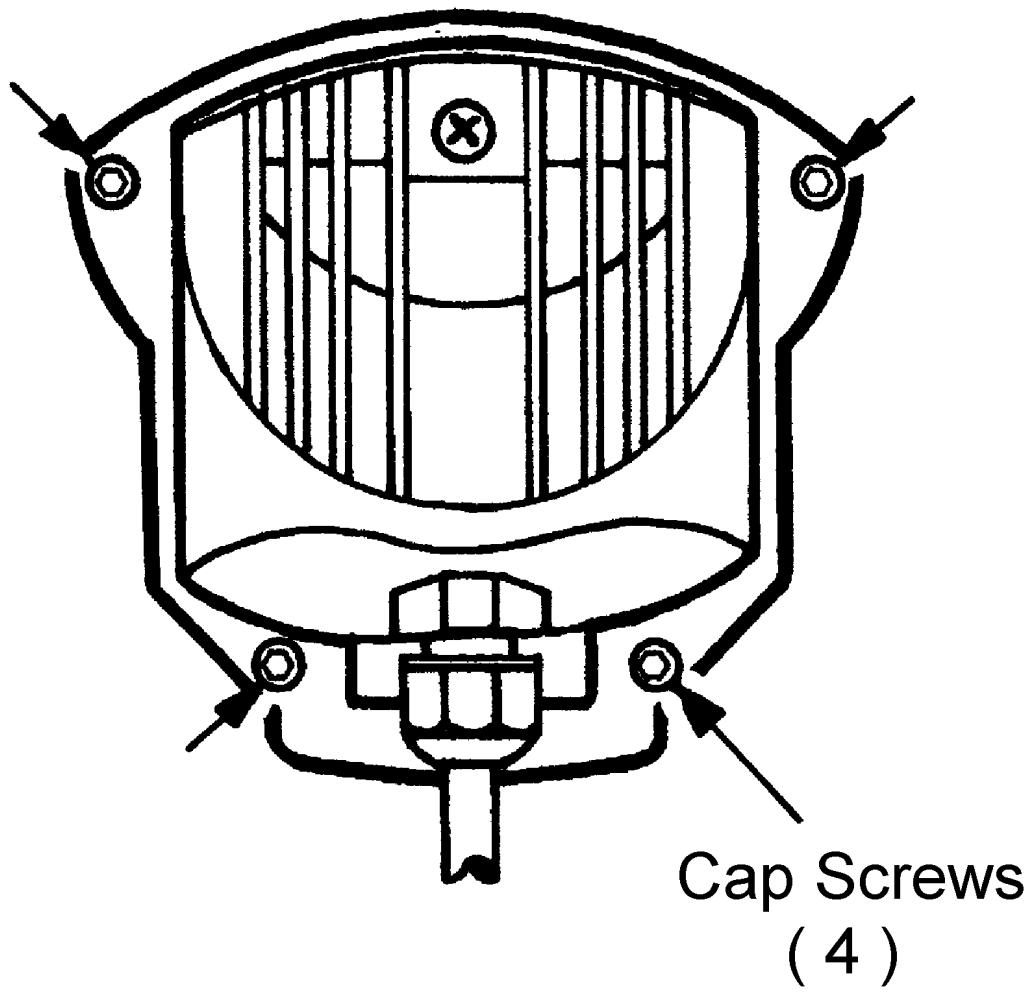


FIGURE 2 – 1
Rear Housing Removal

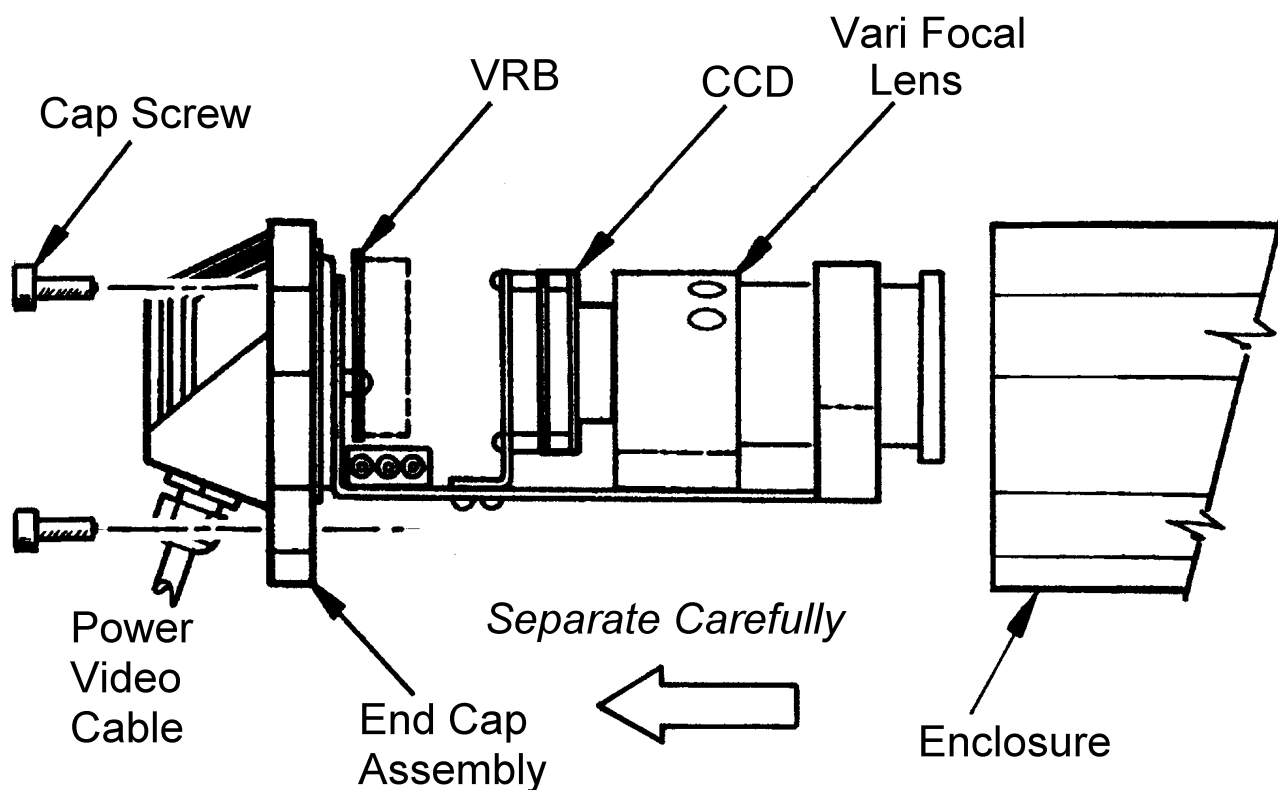


FIGURE 2 – 2
Housing Separation for Camera, Lens and Voltage Regulator Board Access

Proceed to Section 3 for Lens Mounting and Adjustments.

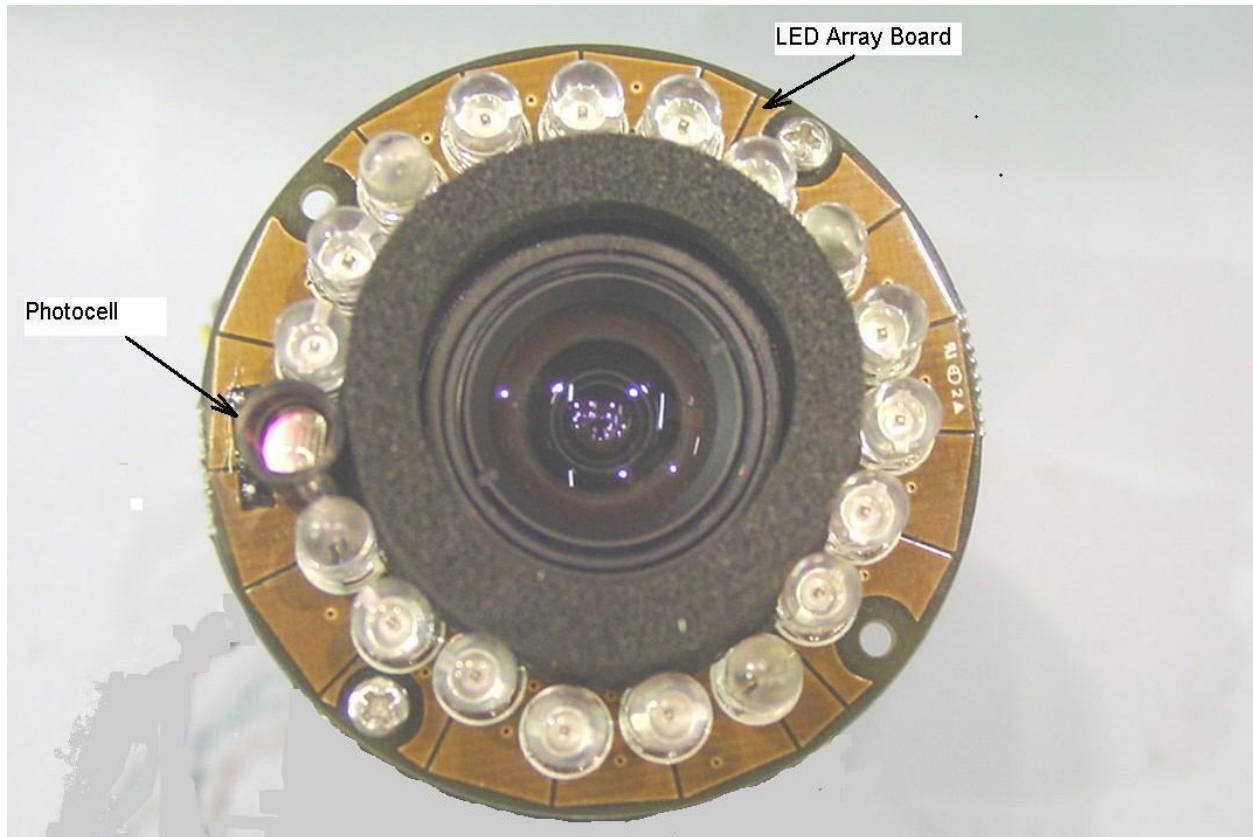
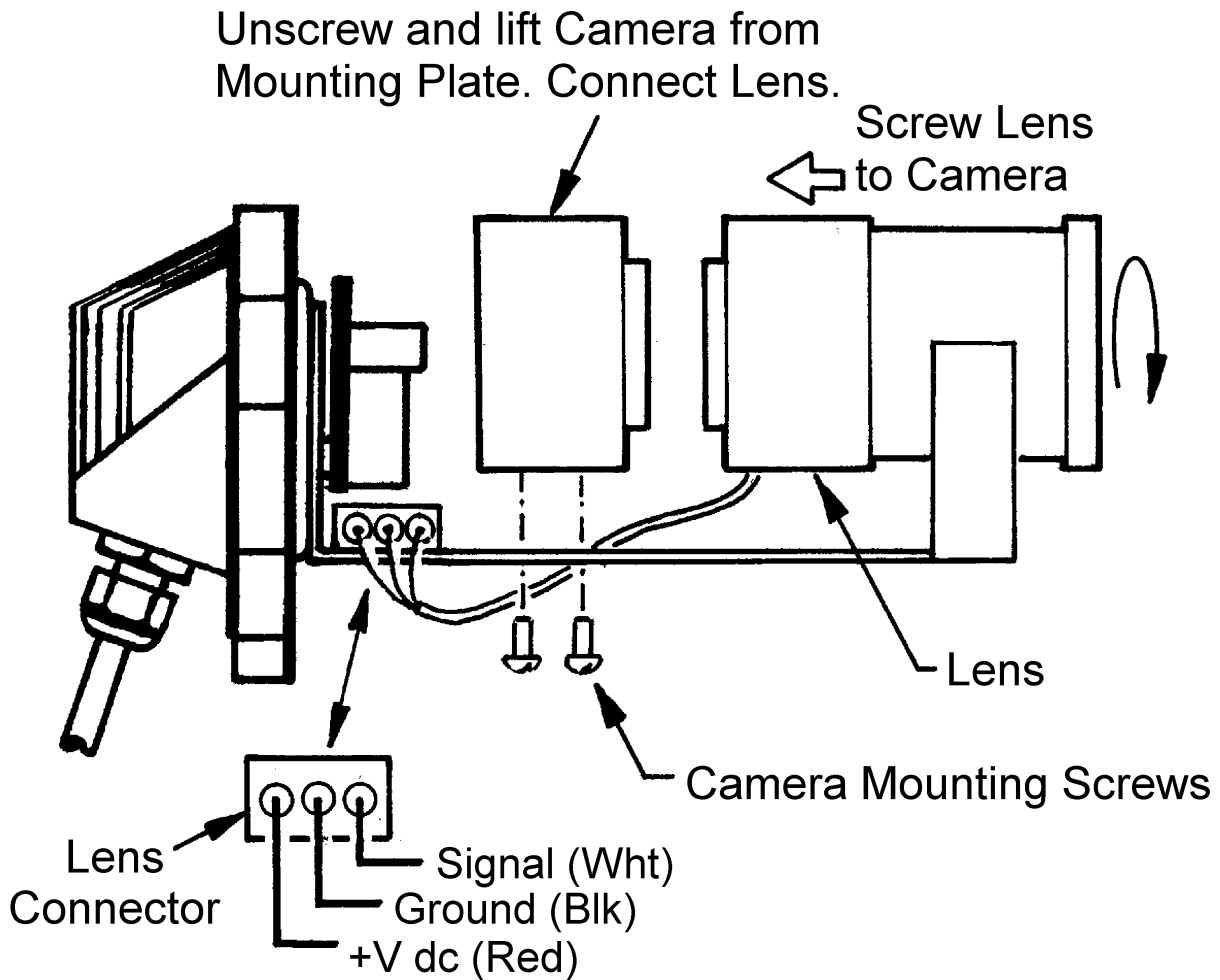


FIGURE 2 – 3
Round LED Illuminator

Figure 2-3 shows the round LED illuminator and the photocell.

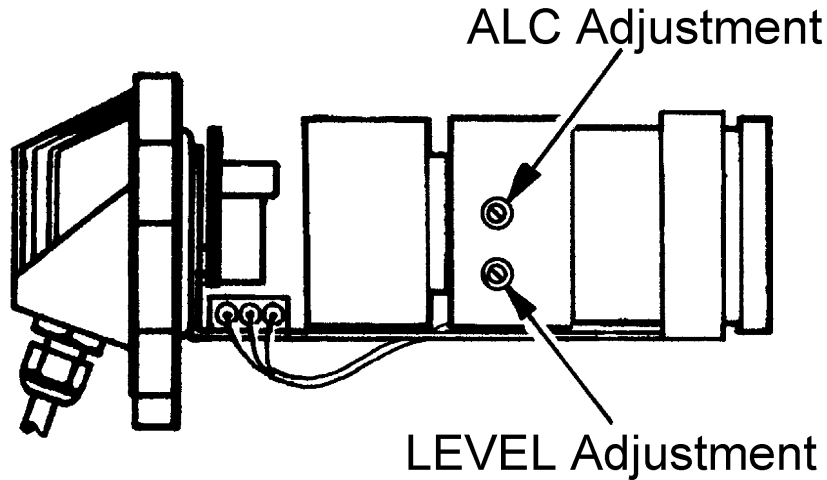
The models not equipped with round LED illuminator have the photocell attached to the rear casting.

3. VIDEO AUTO-IRIS, CS MOUNT LENS



In order to mount the Auto-Iris lens on the camera, it is necessary to first remove the camera from its mounting plate.

FIGURE 3 – 1
Mounting Auto-Iris Lens onto Camera



ALC Mode Select	ALC Adjustment
Metering to the “peak” light intensity of the image	Turn towards “P”
“Average” metering over the image	Turn towards “A”

Brightness	LEVEL Adjustment
For a brighter picture	Turn towards “H”
For a darker picture	Turn towards “L”

FIGURE 3 – 2
Lens Adjustment, ALC and Level

4. TROUBLESHOOTING GUIDE

<i>PROBLEM</i>	<i>POSSIBLE CAUSE</i>	<i>LIKELY SOLUTION</i>
No Video	<p>1. <u>Power Supply</u>: -Connections....</p> <p>-Voltage Range...</p>	<p>Check input power connections at the cable leads Check for loose wires.</p> <p>If connected to DC, check voltage input range of 10.5 - 40 V.</p> <p>If connected to AC, check input voltage range of 12 – 28 V.</p> <p>Measure the voltage at the Input terminal block.</p>

<p>No Video (cont'd.)</p>	<p>2. <u>Video Connections</u></p>	<p>Determine if wiring polarity at “Video Connector” terminal block is correct. Check BNC connector.</p> <p>If still no video, connect the camera directly to the monitor. Check the video signal. If okay, the problem is with the interconnections. If still no video, contact Extreme CCTV® (see back cover for contact details).</p>
<p>Poor Picture Quality</p> <p>Snowy Image</p>	<p>Poor Video Signal</p>	<p>Ensure video cable is correctly matched and terminated with 75 ohms at each end. Make sure video cables are similar types.</p>

Poor Picture Quality		
Dim Image	Iris closed	Increase iris level on lens
Snowy Image (cont'd.)	Noisy Power Supply	Check connections. Relocate or replace power supply.
Horizontal Scan Lines, Rolling Up or Down	Ground Looping on video cable	Check the coax cable shield is not touching ground, e.g. at couplings. An electrically isolated circuit board or isolation transformer may be required.
	24V ac operation	Line Lock adjustment required.
Negative, scrambled, or faded image	Low voltage	Check voltage at input power cable. Must be >10.5V dc or >12V ac.

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5. GENERAL SPECIFICATIONS

Input Voltage:	10.5-40 VDC 12-28 VAC (60Hz), 9W
Enclosure (housing):	Aluminum casting and extrusion (sealed to IP66 / NEMA4)
Viewing Window:	Polycarbonate
Dimensions:	89mm H (3.50") 91mm W (3.58") 228mm L (8.98")
Weight:	1.4kg (3.1lbs.)

Subject To Change Without Notice.



Extreme CCTV[®]

SURVEILLANCE SYSTEMS

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