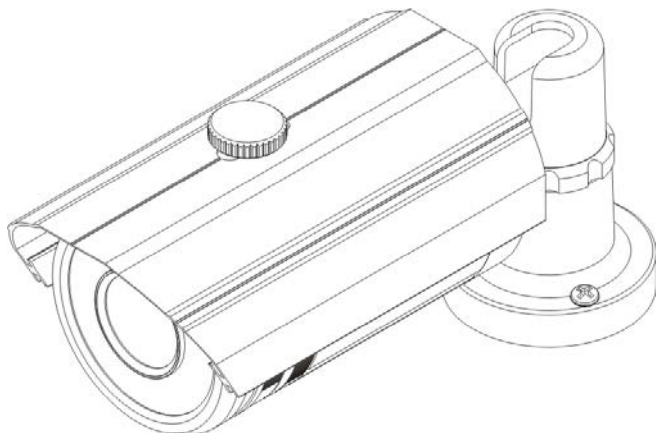


# 600TV Lines Super High Resolution Color Camera

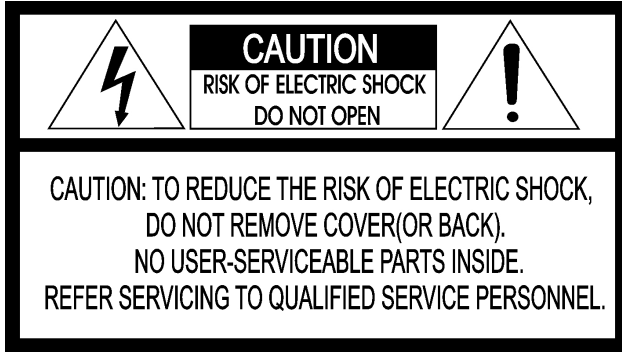


Please read this manual thoroughly before use, and keep it handy for future reference.

## WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE. DO NOT INSERT ANY METALLIC OBJECTS THROUGH THE VENTILATION GRILLS OR OTHER OPENINGS ON THE EQUIPMENT.

## CAUTION



## EXPLANATION OF GRAPHICAL SYMBOL



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of un-insulated "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) instructions in the literature accompanying the product.

## PRECAUTIONS

### Installation

Do not install the unit in an extremely hot or humid place or in a place subject to excessive dust, mechanical vibration.

The unit is not designed to be waterproof. Exposure to rain or water may damage the unit.

### Cleaning

Clean the unit with a slightly damp soft cloth. Use a mild household detergent. Never use strong solvents such as thinner or Benzene as they might damage the finish of the unit.

Retain the original carton and packing materials for safe transport of this unit in the future.

### Safety

Should any liquid or solid object fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.

Unplug the unit from the wall outlet if it is not going to be used for several days or more.

To disconnect the cord, pull it out by the plug. Never pull the cord itself.

Allow adequate air circulation to prevent internal heat build-up. Do not place the unit on soft surfaces (rugs, carpets, sofas, etc.) or near materials (curtains, draperies) that may block the ventilation holes.

Height and vertical linearity controls located on the rear panel are for special adjustments by qualified personnel only.

# FCC COMPLIANCE STATEMENT

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**FCC INFORMATION** : 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.

# CE COMPLIANCE STATEMENT

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## **WARNING**

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

# IMPORTANT SAFETY INSTRUCTIONS

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1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been moisture, does not operate normally, or has been dropped.
15. **CAUTION – THESE SERVICING INSTRUCTIONS ARE FOR USE BY QUALIFIED SERVICE PERSONNEL ONLY. TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT PERFORM ANY SERVICING OTHER THAN THAT CONTAINED IN THE OPERATING INSTRUCTIONS UNLESS YOU ARE QUALIFIED TO DO SO.**
16. *Use Certified/Listed Class 2 power source only.*
17. Apparatus shall not be exposed to dripping or splashing and no object filled with liquids, such as vases, shall be placed on the apparatus.



# INTRODUCTION

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## Camera Model Features:

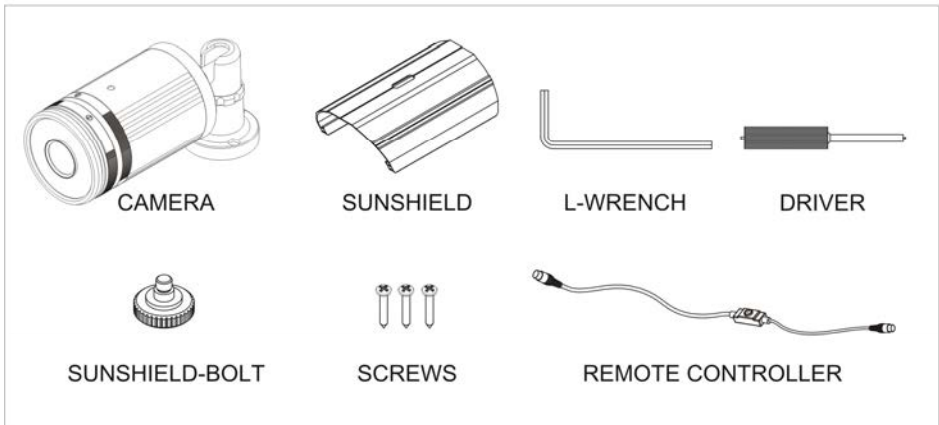
- 1/3" Sony Super HAD CCD
- 600TVL colour & 620TVL monochrome resolution
- 0.1Lux (Colour), 0.04 Lux (B/W), 0.003Lux (Low-shutter) @ F1.2, 50IRE Sensitivity (sense-up x256 – 0.0004Lux (colour), 0.0001Lux (B/W))
- Auto electronic shutter and manual electronic shutter modes
- OSD (On Screen Display)
- 3DNR function
- DRC (Dynamic Range Control)
- Auto and manual white balance modes
- BLC (Back Light Compensation)
- 24no Privacy Zones (B/W, Colour, Mosaic)
- Functions (Nega/Posi, Sharpness, Mirror, Zoom, Pan/tilt)
- AGC (Auto Gain Control)
- Sense-up (x2~ 256)
- Operates on 12VDC or 24VAC (-10% ~ +15%)
- Use Certified / Listed Class 2 power source only
- In DC power, use the Adapter more than DC 12V 1.5A Capacity.



**IMPORTANT:** The user of this camera is responsible for checking and complying with local, state, and federal laws and statutes concerning the recording and monitoring of audio signals.

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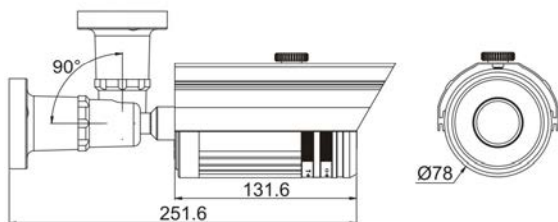
# PACKAGE CONTENTS



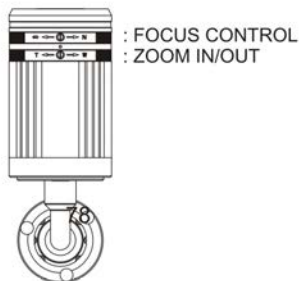
- L-Wrench      Unscrew and tighten bracket screws
- Driver      Control Zoom & Focus ring and unscrew remote control port
- Screw      Firmly attach the bracket to the wall or ceiling

## DIMENSIONS

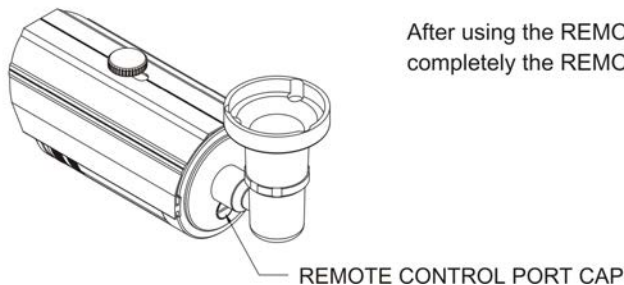
UNIT : mm



## LENS CONTROL



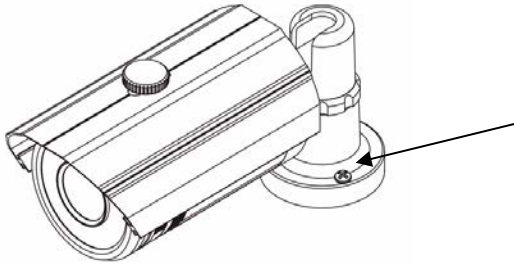
## WATER INGRESS PREVENTION



After using the REMOTE CONTROL and lock completely the REMOTE CONTROL PORT CAP.

# CAMERA FIXING

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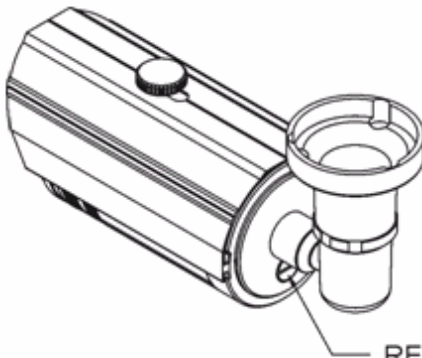


Use the 3 location holes around the base of the bracket to secure the camera to a wall or ceiling using fixing suitable to the type of surface

# CAMERA ADJUSTMENT

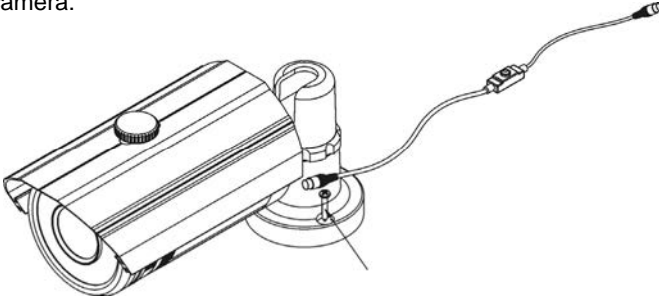
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The camera is supplied with a remote control set up tool. To connect the remote control to the camera, first remove the Remote control port cap at the rear of the camera:



REMOTE CONTROL PORT CAP

Connect the remote control using the 6 pin din connector end to the socket within the camera:



Connect the BNC to a set up monitor to view the picture and On Screen Menus.

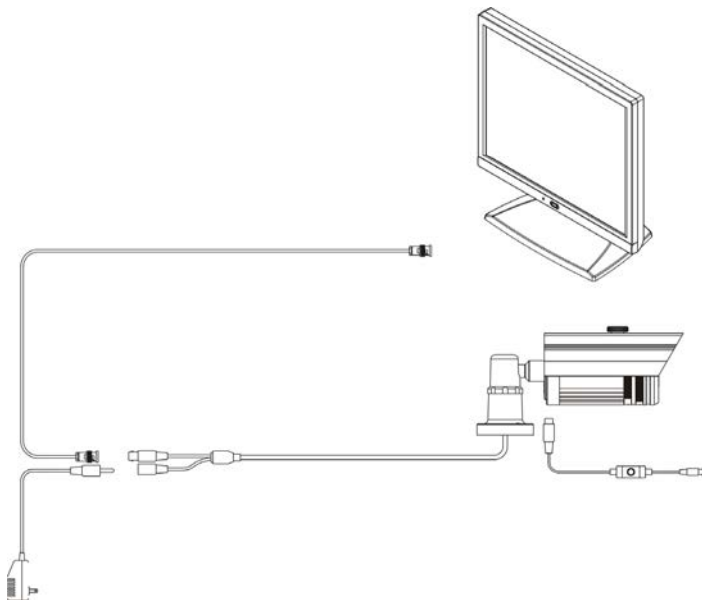
To Enter the menus press the button on the remote control.

To Navigate the menus, move the button left/Right/Up and Down, press the button to Enter.

RET – takes you back a step in the OSD  
END – saves changes and exits from the OSD

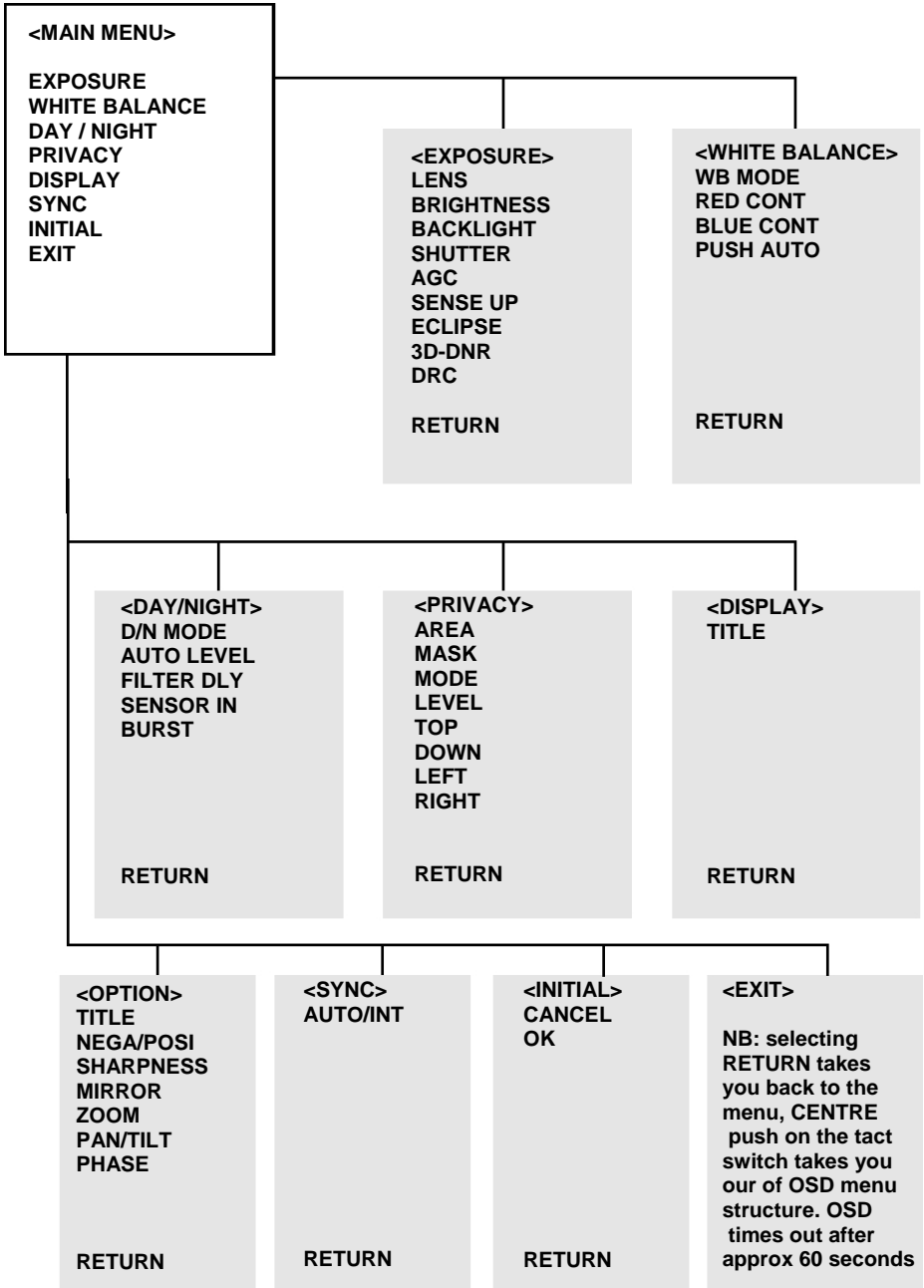
## CAMERA CONNECTION

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# CAMERA SET UP – OSD



## OSD MAIN SCREEN

All operation is via the tact switch

- [CENTER] Turn OSD menu ON or OFF
- [UP]/[DOWN] UP or DOWN of Cursor
- [LEFT]/[RIGHT] to go into SUB MENU or change setting

## <EXPOSURE>

Press the [LEFT] or [RIGHT] button to access the "EXPOSURE" mode.

- 1) LENS DC, ELC can be selected.
- 2) BRIGHTNESS 0 to 60 can be selected.  
(Level setting is available in both DC & ELC mode).
- 3) BACKLIGHT ON or OFF can be selected. (BLC level, location)  
(allows the camera to maintain proper exposure within a certain area, even if the lighting level changes).
- 4) SHUTTER 1/50, FLC, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000  
1/30000, 1/60000, 1/120000 sec.  
(this is only selectable when lens is set to DC mode – FLC reduces screen flickering caused by discordance of frequency and lighting).
- 5) AGC AGC OFF, LOW, MID, HIGH can be selected.  
As the level of gain increases, the screen gets brighter and the level of noise also increases.
- 6) SENSE UP OFF, x2, x4, x8, x16, x32, x64, x128, x256 can be selected.  
(SENSE UP helps maintain a bright, clear screen image by automatically detecting the change in the level of light)
- 7) ECLIPSE ON or OFF can be selected.  
(This function improves the identification capability of subjects facing a brightly lit situation by filtering out the strength of the light).
- 8) 3D-DNR OFF, LOW, MID, HIGH can be selected.  
(Reduces the noise on the screen under low light condition/AGC)
- 9) DRC OFF, ON can be selected.  
(Visibly brightens the subject in a dark area)
- 10) RETURN Return to MAIN MENU.

## <WHITE BALANCE>

Press the [LEFT] or [RIGHT] button to access the "WHITE BALANCE" mode.

### 1) WB MODE

- ATW This mode can be used within the colour temperature range 1800°K ~ 10500°K
- AWC Please press the [LEFT] or [RIGHT] button in the PUSH AUTO mode while the camera is directed at a piece of white paper to obtain the optimum state under current illumination. If the environment including the light source is changed, you have to adjust the White balance again.
- MANUAL Manual mode. User can change R and B Gain manually.
  - RED CONT Adjust Red Gain Value (0 ~ 127)  
(Can only be adjusted whilst in manual mode).
  - BLUE CONT Adjust BLUE Gain Value (0 ~ 127)  
(Can only be adjusted whilst in manual mode).
- INDOOR Set the colour temperature to 3200°K
- OUTDOOR Set the colour temperature to 6300°K

### 2) PUSH AUTO

When it is AWC, OFF to PUSH can be selected.

### 3) RETURN

Return to MAIN MENU.

## <DAY/NIGHT>

Press the [LEFT] or [RIGHT] button to access the "DAY/NIGHT" mode  
(NOTE: colour / monochrome).

### 1) D/N MODE

AUTO, DAY, NIGHT, EXT can be selected.

- AUTO Automatically changes to the appropriate mode for day-time or night-time (NB: note that the camera and IR LEDS are **NOT** synchronized – LEDS operate via photocell and the camera switches by AGC so there may be an undesirable delay)
- DAY Colour images are displayed only.
- NIGHT Monochrome images are displayed only.
- EXT Automatically changes to the appropriate mode for day-time (colour) or night-time (monochrome). (Note that the camera and IR LEDS **ARE** synchronized via the photocell e.g. LED's and IR cut filter operate at the same time)

### 2) AUTO LEVEL

When D/N MODE is set to AUTO, the 0 to 3 values can be selected.

(AGC LOW : 0 AGC MID : 0 ~1 AGC HIGH : 0 ~3)

### 3) FILTER DLY

When set to AUTO, 4 to 10 can be selected. Note that this function does not work when AGC is OFF.

(Adjusts the delay time in seconds when changing from colour to B/W and vice versa).

- 4) **SENSOR IN** When it is EXT, No or NC can be selected.
- 5) **BURST** Removes burst from B/W setting.  
(only available in B/W mode).
- 6) **RETURN** Return to MAIN MENU.

## <PRIVACY>

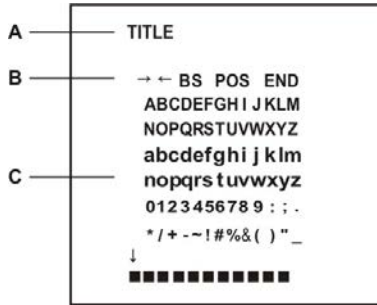
Press the [LEFT] or [RIGHT] button to access the "PRIVACY" mode.

- 1) **AREA** 1 to 24 can be selected.
- 2) **MASK** ON or OFF can be selected.
- 3) **MODE** When MASK is ON, the privacy mask can be displayed as either BW, MOSAIC and COLOUR block.
- 4) **LEVEL**
  - BW: 0 to 15 can be selected.
  - MOSAIC: SMALL or MIDDLE or LARGE can be selected.
  - COLOUR: RED, BLUE, GREEN, YELLOW, CYAN, MAGENTA can be selected.
- 5) **TOP** When MASK is ON, 6 to 150 can be selected.
- 6) **DOWN** When MASK is ON, 8 to 152 can be selected.
- 7) **LEFT** When MASK is ON, 0 to 185 can be selected.
- 8) **RIGHT** When MASK is ON, 2 to 187 can be selected.
- 9) **RETURN** Return to MAIN MENU.

## <OPTION>

Press the [LEFT] or [RIGHT] button to access the "OPTION" mode.

### 1) TITLE



- A. TITLE
- B. Command Line
  - ← : Move to left
  - : Move to right
  - BS : Erase a left character
  - POS : Change the position of the title
  - END : End
- C. Character Table
  - : blank
  - : space

### 2) NEGA/POSI

NEGA or POSI image can be selected.

### 3) SHARPNESS

0 to 15 can be selected.

### 4) MIRROR

- MIRROR
- VERTICAL
- ROTATE

NORMAL, MIRROR, VERTICAL, ROTATE can be selected.  
Horizontal image inversion  
Vertical image inversion  
Horizontal image and Vertical image inversion

### 5) ZOOM

OFF (x1) and ON1 to ON8 (upto max of x4) can be selected.  
When PAN/TILT is ON, ZOOM does not work.

### 6) PAN/TILT

OFF or ON (max of x2) can be selected.  
(When OSD MENU is OFF and PAN/TILT is ON,  
operate by [UP], [DOWN], [LEFT], [RIGHT].

### 7) PHASE

Sync phase is adjustable in line lock mode (Auto mode)  
between 0 ~ 624 (PAL).

### 8) RETURN

Return to MAIN MENU

## <DISPLAY>

Press the [LEFT] or [RIGHT] button to access the "DISPLAY" mode.

### 1) TITLE

ON or OFF can be selected.

### 2) RETURN

Return to MAIN MENU.

## <SYNC>

Press the [LEFT] or [RIGHT] button to select between AUTO / INT

## <INITIAL>

Press the [LEFT] or [RIGHT] button to access the "USER" mode.

### 1) CANCEL

Cancel defaulting of the camera.

### 2) OK

Returns unit to factory defaults.

# SPECIFICATIONS

MODEL		HCUI-G(H)5HNWxE1	
Power	Power source	AC24V $\pm$ 10% / DC12V $\pm$ 10%	
	Power consumption	6.0 Watts	
General	Image sensor	1/3" SONY Super-HAD CCD	
	Total number of pixels	NTSC : 811(H) x 508(V), PAL : 795(H) x 596(V)	
	Scanning system	2:1 interlace	
	Scanning frequency	NTSC : 15.734KHz(H) x 59.94Hz(V) PAL : 15.625KHz(H) x 50Hz(V)	
	Sync. system	Internal	
	Electronic shutter	1/60(1/50) ~ 1/120,000sec	
	Resolution	600TVL (colour) & 620TVL (monochrome)	
	Min. illumination	0.1Lux (Colour) @ F1.2, 50 IRE, 0Lux (IR LED ON)	
	Video output	1.0Vp-p (75ohm, composite)	
	S/N ratio	More than 55dB (AGC OFF, Sense up OFF)	
	IR LED/SENSOR	42no 850nm IR LED / Photocell Sensor 1EA	
	IR LED Lighting Distance	40M	
	Camera Control	Plug in joystick at rear of camera	
	F U N C T I O N	Exposure Shutter	1/60(1/50), FLICKERLESS ,1/250~1/20,000sec
		Lens (Auto Iris Control)	DC / ELC
		Brightness	0 ~ 60
		BLC	OFF/ON
		AGC	OFF / LOW / MIDDLE / HIGH
		Sense-up	OFF / x2~x256
		Eclipse	OFF / ON
		3D-DNR	OFF / LOW / MIDDLE / HIGH
		DRC	OFF / ON
		White Balance	ATW / AWC / MANUAL / INDOOR / OUTDOOR
		Day & Night	AUTO / DAY / NIGHT /EXT
		Privacy zone	OFF / ON (24 zones in BW, Colour, Mosaic)
		Display Title	OFF / ON
		Video Picture	POSI / NEGA
		Sharpness	0~15
	Mirror	NORMAL / MIRROR / VERTICAL / ROTATE	
	Sync	INT / AUTO	
Zoom & Pan/Tilt	Zoom (upto x4): OFF / ON. PAN&TILT (upto x2): OFF / ON		
Phase (LineLock)	NTSC : 0~524, PAL : 0~624		
Sync	INT /AUTO		
Initial	DEFAULT /USER (CANCEL /OK)		

Connector & Etc	Power input	2-Pin Terminal Block
	Video output	BNC connector
	Day & Night System	True ICR
	Lens mount	Fixed mount
	Lens	Varifocal DC auto iris Lens
	Operating Temperature	-10°C~+50°C [14°F~122°F]
	Operating humidity	0~96% (non-condensing)
	IP Rating	IP66
	External Dimension (mm)	77(W) x 255(H) x 77(D)

