
	CAUTION RISK OF ELECTRIC SHOCK, DO NOT OPEN	
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.		



The lightning flash, with an arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure, that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instruction in the literature accompanying the appliance.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

NOTICE

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Our policy is one of continual development and improvement. For this reason, we reserve the right to change specifications without notice. We are also not responsible for misprints or typographical errors.

Read the following instructions before you use the camera:

1. Unplug this appliance system from the wall outlet before cleaning
Do not use liquid cleaners or aerosol cleaner.
Use a damp cloth for cleaning.
2. Do not use attachments not recommended by the appliance manufacturer, as they may cause hazards.
3. Do not use this appliance near water for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.
4. Do not place this appliance on an unstable cart, stand, or table. The appliance may fall causing serious injury to a child or adult, and serious damage to the appliance. Use only with a cart or stand recommended by the manufacturer's instructions, and use a mounting kit approved by the manufacturer. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.
5. This appliance should never be placed near or over a radiator or heat register.

This appliance should not be placed in a built-in installation such as a bookcase, unless proper ventilation is provided.

6. This appliance should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your dealer or local power company.
7. Do not allow anything to rest on the power cord. Do not locate this appliance where the cord will be abused by people walking on it.
8. Do not overload wall outlets and extension cords, as this can result in fire or electric shock.
9. Follow all warnings and instructions marked on the appliance.
10. Do not attempt to service this appliance yourself, as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
11. Unplug this appliance from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - a. When the power cord or plug is damaged or frayed.
 - b. If liquid has been spilled into the appliance.

- c. If the appliance does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions, as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the appliance to normal operation.
 - d. If the appliance has been exposed to rain or water.
 - e. If the appliance has been dropped or the cabinet has been damaged.
 - f. When the appliance exhibits a distinct change in performance this indicates a need for service.
12. When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer that have the same characteristics as the original part.
Unauthorized substitutions may result in fire, electric shock, or other hazards.
13. Upon completion of any service or repairs to the appliance, ask the service technician to perform routine safety checks to determine that the appliance is in safe operating condition.

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1. Introduction

Adopting the latest Sony HQ chip, this camera provides the best monitoring function when they are connected to CCTV system. It is very convenient for users to set camera parameters from the menu on screen.

2. Features

High Sensitivity

Adopting the 1/3" Sony CCD that has the latest built-in microchip lens, the high sensitivity is realized.

Superhigh Resolution

Superhigh resolution is realized due to the Full Digital Image Processing by the DSP for monitoring camera.

Excellent Back Light Compensation

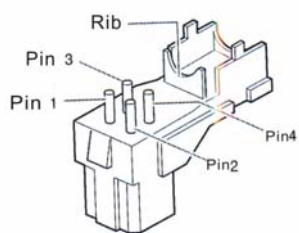
Even when an intense light source or sunlight is in the back of your subject, a clear image will be provided due to the ideal combination of the excellent performance of the high light compression (KNEE Compensation) function and the BLC (Back Light Compensation) function.

3. Installation

Precautions in Installation and Use

- (1) Do not attempt to disassemble the camera yourself.
- (2) Be cautious in handling the camera. Avoid striking or shaking the camera. Be cautious to avoid damage on the camera caused by improper storage or operation.
- (3) Do not expose this camera to rain or moisture.
Do not operate this camera on a wet place.
- (4) Keep the camera at a cool place away from the direct sunlight. Leaving it under the direct sunlight may result in the malfunction of the unit.

Connecting Auto Iris Lens Connector



Connect the cable of the control cable, whose covering is stripped, to the Auto Iris Lens Connector as shown below.

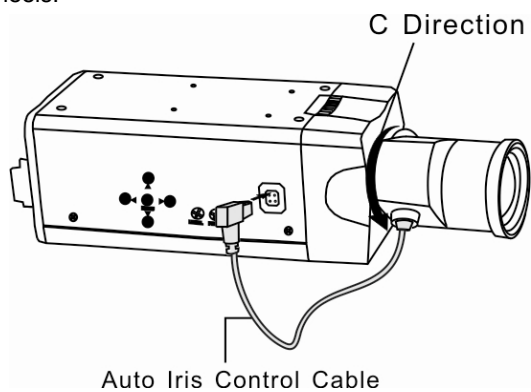
Pin Number	DC Control Type	Video Control Type
1	Damp(-)	Power Source (+9V)
2	Damp(+)	Video Signal
3	Drive(+)	Not used
4	Drive(-)	GND

Mounting the Lens

Take DC lens as an example:

Mount the lens first

Note: To switch the C or CS lens by rotating gear wheels.

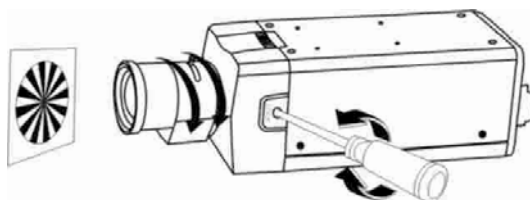


Adjusting Back Focus

Although the Back Focus of the camera has been adjusted in the factory before its shipment, the focus may not be accurate for a certain type of the lens. In this case, follow the procedures below to adjust the Back Focus.

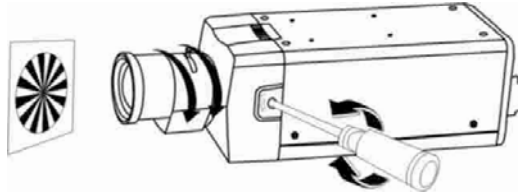
First, following is how to adjust the Back Focus of the Fixed Focus Lens.

- (1) Lightly loosen the screw fixing the Back Focus Adjustment Ring using a screwdriver.
- (2) Image a vivid subject (with check patterns) at a distance of more than 10m away and turn the Focus Ring to the infinity position.
- (3) Adjust the Back Focus Adjustment Ring to obtain the clearest image of the subject.
- (4) Fasten the screw fixing the Back Focus Adjustment Ring.



Second, how to adjust the Back Focus when using a Zoom lens.

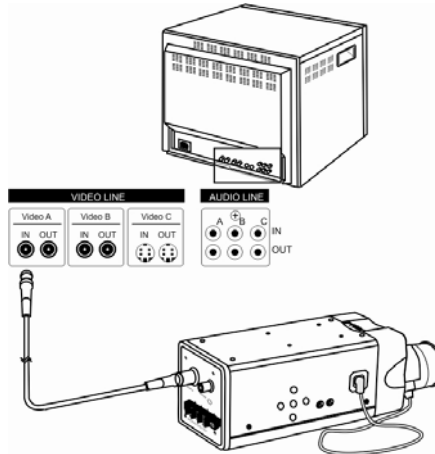
- (1) Lightly loosen the screw fixing the Back Focus Adjustment Ring using a screwdriver.
- (2) Image a vivid subject (with check patterns) at a distance of 3~5m away and adjust the zoom of the lens to TELE as far as it goes. Then adjust the Focus Ring of the lens to obtain the clearest image of the subject.
- (3) Adjust the zoom of the lens to WIDE as far as it goes. Then turn the Back Focus Ring of the camera to obtain the clearest image of the subject.
- (4) Repeat no. (2) & (3) 2~3 times to exactly coincide the zoom focus from TELE and with that from WIDE.
- (5) Fasten the screw fixing the Back Focus Adjustment Ring.



Connecting Cables

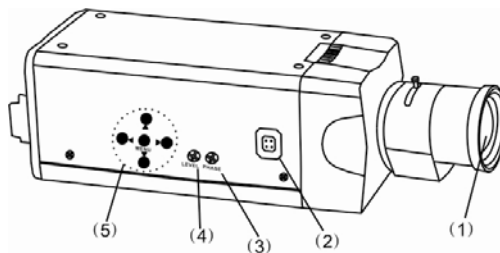
After mounting the lens and setting the Lens Selection Switch, connect the prepared cable to each terminal of the camera.

- (1) Connect one end of the BNC cable to the Video Output Terminal (VIDEO OUT) of the camera.
- (2) Connect the other end of the BNC cable to the Video Input Terminal of the monitor.
- (3) Connect the power adapter.



4. Names and Functions of Parts

Side View



(1) Auto Iris Lens (Option)

Lens to be mounted on the camera.

Note: When the surface of the camera lens is contaminated, wipe the surface gently with a tissue for lens or a cotton cloth applied with ethanol.

(2) Auto Iris Lens Connector

Used for supplying power, which is required to control the iris of the lens, as well as control signal, video signal, or DC signal to the Auto Iris Control Lens.

(3) V.PHASE UP/DOWN Button (AC24V/DC12V, HI-RES)

If the camera is to be used in the L/L mode, the vertical phase may require adjustment to synchronize the phase of other cameras in the system.

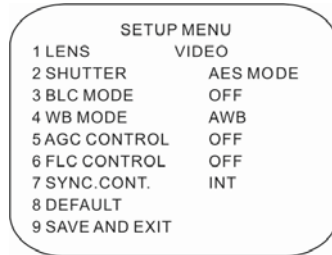
Synchronize the vertical phase by pressing "UP/DOWN" button on the rear on the camera, if necessary.

(4) DC-drive lens electrograph

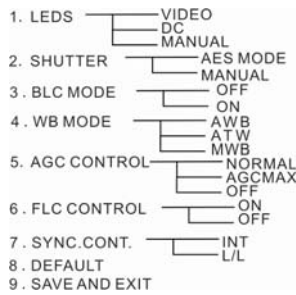
When setting DC lens drive, adjust DC-drive lens electrograph to obtain the required pictures.

(5) Menu on the screen

Press MENU key for entering in. To move the cursor of the menu through "▲", "▼", set the value through "◀", "▶". See as follows:



Menu Chart as below:



Functions:**1. Lens selection:**

Install DC lens, set as DC and adjust LEVEL electrograph to get a clear picture; install VIDEO lens, set as VIDEO and adjust the LEVEL to get a clear picture.

2. Electronic shutter (AES/MES optional)

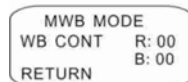
Under MES mode, press MENU key to adjust the ES. The speed 1/50,1/120,1/250,1/500,1/1000,1/2000,1/4000,1/10000,1/100000sec.(PAL),1/60,1/100,1/250,1/500,1/1000,1/2000,1/4000,1/10000,1/100000sec.(NTSC) optional.

**3. BLC:**

Set the BLC ON to have a clear picture even under a spotlight or a very bright incident light.

4. White Balance

There are three modes for selection: AWB,ATW and MWB. Press MENU key to adjust white balance under MWB mode.



5. AGC Mode

Under the mode of AGCMAX, the gain is up to max. and normal gain for AGC NORMAL.

6. Flickerless

Under this mode, the shutter speed is fixed to 1/100 sec. for NTSC system and 1/120 sec. for PAL system to reduce the flicker of fluorescent lights.

7. LL

Set the vertical phase of the camera video signal to match the phase of AC power source to clear AC interference.

When using dual power source mode, set the DIP SW to LL, the camera will automatically detect and adjust to Line Lock mode with AC power source, and INT for DC power source.

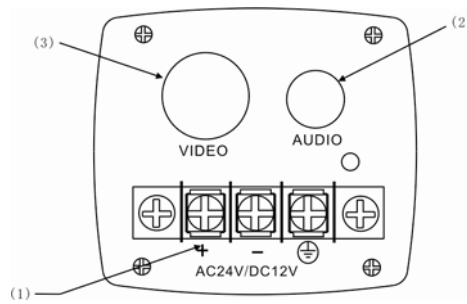
8. Back to Default Setting

Press MENU key and back to the default setting.

9. Exit

Press MENU key to save and exit or exit to the main menu directly.



Back Panel**(1) Power Connection Terminal**

+and - terminal to be connected to the power (adapter) cable. Connect it to AC 24V or DC 12V.
⊕connect to ground.

(2) Audio Output Terminal

This is a terminal to be connected to the Input Terminal of the audio device. Through this terminal, the audio signals are outputted.

(3) Video Output Terminal

This is a terminal to be connected to the Input Terminal of the monitor. Through this terminal, the video signals are outputted.

5. Specifications

Item	
Product Type	Superhigh res. low lux Camera
Broadcasting System	PAL or NTSC System
Imaging Device	1/3" Sony CCD
Scanning Method	NTSC: 525 Lines 2:1 interlace PAL: 625 Lines
Effective Pixels	NTSC: 768(H) X 494(V) PAL: 752(H) X 582(V)
Line Frequency	NTSC: 15,734 Hz(H), 59.94 Hz(V) PAL: 15,625 Hz(H), 50 Hz(V)
Synchronization Method	Internal / External
Horizontal Resolution	540 Lines
S/N Ratio	48dB (AGC OFF)
Minimum Illumination	0.1Lux (F1.2)
Function selection	OSD menu controlling (See the functions of menu from the above)
Video Output	Mixed-video output 1Vp-p 75Ω / BNC
Power Supply	DC 12V / AC 24V ± 10%
Power Consumption	Max. 6W
Operating Temperature	-10°C ~ +50°C
Operating Humidity	~90%

Item	
Product Type	Superhigh res. D/N Color Camera
Broadcasting System	PAL or NTSC System
Imaging Device	1/3" Sony CCD
Scanning Method	NTSC: 525 Lines 2:1 interlace PAL: 625 Lines
Effective Pixels	NTSC: 768(H) X 494(V) PAL: 752(H) X 582(V)
Line Frequency	NTSC: 15,734 Hz(H), 59.94 Hz(V) PAL: 15,625 Hz(H), 50 Hz(V)
Synchronization	Internal
Horizontal Resolution	540 Lines
S/N Ratio	48dB (AGC OFF)
Minimum Illumination	0.01 Lux (F1.2)
Function Selection	OSD menu controlling (See the functions of menu from the above)
Video Output	Mixed-video output 1Vp-p 75Ω / BNC
Power Supply	DC 12V / AC 24V ± 10%
Power Consumption	Max. 6W
Operating Temperature	-10°C ~ +50°C
Operating Humidity	~90%

Note: All data are subject to change without any prior notice.

6. Exception Handling

Issue	Solution
No image on the screen	Check power line and Monitor connection
Image is dim	Check lens or glass is dirty or not. Use soft cloth to clean it.
Camera out of work and too high body temperature	Check power source
Too bad image contrast	Adjust monitor contrast. Do not place the camera under strong light condition.
Image flickers	Do not let the camera directly face to the fluorescent light