

***EZ180***

**High Resolution B/W Weatherproof Camera**

**User's Manual**  
**and**  
**Operation Instructions**

# Notice

This manual is presented to the users of EZ180 by EverFocus Electronics Corp. With years of engineering researches, EverFocus has spared no effort to provide the high quality products to the worldwide users. For the policy of continual product improvement, EverFocus reserves the right to make changes to the product specifications and documentation without notice. All the components of the products, including accessories, components, and outlook, are based on the agreements of each deals to satisfy all kinds of users. Meanwhile, please be advised that every step of operation must follow the instruction of this manual to keep EZ180 working under the best condition. Please notice that EverFocus will not be charged any claims or renewing cases resulted from inappropriate operation.

# Table of Contents

<i>Safety Warning</i> .....	<i>1</i>
<i>Introduction</i> .....	<i>2</i>
<i>Specification</i> .....	<i>3</i>
<i>Major Parts Names</i> .....	<i>4</i>
<i>Installation Instructions</i> .....	<i>5</i>
<i>Settings</i> .....	<i>7</i>

# Safety Warning

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## 1. **Handle the camera with care.**

Be careful when handling the camera, do not drop it or subject it to strong shock or vibration to prevent any damages to it. Do not disassemble it or place it on an unstable base.

## 2. **Do not install the camera near electric or magnetic fields.**

Installed the camera away from TV, radio transmitter, magnet, electric motor, transformer, audio speakers because the magnetic fields generate from above devices will distort the video image.

## 3. **Do not install the camera in the high temperature environment.**

Installed the camera away from stoves, or other heat generating devices as the high temperature could cause deformation, discoloration or other damages of the camera. Install the camera at where the temperature range will stay between  $-35^{\circ}\text{C} \sim +50^{\circ}\text{C}$  for 12VDC,  $-45^{\circ}\text{C} \sim +50^{\circ}\text{C}$  for 24VAC.

## 4. **Never face the camera toward the sun.**

Never aim the camera at the sun or other extremely bright objects whether it is in use or not.

## 5. **Cleaning**

Do not touch the surface of CCD sensor by hand directly. Use a soft cloth to remove the dirt from the camera body. Use lens tissue or a cotton tipped applicator and ethanol to clean the CCD sensor and the camera lens. When the camera is not in use, put the cover cap on the lens mount.

# Introduction

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The EZ180 series offers great performance in 1/3" image format B/W CCD camera. The EZ180 is ideal for outdoor applications such as parking lots, gas stations or shopping malls. The sophisticated circuit design provides a heater that turns on at 10°C for cold weather. The EZ180 will provide protection against the elements and provide an excellent quality picture.

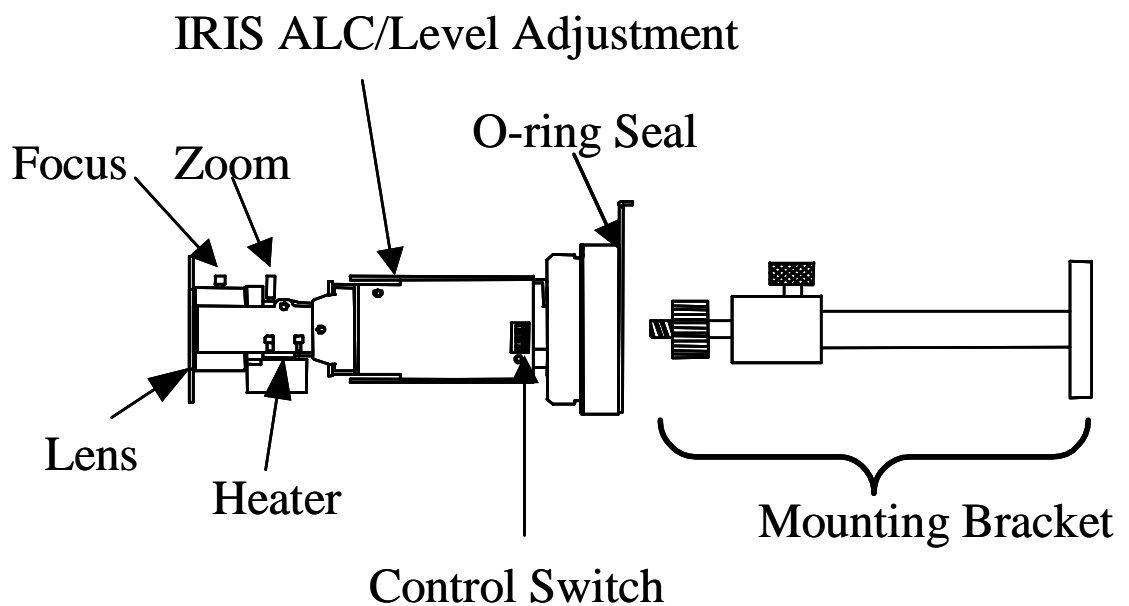
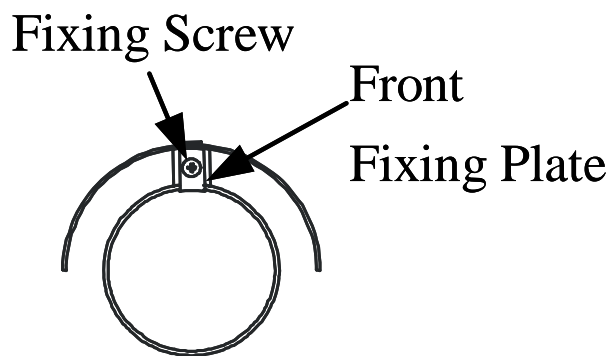
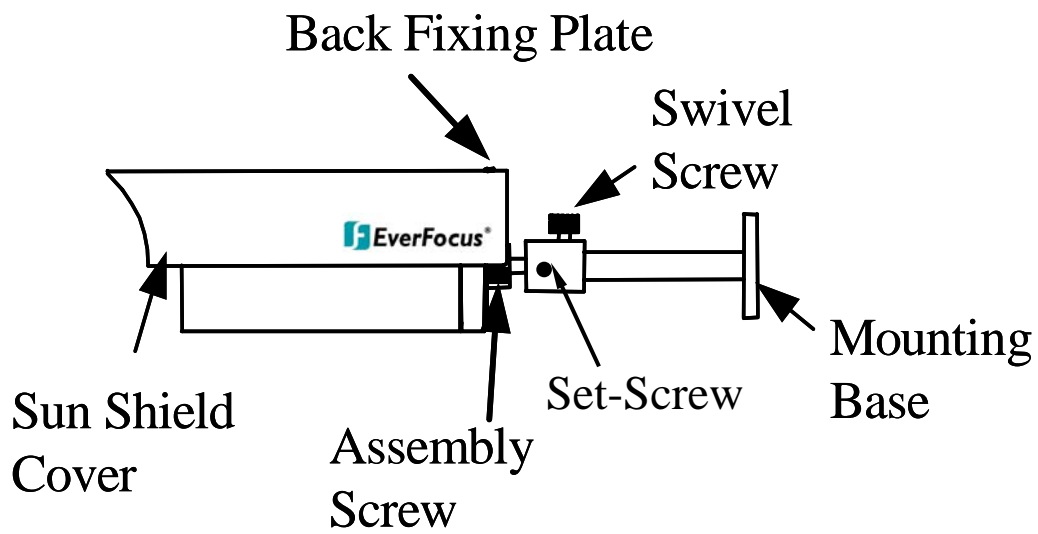
## **Main Features :**

- High Resolution: 560 TV Lines.
- Two types of built-in vari-focal lens for versatile applications.
- Designed with sturdy aluminum shell specifically for outdoor surveillance.
- Removable sun shield.
- The heater allows the camera to be used in extremely low temperature to -46°C.

# Specification

<b>EZ180</b>	
Pickup Device	1/3" SONY B/W CCD
Picture Elements	768 x 494 (EIA) 752 x 582 (CCIR)
Horizontal Resolution	560 TV lines
Video Output	BNC 1.0Vp-p, 75 ohm
Lens Focal Length	Vari-focal lens f=3.5~8mm Vari-focal lens f=9~22mm *Lens models and availability vary in different regions
Sensitivity	0.1 lux/F=1.6
Gamma Correction	0.45
S/N Ratio	Over 48dB (AGC off)
Back Light Comp.	On/Off switch
Auto Gain Control	On/Off switch
Flickerless	On/Off switch
Line Lock	On/Off switch
Sync. Mode	Internal Sync.
Weatherproof	IP66
Power Source	12VDC/24VAC
Power Consumption	12VDC: 7.5W max. (Heater ON) 24VAC: 10W max. (Heater ON)
Dimensions	With sun shield : 90.7mm(W) x 70mm(H) x 172mm(L);3.57"(W) x 2.8"(H) x 6.8"(L)Without sun shield: 57mm(O.D) x 132mm(L); 2.2"(O.D) x5.2"(L)
Weight	0.71 kg ; 1.6 lbs 0.91 kg ; 2 lbs (with bracket)
Operating Temperature	-46°C ~ 50°C ; -50.8°F~122°F (20%~80% Humidity)
Heater Operating Temperature	10 °C ; 50°F
Certifications	FCC/CE

# Major Parts Names and Their Functions



# Installation Instructions

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1. Using the supplied screws, mount the bracket base on the desired location.
2. Connect the BNC connector of the camera to a monitor or other video device through a 75 ohm type coaxial cable with BNC female connector at cable extension.
3. Connect the 24VAC or 12VDC regulated power source of the camera (power jack) to the power-in jack with 2mm plug. **For 12VDC power source, please make sure the power plug is center+ outer- for heater normal operation.**
4. Our factory settings is for you to get the best image within about 3~5 meters (for veri-focal lens  $f=3.5\sim 8\text{mm}$ ) or 5~10 meters (for veri-focal lens  $f=9\sim 22\text{mm}$ ) . If it is out of focus, or any other adjustment is required, follow the procedures below.
  - a. Remove the fixing screw in the front, which hold the sun shield cover. Remove the sun shield cover.
  - b. Twist open and carefully remove the housing cover.  
(Please pay attention to prevent damage to the “O”-Ring seal.)
  - c. Loosen the focal lens and focus locking screws.
  - d. Adjust the lens to bring the subject into focus.  
(Caution: Heater elements could be hot! When camera power is on, use caution when adjusting the camera.)
  - e. Retighten the screws.
  - f. Please refer to the Settings section for the details of the other adjustments. Adjust accordingly if necessary.



- g. When all the adjustments and settings are completed, overlaying the cover gently. Be careful not to damage to the “O”-Ring and camera components.
  - h. To reassemble the sun shield, match the hole on the sun shield to the back fixing plate of camera, Fix the screw on the front fixing plate. Make sure the wider side of the fixing plate holds the edge of the camera well.
5. Attach the camera onto the mounting bracket.
  6. Loosen the swivel screw and point the camera to the desired direction.
  7. Tighten the swivel screw. To strengthen the fixing power of the swivel screw, tighten the set-screw with the set-screw wrench. (supplied)

**Notes:**

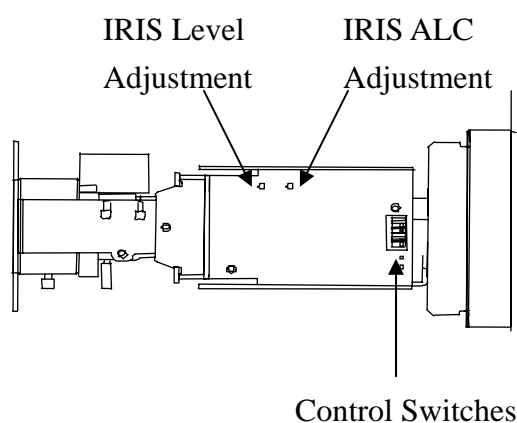
- (A) Make wiring connections only after it has been determined that power has been disconnected.
- (B) There is a desiccant pack attached to the housing base under the camera which is designed to absorb any moisture trapped inside the housing during adjustment. To avoid excessive moisture build up, it is recommended that the camera not be installed in rainy or excessively damp conditions. It is also advisable to limit the number of times the housing cover is removed. The desiccant pack can be replaced if condensation develops inside the housing.

# Settings

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The camera is set up at factory and normally requires no adjustments. Sometimes, however, adjustments may be necessary. Please refer to the following description for the function details.

- The IRIS ALC and IRIS Level adjustments are located on the side circuit board, use a screwdriver to adjust if it's necessary.



## **IRIS Level Adjustment**

To adjust brightness level –

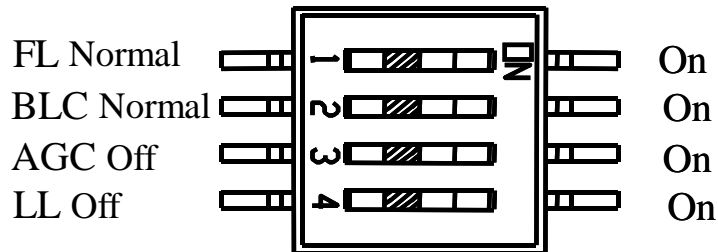
- Turn the IRIS Level Adjustment VR counterclockwise to get darker picture.
- Turn the IRIS level adjustment VR clockwise to get brighter picture.

## **IRIS ALC Adjustment**

To select light metering method –

- Turn the IRIS ALC Adjustment VR counterclockwise for Average Metering.
- Turn the IRIS ALC Adjustment VR clockwise for Peak Metering.

- The 4 control switches are also located on the side circuit board, the switches in orders are for Flickerless, Back Light Comp, Auto Gain Control and Line Lock.



Control Switches

### **FL(Flickerless) Normal/On**

When picture flicker fiercely, turn FL on, then the camera will stabilize the speed of electronic shutter at 1/100(NTSC) or 1/120(PAL) automatically, and reduce the flicker immediately. The default setting is Normal.

### **BLC (Back Light Compensation) Normal/On**

When BLC is turned on, the AGC, ES and IRIS operating point is determined by averaging over the center area instead of entire field-of-view, so that a dimly-lit foreground object at center area can be clearly distinguished from brightly-lit backgrounds.

BLC should not be used unless it is needed to compensate for back-lit. The default setting is Normal.

## **AGC (Automatic Gain Control) Off/On**

AGC ON: The sensitivity increases automatically when light is low.

AGC OFF: A-low-noise picture is obtained under a low light condition.

The default setting is On.

## **LL (Line-Lock) Off/On**

To select the sync mode between Internal Sync.(LL off) and Line-Lock (LL on).

Set the line-lock off, the camera will synchronize to the internal time base. Set the line-lock on, the camera's vertical synchronization can be driven by the AC signal in the power lines.

The default setting is Off

**Note:** Line-Lock sync mode operation is possible only when used with an AC power source; it's not possible with a DC power source.

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In the European Union there are separate collection systems for used electrical and electronic product.  
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