

INSTRUCTIONS

700TVL SV5 Wide Dynamic Range True Day&Night Box Camera







- SONY 1/3" 960H(EXview HAD CCD II)
- Super WDR with SV-V DSP
- Ultra High Resolution 700 TV Lines
- True Day&Night(ICR) & Sens-up(x512)
- 3D Noise Filter for clear images even in dark
- SDDR (Super Dynamic Range) & VPS(Virtual Progressive Scan)
- PROFILE to set a mode according to the camera installation conditions
- PIP, HLC, DIS, Intelligence, Privacy, D-Zoom etc.
- OSD Control by coaxial cable via pelco coaxitron(Optional)
- Dual Power or 230VAC(Optional)

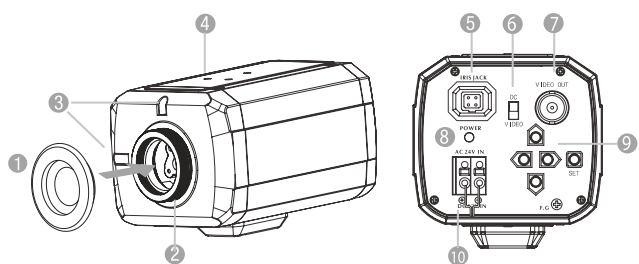
Before installing and using the camera, please read the instructions thoroughly and retain them for reference.

SPECIFICATIONS

ITEM	NTSC	P A L
Size	SONY 1/3" 960H(EXview HAD CCD II)	
Effective Pixels	976(H) x 494(V)	976(H) x 582(V)
Scanning System	2:1 Interface	
Synchronization	Internal	
Shutter Speed	1/60~1/120,000sec.	1/50~1/120,000sec.
Video Output	VBS 1.0 Vp-p / 75Ohm	
S/N Ratio	52dB (AGC Off)	
Resolution	700TVL(Color), 750TVL(B/W)	
Min. Illumination	0.1Lux(Color), 0.01Lux(B/W), 0.00002Lux(Sens-upX512) @ F1.2	
Day&Night	COLOR / B/W / AUTO / EXTERN	
White Balance	ATW / OUTDOOR / INDOOR / MANUAL / AWC->SET	
Sense-up	AUTO / OFF(x2~x512)	
DNR3	ON / OFF(1~32 Level)	
WDR & BLC	OFF / USER BLC / HLC / WDR	
O.S.D	x16 D. Zoom, DIS, Intelligence, Privacy Mask, PIP, Sharpness, Profile etc.	
Lens	C/CS Mount	
Operating Temperature	-10°C to +50°C	
Humidity	Max. 90% RH	
Supplied Voltage	12VDC 180mA	
Dimension & Weight	64.2(W) X 60.4(H) X 118.6(D) mm, Appro. 0.55kgs	

COMPOSITION & PARTS

- CAMERA 
- L-wrench 
- C-Mount Lens Adaptor 
- Auto Iris Lens Plug 



1. **Sensor Protective Cap** : Be sure to cover the lens when not using it.
2. **CS-Mount Lens Adaptor** : Used to mount a CS-mount lens.
(C-Mount lens Adaptor : Used to mount a C-mount lens.)
3. **Back Focus Set Screw** : If needed adjustment of back focus, loosen the set screws using L-wrench to turn CS-mount lens adaptor and tighten the set screw after adjustment.
4. **Mounting Bracket Screw Hole** : Use to install the camera on the mounting bracket.
5. **Auto Iris Lens Connector** : Connect auto Iris lens plug
6. **Auto Iris Lens Selection Switch** : Change the mode to DC or VIDEO depending on the type of auto iris lens being used.
7. **Video Output Terminal** : Connect the video input terminal of the monitor.
8. **Power Indicator**
9. **OSD Menu Set up Key**
10. **Power Input Terminal** : Connect the power appropriate to each power requirement.

INSTALLATION

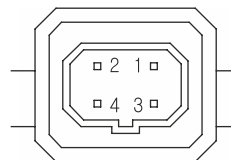
Installing DC Auto Iris Lens

Using DC Auto Iris lens, connect the Iris lens plug to the camera as shown below.

1. Strip approximately 8mm for outer shield and 2mm for inner shield of lens cable for soldering.
2. Remove the cover from the Iris lens plug and solder the lens cable to the plug pin following the table below.
3. Connect the lens plug to the auto Iris lens connector on the rear of the camera.

<< DC Lens Pin Definitions >>

Pin	Function
1	DAMP -
2	DAMP +
3	DRV +
4	DRV -



Connecting the Camera

Check the power source from the external power supply before applying power to the camera.

1. Connect the VIDEO connector on the rear of the camera to the video-in connector on your monitor or video recorder.
2. Connect the camera to a power supply appropriate for your installation (12 VDC or 24 VAC)
3. Plug the power supply into an appropriate power source.
The power LED illuminates to show that the camera is receiving power.

Camera OSD Setup Controls

Please use the directional keys located at the back of the camera to make the desired changes in the OSD menu.

OSD MENU

LENS	• DC	• MANUAL	
EXPOSURE	• BRIGHTNESS	• SHUTTER	• AGC
	• SENS-UP	• RETURN	
SSDR	• ON	• OFF	
WHITE BALANCE	• ATW	• OUTDOOR	• INDOOR
	• MANUAL	• AWC -> SET	
BACKLIGHT	• OFF	• USER BLC	• HLC
	• WDR		
DNR3	• ON	• OFF	
DAY&NIGHT	• AUTO	• EXTERN	• COLOR
	• B/W		
SPECIAL	• IMAGE ADJ	• CAM TITLE	• SYNC
	• INTELLIGENCE	• PRIVACY	• DIS
	• PROFILE	• COMM ADJ	• RETURN
EXIT	• SAVE	• NOT SAVE	• RESET

LENS

- **DC** : Select Auto Iris Lens
- **Manual** : Select Manual Lens
 - **Brightness (DC, Manual)** : Adjusts the video brightness.
 - **IRIS SPEED (DC)** : Adjusts the Iris control speed of the DC lens. If the control speed is too slow or fast, please use this menu to adjust the speed.
 - **FOCUS ADJ. (DC)** : Activate the Focus Settings mode, adjust the lens focus and then deactivate the settings mode.
SHUTTER : ESC, MANUAL, A. FLK, EXTERN(disabled) => Same with the SHUTTER of EXPOSUER.

EXPOSURE

- **BRIGHTNESS** : Adjusts the video brightness.
- **SHUTTER** : Select either auto or manual shutter.
 - **ESC** : Select this to control the shutter speed automatically.
 - **MANUAL** : Control shutter speed manually.
 - **A.FLK** : Select this when you experience picture flicker, which can happen when there is a clash with the frequency of the installed lighting.
- * *When you use a DC lens, set the shutter mode to - - - if color rolling occurs.*
- * *When the SHUTTER is set to MANUAL or A.FLK mode, SENS-UP will be disabled.*
- **AGC(AUTO GAIN CONTROL)** : The higher the gain level, the brighter the screen but the higher the noise.
 - **HIGH** : from 5.3dB to 37dB
 - **LOW** : from 5.3dB to 32dB
 - **OFF**
- **SENS-UP** : When it is night or dark, the camera automatically detects the light level and maintains a clear picture if this mode is activated.
 - **AUTO** : Activates the SENS-UP function. (x2 ~ x512), - **OFF**
- **RETURN** : Save the changes in the EXPOSURE menu and return to the SETUP menu.
- * *Note that the higher the zoom level, the brighter the screen, but the more likely it is that an after-image will appear.*
- * *Although Noise, Spots, and Whitish symptoms may occur in SENS-UP operation when the zoom level is increased, this is normal.*

SSDR(Super Dynamic Range)

It illuminates darker spots of an image while retaining the same light level for brighter spots to even out the overall brightness of images with high contrast between bright and dark spots.

White Balance (White Bal.)

- **ATW** : When the color temperature is between 1,700°K and 11,000°K.
- **OUTDOOR** : Between 1,700°K and 11,000°K. (sodium light inclusion)
- **INDOOR** : Between 4,500°K and 8,500°K.
- **MANUAL** : Select this to fine-tune White Balance manually.
Set White Balance first by using the ATW mode and then use this mode.
- **AWC→SET** : To find the optimal luminance level for the current environment, point the camera towards a sheet of white paper and press the Function Setup switch. If the environment changes, readjust it.

BACK LIGHT

- **OFF** : Not being used
- **USER BLC** : Select a desired area on a picture and view that area more clearly
 - **LEVEL** : Adjusts the brightness level of a monitoring area.
 - **TOP/BOTTOM/LEFT/RIGHT** : Adjust the area to be enhanced.
- **HLC(High Light Compensation)** : If the scene contains extremely brightly light areas such as from car headlight, the light can mask out much of the on-screen
 - **LEVEL** : Adjusts the brightness level of a monitoring area.
 - **LIMIT** : Enable to change the operating condition.
 - **MASK COLOR/TONE** : Change the color / brightness of the masking area. (Black, Red, Blue, Cyan, Magenta)
 - **TOP/BOTTOM/LEFT/RIGHT** : Adjust the area to be enhanced.
- **WDR(Wide Dynamic Range)** : When there are both bright and dark areas at the same time, this mode makes both areas distinctive.
 - **LIMIT** : Adjust the WDR Sensitivity by selecting LOW, MIDDLE, or HIGH.
 - **LEVEL** : Adjust the WDR Brightness by controlling the bar from 1 to 100.
 - **MODE** : Indoor and outdoor backlight conditions are appropriately selected.
 - **ANTI ROLLING** : Rolling caused around a fluorescent lamp is improved.
- * *The HLC is not activated in day light or when bright light is not present at night. (In NIGHT ONLY mode).*
- * *Using the WDR function, select the shutter mode can be either fixed or A.FLK in the DC And in the manual lens, select the shutter mode can be only ESC.*
- * *If you use the VPS (Virtual Progressive Scan) function, the CCD reads differently so you can not use WDR simultaneously.*
- * *If you set VPS to ON, WDR will be automatically set to FIXED Mode.*

DNR3

- **ON** : Activates DNR so that noise is reduced. You can adjust the noise reduction level.
- * *You cannot set the DNR to 'ON' or 'OFF' when the AGC mode is 'OFF'.*
- * *The higher the DNR level set, the more the noise level will be reduced, as will the brightness of the image.*
- **OFF** : Deactivates DNR. Noise is not reduced.

DAY/NIGHT

- **AUTO** : The mode is switched to 'Color' in a normal environment, but switches to 'B/W' mode when ambient illumination is low.
 - **DURATION** : You can select the day/night switching point.
 - FAST : Color -> B/W(2.5lux), B/W-> Color(5lux)
 - SLOW : Color -> B/W(11lux), B/W-> Color(7lux)
 - **DWELL TIME** : You can select the duration time about changing the day/night mode.
- **EXTERN** : This mode allows you to apply a desired filter to external signals.
- **COLOR** : Always displayed in color.
- **B/W** : Always displayed in black and white. You can turn on or off the burst signal.
- * *When AGC is 'OFF', '- - -' mode operates as selecting 'COLOR' mode and 'AUTO' mode cannot be selected.*

SPECIAL

● IMAGE ADJ.

- **MONITOR** : Change the settings value of video appropriate to your monitor.
- **VPS(Virtual Progressive Scan)** : This is an advanced technology that reproduces a sharp progressive image. This is appropriate to high quality recording and file transfer via the Internet.
 - OFF : Selects 2:1 Interlaced Scan as the Imaging Method.
 - ON : Selects Progressive Scan as the Imaging Method.
- **REVERSE** : OFF, HV-REV, V-REV, H-REV
- **PIP(Picture in Picture)** : Displays a full-size image along with the thumbnail to provide more detailed information.
- **D-ZOOM** : x1 ~ x16.
- **FONT COLOR** : White, Blue, Red, Green, Yellow
- **SHARPNESS** : As you increase this value, the picture outline becomes stronger.
- **LANGUAGE** : You can select the menu language according to your requirements.
- **RETURN** : Save the settings for the IMAGE ADJ. menu and to return to the SETUP menu.

** When the V-REV or H-REV mode is enabled, the text on the screen does not flip.*

** If you increase the SHARPNESS level too high, the picture may become distorted or noise may appear.*

● CAM TITLE : If you enter a title, the title will appear on the monitor. (15 letters)

● SYNC : INT(Internal Synchronization Type)

● INTELLIGENCE : Commands the camera to motion-detect and trace an object.

- **MOTION** : Select motion types to detect.
 - OFF : Not being used.
 - DETECTION : Since the camera detects motion without any additional external sensor, you can monitor activity more efficient.
 - TRACKING : Commands the camera to detect and trace a moving object.
 - ▶ FENCE : You can select up to 4 FENCE.
 - ▶ MODE : Determines whether to use the fence selected in the FENCE.
 - ▶ TYPE : Two types, line and area, of fences are available.
 - ▶ COUNT : Displays the number of times that an object enters or leaves a fenced area.
 - ▶ FILL : Fill or remove color from the FENCE.
 - ▶ POSITION : Defines the position and detection direction of a line or fenced area.
 - 1) LINE FENCE
 - SEL POS : Selects a position from POS1, POS2.
 - X POS / Y POS : Adjust the size and position of the selected line fence.
 - DIRECTION
 - DIR1 : Detects objects moving left to right on the fence line.
 - DIR2 : Detects objects moving right to left on the fence line.
 - DIR1/2 : Detects all objects moving crosswise on the fence line.
 - RETURN : Select this to save the POSITION menu settings and return to the TRACKING menu.
 - 2) AREA FENCE
 - SEL POS : Selects a position from POS1 ~ POS4.
 - X POS / Y POS : Adjust the size and position of the selected area fence.
 - DIRECTION
 - IN : Detects objects entering the fenced area.
 - OUT : Detects objects exiting the fenced area.
 - IN/OUT : Detects all objects entering and exiting the fenced area.
 - RETURN : Select this to save the POSITION menu settings and return to the INTELLIGENCE menu.
 - FIXED/MOVED : Detects an object that emerges or disappears from the screen, or stays onscreen without movement.

** A detection (FIXED/MOVED) error may occur if • multiple motions occur continuously in random directions, • a fixed object moves in one position continuously, • a second object screens the first moving object.*

- **DETECT BOX** : Outlines an object on the screen in a box when its movement matches a custom Motion Type.
- **ALARM OUT** : Releases a signal from the MD Output Port on the back of the camera when an object's movement matches a custom Motion Type.
- **DETECT AREA** : Defines the Motion Detection area.
- **MASK AREA** : Specify a detection exception area to mask. Select a mask area number (up to 4 areas) and specify the size and position.
- **SENSITIVITY** : Set the sensitivity of the motion detection. When you adjust the lower level, the more sensitive.
- **DETECT SIZE** : Selects an object size to detect on the screen.
- **RETURN** : Save the MOTION menu settings and return to the SPECIAL menu.

- **PRIVACY** : Mask an area you want to hide on the screen.
 - **AREA SEL** : You can select up to 12 PRIVACY areas.
 - **MODE** : Determines whether to use the area selected in the AREA SEL.
 - **MASK COLOR** : Determines area color. (Green, Red, Blue, Black, White, Gray)
 - **TRANSPARENCY** : Adjust the brightness of MASK COLOR.
 - **SEL POS/ XPOS/ YPOS** : Adjust the size and position of the selected area
 - **RETURN** : Save the PRIVACY menu settings and return to the SPECIAL menu.
- **DIS (Digital Image Stabilizer)** : This function mitigates any picture movement due to external actors such as wind.
- **PROFILE** : Select a desired mode using the Function Setup button according to the picture display you want.
 - **BASIC** : The most common environment is set to meet.
 - **DAYNIGHT** : It will be set automatically so it optimizes to the day or night conditions, respectively
 - **BACKLIGHT** : It will be set automatically so you can distinguish the object from the background in a severe backlighting scene.
 - **ITS** : It will be set automatically so you can easily check the traffic conditions.
 - **INDOOR** : It will be set automatically to help you take a picture in a regular indoor lighting condition.
 - **USER** : Automatically configures the camera to your custom settings.
 - 1) Select Custom for Simple Setup mode.
 - 2) Configure the menu options to your custom settings.
 - 3) The settings are automatically saved as Custom mode.
 - 4) Profile user mode don't initialize when menu resets.
- **COMM ADJ (Communication Adjustment)** : This function sets up the camera communication status when controlling the camera through an external control device.
 - **CAM ID** : Determines the camera's identification number. (between 0 and 255).
 - **BAUD RATE** : Select 2400/4800/9600/19200/38400/57600 bps.
 - **UART MODE** : Select NONE, EVEN or ODD for the parity bits.
 - **RET PKT** : Determines whether to send a command back to the controller device when a communication control command is sent to the camera.
 - **DISP ID** : Display the camera title on the top left corner of the screen.
 - **PROTOCOL** : SAMSUNG-T/E, PELCO-D/P, BOSCH, HONEYWELL, VICON, PANASONIC
 - **RETURN** : Save the COMM ADJ menu settings and return to the SPECIAL menu.
- **RETURN** : Save the SPECIAL menu settings and return to the MAIN SETUP menu.

EXIT

- **SAVE** : Save the current settings and exit the MAIN SETUP menu.
- **NOT SAVE** : Do not save the current settings and exit the MAIN SETUP menu.
- **RESET** : Resets the camera settings to the factory defaults. Language and Monitor settings are not initialized.