SONY EFFIO-E Security Camera
With On-Screen Display

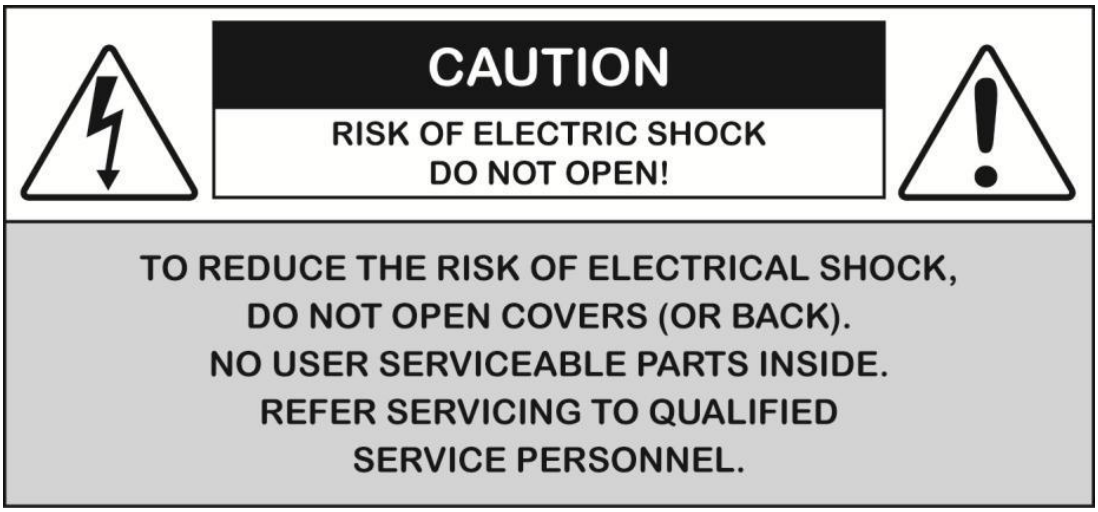
Model CSP-700SE

FEATURES:

- 1/3 Sony Ex-View HAD II CCD
- Sony Effio-E DSP
- 700TVL High Resolution
- 42 Infrared LEDs'
- IR Distance up to 120ft / 40m
- 2.8~12.0mm Varifocal Lens
- On-Screen Display (OSD)
- IP66 Rating
- 3-AXIS Cable Management Bracket
- 1AMP
- 12V DC

The CSP-700SE is a "New Generation" camera with SONY EFFIO-E DSP. It was designed to provide the user with stunningly clear images in both day and night. The camera has a Day/Night auto-switch which automatically produces a black and white/infrared image in low light. This camera is an excellent choice for low light or complete darkness. The camera is also equipped with many advanced features including a digital on-screen display (OSD) menu which enables the user to adjust camera settings in order to achieve the highest quality image.

CAUTION:



Do not attempt to service this video product by yourself as taking apart camera may expose you to dangerous voltage or other hazards.

Please comply with all electrical safety standards during installation and operation.

In order to prevent damage caused by fire or electric shock, please do not submerse camera in water or expose any open parts to liquid.

Make sure to use the appropriate power supply and that the power is plugged into the camera correctly and securely. Do not switch on power until after camera connection is complete. This camera requires 12volt DC power.

Do not expose the lens directly to the sun or to strong light as this may damage the pick-up device.

There are some sophisticated parts inside this camera, therefore, always handle with care in order to avoid any internal damage to the camera.

Frequently Asked Questions:

No Image

Check the power cable to the power box or wall outlet. Make sure video and power connections are secure. Do not switch on power until camera connection is complete.

If using a multiple output power box, make sure the power switch is in the “ON” position & all of the fuses are illuminated.

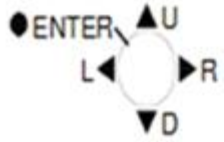
If using a multiple output power box, make sure the POSITIVE (+) and NEGATIVE (-) wires are connected correctly.

If using a spool of cable (not premade), make sure outer copper wire is not touching the center pin.

Make sure the BNC video from connection from the camera is plugged into the video input on the DVR or display.

CSP-700SE Operation Manual

3.1 OSD Control Buttons



① **U (UP)**

Use this button to move the cursor upwards to the desired item.

② **R (RIGHT)**

Use this button to move the cursor to the right to select or to adjust the parameters of the selected item. The parameter increases when the right button is pressed.

③ **D (DOWN)**

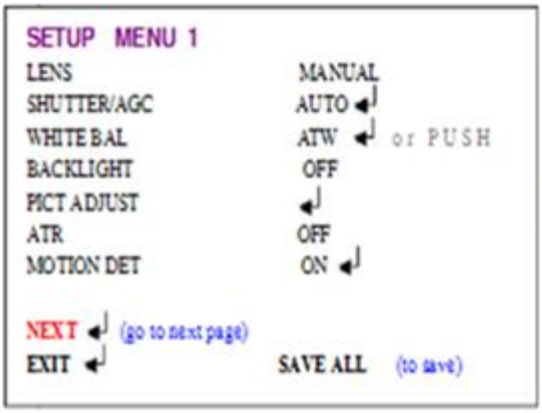
Use this button to move the cursor downwards to the desired item.

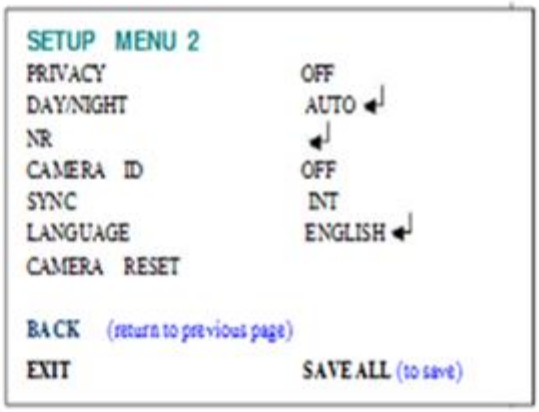
④ **L (LEFT)**

Use this button to move the cursor to the left to select or to adjust the parameters of the selected item. The parameter decreases when the left button is pressed.

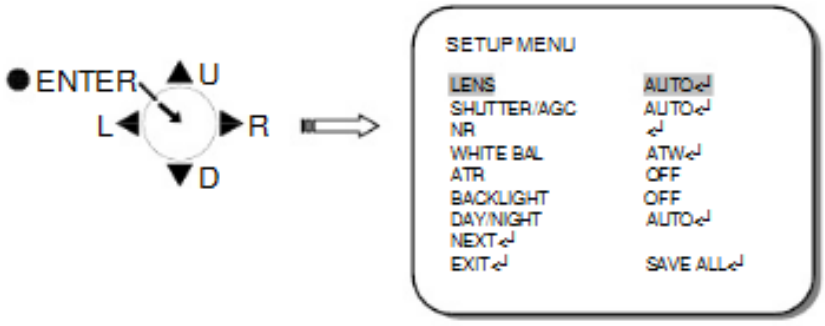
⑤ **ENTER**

Use this button to display the main menu, to confirm and to enter the submenus when they are available. Items with the symbol "↵" in the end contain sub-menus. For further settings of those items, select the desired item with the button ▲ or ▼ and press the **ENTER** button to bring up the sub-menu and edit.





3.2 OSD Operation



1. Start to operate the OSD menu

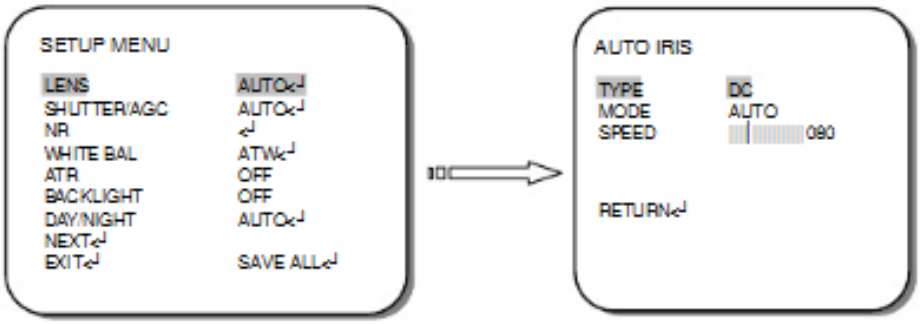
Press the **ENTER** button to bring up the OSD main menu to start operating OSD menus.

2. Select items with the cursor buttons

- Use buttons ▲ and ▼ to move the cursor up and down.
- Use buttons ◄ and ► to switch the modes or to adjust the parameters or the values of the settings.

3. Switch to the sub-menu

Items with the symbol "↵" in the end contain sub-menus. For further settings of those items, select the desired item with the button ▲ or ▼ and press the **ENTER** button to bring up the sub-menu and edit.



Main Menu Sub-Menu

4. Return to the previous page

Select **RETURN** and press the **ENTER** button to return to the previous page.

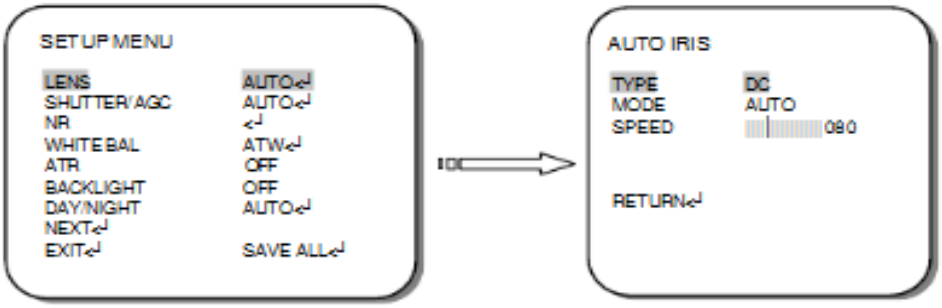
5. Exit the OSD menu

Select **EXIT** with the button ▲ or ▼ and press the **ENTER** button to exit the OSD menu.

4. Configuration

4.1 LENS

When the **SETUP MENU** is displayed on the screen, use buttons ▲ and ▼ to select the ***LENS*** and press the **ENTER** button to do further settings.



Select to set the mechanical iris of the lens.

Function	Option
LENS	MANUAL AUTO↵

- ***MANUAL***

  Auto electronic shutter

- ***AUTO↵***

  Auto electronic shutter + Mechanical auto IRIS

  When **AUTO↵** is selected, click **ENTER** to bring up the ***AUTO IRIS*** sub-menu for further settings.

4.1.1 AUTO IRIS

Adjust the settings of the ***AUTO IRIS***.

Function	Option
TYPE	DC VIDEO
MODE	OPEN CLOSE AUTO
SPEED	000 – 255

- ***TYPE***

  Select to set the type of the mechanical iris.

  - **DC**: DC Lens. only
  - **VIDEO**: VIDEO Lens.

- ***MODE***

  Select to set the type of control to be exercised over the mechanical iris.

  - **OPEN**: The mechanical iris is fixed to open.
  - **CLOSE**: The mechanical iris is fixed to close.
  - **AUTO**: The mechanical iris is controlled automatically.

- ***SPEED***

  Select to set the convergence speed of the mechanical iris.

Adjusts the iris control speed. The lower the value, the faster the speed.

If the speed is too slow or fast, the iris control may be unstable.

AUTO IRIS	Default	Descriptions
TYPE	DC	**MUST BE SET TO DC ONLY**. This camera does NOT support video type auto iris lens.
MODE	AUTO	**AUTO** – Lens iris is automatically controlled according to the scene's light level. **OPEN** – Lens is fully opened regardless of the light level. **CLOSE** – Lens is fully closed.
SPEED	080	Adjusts the iris control speed. The lower the value, the faster the speed. If the speed is too slow or fast, the iris control may be unstable.

4.2 SHUTTER/AGC

When the **SETUP MENU** is displayed on the screen, use buttons ▲ and ▼ to select the ***SHUTTER/AGC*** and press the **ENTER** button to do further settings.

Select to set Auto exposure or Manual exposure.

Function	Option
SHUTTER/AGC	AUTO↵ MANUAL↵

- ***AUTO↵*** :

  When **AUTO↵** is selected, click **ENTER** to bring up the ***AUTO SETUP*** sub-menu for further settings.

- ***MANUAL↵*** :

  When **MANUAL↵** is selected, click **ENTER** to bring up the ***MANUAL SETUP*** sub-menu for further settings.

4.2.1 AUTO SETUP

Adjust the settings of the ***AUTO SETUP***.

Function		Option
HIGH LUMINANCE	MODE	SHUT+AUTO IRIS AUTO IRIS *
	BRIGHTNESS	000 – 255
LOW LUMINANCE	MODE	OFF AGC
	BRIGHTNESS	x0.25 ; x0.50 ; x0.75 ; x1.00

- ***HIGH LUMINANCE***

- **MODE**

  Select to specify AE control on the medium- and high-brightness side.

  SHUT + AUTO IRIS: Auto electronic shutter + Mechanical auto IRIS
  AUTO IRIS: Shutter fix + Mechanical auto IRIS

> **NOTE**:
> If **MANUAL** has been selected as the ***LENS*** function setting, **SHUT** will be displayed, and the settings made in this section will not take effect.

- **BRIGHTNESS**

  Select to specify the high- and medium-brightness side reference.

  The brightness changes depending on whether the ***ATR*** function is **ON** or **OFF**, and whether the **CRS** mode has been selected as the ***AWB*** function.

  Please note that the brightness will change when ***ATR*** or ***WHITE BAL*** is set to **ANTI CR** (CRS mode), etc., after ***BRIGHTNESS*** has been set.

- ***LOW LUMINANCE***

  - **MODE**

    Select to specify AE control on the low-brightness side.

    OFF: OFF
    AGC: Auto gain control

  - **BRIGHTNESS**
    Select to specify the low-brightness side reference.

4.2.2 MANUAL SETUP

Adjust the settings of the ***MANUAL SETUP***.

Function	Option
MODE	SHUT+ AGC
SHUTTER	1/60* ; 1/100* ; 1/250 ; 1/500 ; 1/1000 ; 1/2000 ; 1/4000 ; 1/10000
AGC	6.00 ; 12.00 ; 18.00 ; 24.00 ; 30.00 ; 36.00 ; 42.00 ; 44.80

- ***MODE***

  "**SHUT+AGC**" is the only option available for the ME operation mode. There are no other options.

- ***SHUTTER***

  Select to set the ME shutter speed (in fractions of a second).

- ***AGC***

  Select to set the ***AGC*** value for ME.

This menu offers how to control/select SHUTTER, AUTO IRIS and AGC to get the best image for the high luminance and the low luminance according to the scene.

For example, to reduce the wash out and extend the dynamic range for the highlight scene, it is improved by SHUTTER+AUTO IRIS in the outdoor daylight. This mode may show color rolling or the video level hunting problem in certain lighting condition such as fluorescent lights.

Flickerless mode reduces the flickers by NTSC camera under 50Hz light or PAL camera under 60Hz light. MAIN> SHUTTER/AGC> MANUAL> SHUTTER must be set to 1/100 (NTSC), 1/120 (PAL) and MAIN> SHUTTER/AGC> AUTO> MODE to AUTO IRIS. Normal shutter speed with an auto iris lens should be set to 1/60 (NTSC) and 1/50 (PAL) for the best sensitivity.

AUTO SETUP		Default	Descriptions
HIGH LUMINANCE	MODE	AUTO IRIS	Selects the shutter mode from AUTO IRIS or SHUT+AUTO IRIS when MAIN>LENS>AUTO but it is fixed to SHUT if MAIN>LENS>MANUAL. **AUTO IRIS** - Light level is controlled by an auto iris lens only. For proper auto iris operation, the auto iris operation mode in MAIN> LENS>AUTO>MODE must be set to AUTO. The shutter speed is fixed to the setting at MAIN>SHUTTER/AGC> MANUAL> SHUTTER in this mode. Set SHUTTER to 1/60 (NTSC) or 1/50 (PAL) for the best sensitivity unless it is in Flickerless mode. To set Flickerless mode: MAIN>SHUTTER/AGC>MANUAL>SHUTTER must be set to 1/100 (NTSC), 1/120 (PAL) and MAIN>SHUTTER/AGC> AUTO>MODE to AUTO IRIS. **SHUT+AUTO IRIS**- Light level is controlled by the combination of an auto iris lens and shutter control to improve the highlight from wash-out and extend the dynamic range. Shutter speed can vary between 1/60(1/50)~1/10,000sec. This mode enhances the overall video quality of daylight but may show a smeared image in bright spotlights. However, color rolling or video level hunting may occur under a certain lighting condition such as fluorescent lights.
	BRIGHT-NESS	032	Adjusts the brightness of the image by an auto iris lens or a shutter speed control + an auto iris lens.
LOW LUMINANCE	MODE	AGC	Sets AGC to compensate the video level when the scene is dim.
	BRIGHT-NESS	x0.50	Sets the brightness level which starts AGC from x0.25, x0.50, x0.75 and x1.0 of full video level. If set to x0.50, the camera will start AGC when the video level goes down to below the 50% level.

NOTICE : The setting AUTO IRIS at SHUTTER/AGC>AUTO SETUP>HIGH LUMINANCE MODE will be changed to SHUT+AUTO IRIS if MAIN menu-1>LENS is changed to MANUAL.

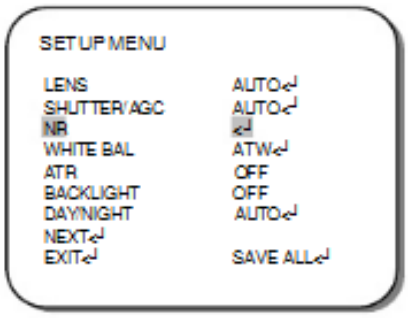
As a result, the lens iris can NOT be fully opened when MAIN menu-1>LENS>AUTO IRIS> MODE is OPEN.

This can be recovered by setting SHUTTER/AGC>AUTO SETUP>HIGH LUMINANCE MODE to AUTO IRIS.

MANUAL SETUP	Default	Descriptions
MODE	SHUT +AGC	Compensates the video level by the manual shutter control and AGC.
SHUTTER	1/60 (1/50)	Sets the manual shutter to 1/60(1/50), 1/100(1/120), 1/250,1/500,1/1000, 1/2000,1/4000 or 1/10000. Manual shutter is only useful when luminance is unchanged.
AGC	6.00	Sets AGC gain in dB. Higher gain compensates for a brighter scene, but noise increases. Manual AGC can be set to 6, 12, 18, 24, 30, 36, 42 or 44 8dB.

4.3 NR

This item is used to set the noise reduction.



Select to bring up the ***NR*** sub-menu for further settings.

Function	Option
NR MODE	OFF Y C Y/C
Y LEVEL	000-015
C LEVEL	000-015

NR MODE

Select to set the 2D NR filter mode.

- **OFF**: Y and C filters OFF
- **Y**: Y filter ON
- **C**: C filter ON
- **Y/C**: Y and C filters ON

Y LEVEL

Select to set the Y filter strength.

C LEVEL

Select to set the C filter strength.

NR	Default	Descriptions
NR MODE	Y/C	Selects OFF, Y, C or Y/C which noise reduction is performed with.
Y LEVEL	006	Indicates the noise reduction strength for the luminance signal. Higher value performs stronger noise reduction and makes the image less sharp. Due to the limitation of 2D NR, noise reduction may not be effective enough.
C LEVEL	004	Indicates the noise reduction strength for the chrominance signal. Higher value performs stronger noise reduction and makes the image less sharp. Due to the limitation of 2D NR, noise reduction may not be effective enough.

4.4 WHITE BAL (White Balance)

White balance can be set to ATW, PUSH, USER1, USER2, ANTI CR, MANUAL or PUSH LOCK.
ATW (Auto Tracking White balance) and PUSH (Full pull-in) are continuously monitoring/analyzing the color temperature of the incoming light and correcting the white balance.

ATW limits the color temperature range at about 2,500°K~8,500°K to reduce the excessive compensation for the big object which has a single color.
PUSH has no limits between about 1,800°K~10,500°K but it may over-compensate the white balance for the big object which has a single color.

In cases where it goes under 2,500°K such as halogen light, ATW may stop. If so, PUSH mode is recommended.

USER1 and USER2 are a fixed white balance which is user-programmable by R-GAIN and B-GAIN and useful only for the steady light.

ANTI CR (Anti Color Rolling) can reduce color rolling under the fluorescent light when the camera operates in shutter control without an auto iris lens. (NTSC version only)

In cases if Switch on the camera in an area where **Energy Efficient Lights** are the only source of lights the Picture might be RED in ATW mode.
In these cases PUSH mode is recommended.

ATW	Default	Descriptions
SPEED	250	Sets the AWB compensating speed. Lower value makes AWB faster. **CAUTION** Too fast an AWB may force color oscillation.
DELAY CNT	001	Adjusts the AWB compensation period to next update of AWB. The smaller value will update AWB more frequently (faster).
ATW FRAME	X2.00	Determines the ATW range with respect to the fundamental range. A higher value than x1.00 extends the ATW range at lower and higher color temperature.
ENVIRON-MENT	INDOOR	Selects INDOOR or OUTDOOR. Their ATW is optimized for the limited application and cannot cover. **INDOOR** - Optimized for Indoor installation and compensates ATW for low color temperature such as incandescent lights. **OUTDOOR** - Optimized for outdoor sunlit applications and compensates ATW for high color temperature such as daylight.

MANUAL WB	Default	Descriptions
LEVEL	064	Manual White Balance Adjustment value.

4.4 WHITE BAL (White Balance)

The screen color can be adjusted by using the ***WHITE BAL*** function.

1. Please use the ▲ and ▼ buttons to ***WHITE BAL*** on the **SETUP MENU** and press the **ENTER** button to do further settings.
2. Please select the desired item and press ◄ and ► buttons to adjust the settings.

Select to set the white balance Mode.

Function	Option
WHITE BAL	ATW PUSH USER1 USER2 ANTI CR MANUAL PUSH LOCK

ATW (Auto Trace White balance)

When **ATW↵** is selected, click **ENTER** to bring up the ***ATW*** sub-menu for further settings.

PUSH: All pull-in

Select to set the white balance mode to the **PUSH** mode.

USER1: Fluorescent light fixed gain (3200K)

When **USER1↵** is selected, click **ENTER** to bring up the ***USER1 WB*** sub-menu for further settings.

USER2: Outdoor fixed gain (6300K)

When **USER2↵** is selected, click **ENTER** to bring up the ***USER2 WB*** sub-menu for further settings.

ANTI CR: Color rolling suppression

Select to set the white balance mode to the **ANTI CR** mode.

MANUAL: Manual white balance

When **MANUAL↵** is selected, click **ENTER** to bring up the ***MANUAL WB*** sub-menu for further settings.

PUSH LOCK

Select to set the white balance mode to the **PUSH LOCK** mode.

4.4.1 ATW (Auto Trace White Balance)

Adjust the settings of the ***ATW***.

Function	Option
SPEED	000-255
DELAY CNT	000-255
ATW FRAME	x0.50 ; x1.00 ; x1.50 ; x2.00
ENVIROMENT	INDOOR ; OUTDOOR

- ***SPEED***

  Select to adjust the pull-in speed of ATW.

- ***DELAY CNT***

  Select to set the time-based hysteresis of ATW.

- ***ATW FRAME***

  Select to set the pull-in frame magnification.

- ***ENVIROMENT***

  Select to set the pull-in frame (indoor/outdoor) of ATW.

4.4.2 PUSH

Select to allow the camera automatically adjust the white balance under all conditions.

4.4.3 USER1

The gain values for the fluorescent light fixed mode are used as the adjustment items of ***USER1 WB*** on the internal OSD menu.

Function	Option
B-GAIN	000-255
R-GAIN	000-255

- ***B-GAIN***

  Used for operating the B gain in the WB fixed gain mode.

- ***R-GAIN***

  Used for operating the R gain in the WB fixed gain mode.

4.4.4 USER2

The gain values for the outdoor fixed mode are used as the adjustment items of ***USER2 WB*** on the internal OSD menu.

Function	Option
B-GAIN	000-255
R-GAIN	000-255

- ***B-GAIN***

  Used for operating the B gain in the WB fixed gain mode.

- ***R-GAIN***

  Used for operating the R gain in the WB fixed gain mode.

4.4.5 MANUAL WB (Manual White Balance)

The B and R gain values for manual WB are set on this screen.

Function	Option
LEVEL	000-255

- ***LEVEL***

  Select to set the B and R gain values for **MANUAL WB**.
  By incrementing or decrementing the B gain value, the R gain value is also adjusted in tandem.

  NOTE:
  The actual variable range is limited to the range from the low color temperature (approx. 1800K) to the high color temperature (approx. 10500K) stored when the pre-white balance was adjusted.

4.4.6 PUSH LOCK

To find the optimal setting for the current luminance environment in this mode, point the camera towards a sheet of white paper and press the **ENTER** button.

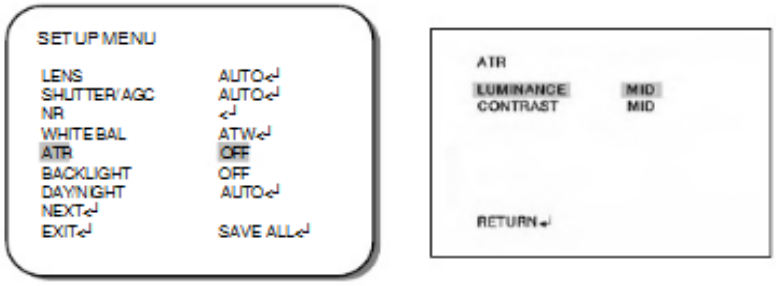
Whenever the condition changes, readjust it.

ATTENTION:
The white balance can not fully function under the following conditions. Please select ***PUSH LOCK*** Mode when the following occurred.
< When there's a higher temperature surrounded the object.
< When there's darkness surrounded the object.
< When there's a fluorescent light surrounded the object or where the light changes all the time.

ATR	Default	Descriptions
LUMINANCE	MID	Compresses the highlighted area and enhances the dark area so that the entire image can converge toward the medium level. LOW will compensate minimally and HIGH will average out the image. With setting HIGH, the image may look less contrastive and noise may increase in the dark area.
CONTRAST	MID	Adjusts the strength of the image contrast. If set to too high, the dark area may lose detail and the high luminance area may saturate.

4.5 ATR (Adaptive Tone Reproduction) menu (WDR)

The ATR feature improves the dynamic range and the visibility of the image by providing the optimal gradation compensation of the image in one field. This is achieved by two ways of image processing, luminance compression and contrast enhancement, so that the tone can be enhanced at highlighted and dark areas.



Function	Option
LUMINANCE	LOW MID HIGH
CONTRAST	LOW MIDLOW MID MIDHIGH HIGH

OFF

ATR OFF

ON

ATR ON

When **ON**↵ is selected, click **ENTER** to bring up the ***ATR*** sub-menu for further settings.

4.5.1 ATR ON

- ***LUMINANCE***

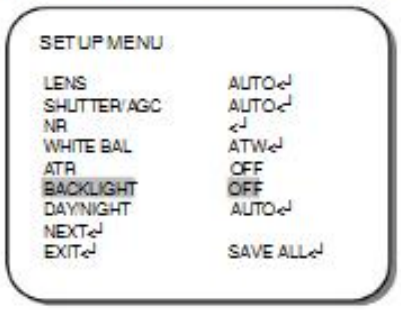
  Select to set the extent of the luminance compression.

- ***CONTRAST***

  Select to set the extent of the contrast enhancement.

4.6 BACKLIGHT

This item is used to set the backlight compensation operation.



Select to set **BACKLIGHT** to **OFF**, **BLC** or **HLC**.

Function	Option
BACKLIGHT	OFF BLC HLC

OFF

Backlight compensation OFF.

BLC

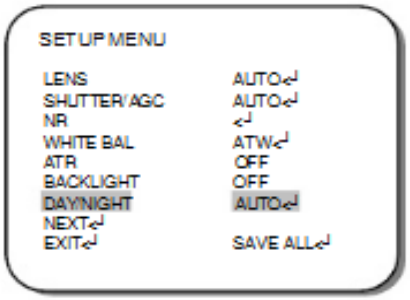
Backlight compensation ON.

HLC

HLC(Headlight compensation) function ON.

4.7 DAY/NIGHT

This item is used to set the Day/Night function.



Select to set **DAY/NIGHT** to **AUTO**, **COLOR** or **B/W**.

Function	Option
DAY/NIGHT	AUTO↵ COLOR B/W

AUTO

Day or Night is automatically identified and controlled accordingly.

When **AUTO**↵ is selected, click **ENTER** to bring up the ***DAY/NIGHT*** sub-menu for further settings.

COLOR

The Day/Night function is set to **OFF**.

B/W

The NIGHT mode is established forcibly, and chroma is set to **OFF**.

When **B/W**↵ is selected, click **ENTER** to bring up the ***B/W*** sub-menu for further settings.

4.7.1 B/W

Adjust the settings of ***B/W***.

Function	Option
BURST	ON OFF

IMPORTANT ACTIVITY!!!

DAY->NIGHT and NIGHT->DAY operations must be examined and verified at the final installation.

Block the lens for a few seconds for NIGHT mode, then release and let it return to DAY mode.

If camera stays at NIGHT mode for more than 10sec, slightly increase 'N→D THRES' and repeat the fore-mentioned steps.

If the scene is too dim or the lens iris was adjusted too low (near close), it may not return to DAY.

4.7.2 DAY/NIGHT

Adjust the settings of ***DAY/NIGHT***.

Function	Option
BURST	ON OFF
DELAY CNT	000-255
DAY->NIGHT	000-255
NIGHT->DAY	000-255

- ***BURST***

  Select to set whether to output the burst signal when the Night status has been identified.

  - **ON**: Burst signal ON
  - **OFF**: Burst signal OFF

- ***DELAY CNT***

  Select to set the Night/Day identification transfer time.

- ***DAY->NIGHT***

  Select to set the threshold for identifying the Night status from the Day status.

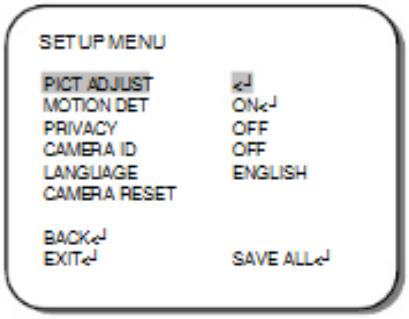
- ***NIGHT->DAY***

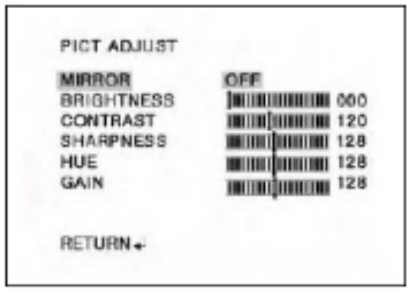
  Select to set the threshold for identifying the Day status from the Night status.

DAY/NIGHT	Default	Descriptions
BURST	OFF	**BURST** mode contains color burst signal when the camera switches to B/W. ON mode maintains the same color signal in B/W so that the video signal provides better compatibility with certain color equipment. OFF mode removes the color burst signal B/W video and increase the total TV lines.
DELAY CNT	005	**DELAY CNT** is the time in seconds before Day↔Night switches. DELAY can avoid the unwanted/frivolous switching of short term lights such as light from a passing car.
DAY→NIGHT	005	**DAY→NIGHT** mode sets a threshold level to determine when switch from DAY to NIGHT. Lower (Higher) value makes the camera switched from Day to Night at lower (higher) illumination. If the camera stays in Color at night time, increase **DAY→NIGHT** threshold value until it just switches to Night. **CAUTION** **If the value between DAY→NIGHT and NIGHT→DAY is minimal, then camera may switch between DAY and NIGHT mode repeatedly.**
NIGHT→ DAY.	3	**NIGHT→DAY** mode sets a threshold level to determine when to switch from NIGHT to DAY. Lower (Higher) value makes the camera switched from Night to Day at lower (higher) illumination. If the camera stays in B/W mode during day time, decrease **NIGHT→DAY** threshold value until it switches to Day. **CAUTION** **If the value between DAY→NIGHT and NIGHT→DAY is minimal, then camera may switch between DAY and NIGHT mode repeatedly.**

4.8 PICT ADJUST

This item is used to set the PICT ADJUST function.





Select to bring up the ***PICT ADJUST*** sub-menu for further settings.

Function	Option
MIRROR	OFF ON
BRIGHTNESS	000-255
CONTRAST	000-255
SHARPNESS	000-255
HUE	000-255
GAIN	000-255

MIRROR

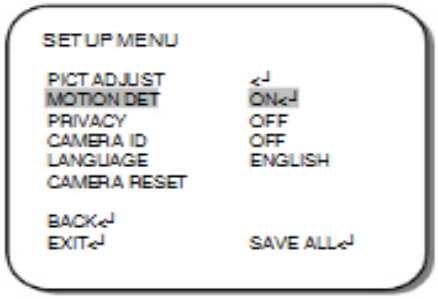
Select to set the horizontal flip for the display output.

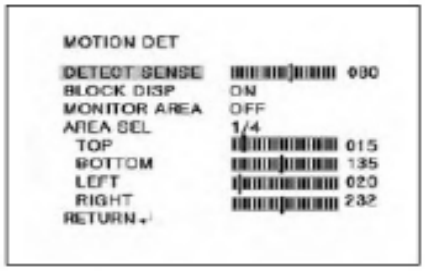
- **OFF**: Normal output
- **ON**: Horizontally flipped output

PICT ADJUST	Default	Descriptions
MIRROR	OFF	Picture will be flipped horizontally if it turns ON.
BRIGHTNESS	000	Increases or decreases the brightness of the picture. This is different from that of DC iris lens because it simply increases or decreases the digital gain of the video. Do not increase this too much or the dynamic range for the highlight area will decrease.
CONTRAST	128	Increases or decreases the contrast of the picture.
SHARPNESS	128	Increases or decreases the sharpness of the picture. Too much sharpness can make the image too harsh and show more noise as well as line flicker at the edge of object in the picture.
HUE	128	Adjusts hue for NTSC version only.
GAIN	128	Increases or decreases the color gain of the picture.

4.9 MOTION DET (Motion Detection)

This item is used to set the Motion Detection function.





Select to set motion detection to **OFF** or **ON**.

Function	Option
MOTION DET	OFF ON↵

OFF

Motion detection OFF

ON

Motion detection ON

When **ON**↵ is selected, click **ENTER** to bring up the ***MOTION DET*** sub-menu for further settings.

4.9.1 MOTION DET ON

Adjust the settings of ***MOTION DET***.

Function	Option
DETECT SENSE	000-127
BLOCK DISP	OFF ON ENABLE
MONITOR AREA	OFF ON
AREA SEL	1/4 ; 2/4 ; 3/4 ; 4/4
TOP	000-244
BOTTOM	000-244
LEFT	000-474
RIGHT	000-474

- ***DETECT SENSE***

  Select to set the motion detection sensitivity.

- ***BLOCK DISP***

  Select to control the ON/OFF status of the motion detection block display.

  - **OFF**: No display
  - **ON**: Luminance highlighted

- ***MONITOR AREA***

  Select to set whether to use the monitoring frames.

  - **OFF**: The monitoring frames are not used.
  - **ON**: The monitoring frames are used.

- ***AREA SEL***

  Select to deinfe the monitoring frame to be set.

- ***TOP/BOTTOM/LEFT/RIGHT***

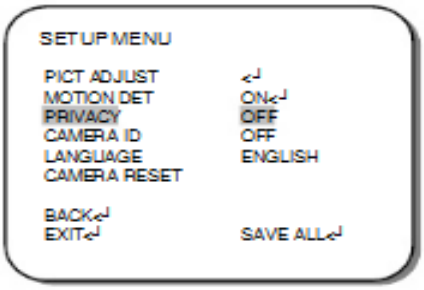
  Select to set the monitoring frame selected with the AREA SEL function.

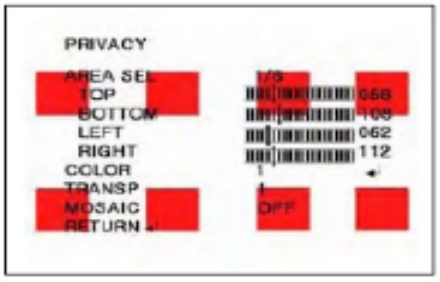
Up to 4 motion detection areas are available and each area is programmable in size and location. The motion is displayed by means of blocks when MAIN **menu-2**>MOTION DET and MOTION DET>BLOCK DISP are ON.

MOTION DET	Default	Descriptions
DETECT SENSE	080	Adjusts the sensitivity for detecting motion. A higher value is more sensitive.
BLOCK DISP	ON	Enables or disables displaying blocks for the area where the motion is detected.
MONITOR AREA	OFF	Displays four motion windows as programmed in sizes and positions.
AREA SEL	1/4	Selects AREA1~AREA4 to be adjusted. TOP (BOTTOM) - button moves up and button moves down the top (bottom) border of the selected window at AREA SEL. LEFT (RIGHT) - button moves left and button moves right the left (right) border of the selected window at AREA SEL

4.10 PRIVACY

This item is used to set up to eight privacy masks. When monitoring frames are used for motion detection, the maximum number of masks which can be used is four.





Select to set the masks to **OFF** or **ON**.

Function	Option
PRIVACY	OFF ON

When **ON** is selected, click **ENTER** to bring up the ***PRIVACY*** sub-menu for further settings.

4.10.1 PRIVACY ON

Adjust the settings of ***PRIVACY***.

Function	Option
AREA SEL	1/8 ; 2/8 ; 3/8 ; 4/8 ; 5/8 ; 6/8 ; 7/8 ; 8/8 *
TOP	000-244 (NTSC) ; 000-288 (PAL)
BOTTOM	000-244 (NTSC) ; 000-288 (PAL)
LEFT	000-251(510H)/378(760H)/474(960H)(NTSC) ; 000-246(510H)/370(760H)/468(960H)(PAL)
RIGHT	000-251(510H)/378(760H)/474(960H)(NTSC) ; 000-246(510H)/370(760H)/468(960H) (PAL)
COLOR	1-8
TRANSP	0.00 ; 0.50 ; 0.75 ; 1.00
MOSAIC	OFF ON

- ***AREA SEL***

  Select to set the mask frame to be adjusted.

> **NOTE**:
> When **MONITOR AREA** has been set to **ON** by the ***MOTION DET*** setting, four frames--1/4, 2/4, 3/4 and 4/4--are selected.

- ***TOP/BOTTOM/LEFT/RIGHT***

  Select to set the mask frame selected by the AREA SEL parameter.

- ***COLOR***

  Select to set the colors of the mask frames.

- ***TRANSP***

  Select to set the transparency ratio of the mask frames.

- ***MOSAIC***

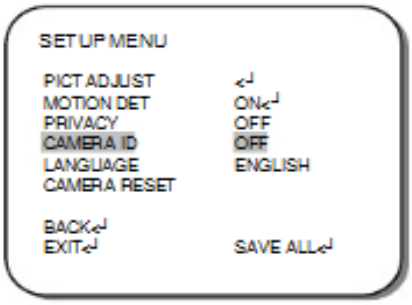
  Select to set the mask frame mosaic function to ON or OFF.

  - **OFF**: Mosaic function OFF
  - **ON**: Mosaic function ON

PRIVACY	Default	Descriptions
AREA SEL	1/8	Selects one of AREA1~AREA8 to be adjusted. TOP(BOTTOM) - button moves up and button moves down the top (bottom) border of the selected window at AREA SEL. LEFT(RIGHT) - button moves left and button moves right the left (right) border of the selected window at AREA SEL
COLOR	1	Sets one of 8 colors for the selected mask window at AREA SEL.
TRANSP	1.00	Transparency rate for the mask can be adjusted. 0.00 - Mask is fully transparent and not visible. 0.50 - Mask is 50% transparent. 0.75 - Mask is 25% transparent. 1.00 - Mask is not transparent.
MOSAIC	OFF	Enables or disables the mosaic effect for the selected mask window at AREA SEL

4.11 CAMERA ID

This item is used to set the camera ID.



Select to set the camera ID to OFF or ON.

Function	Option
CAMERA ID	OFF ON↵

OFF

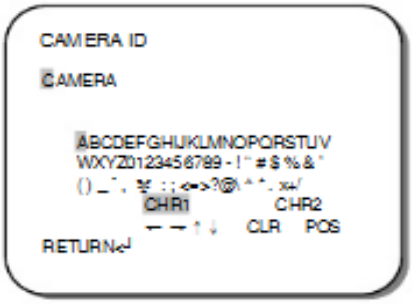
Camera ID display OFF

ON

Camera ID display ON

When the **ON**↵ is selected, click **ENTER** to bring up the ***CAMERA ID*** sub-menu for further settings.

4.11.1 CAMERA ID ON



- ← → ↑ ↓

  Select ←, →, ↑ or ↓ with the character selection cursor, and click the **ENTER** button to move the cursor in the direction of the arrow.

- ***CLR***

  Select to clear one letter of the input.

- ***POS***

  Adjust the position of the camera ID.

4.12 LANGUAGE

This item is used to select the language in which to display the internal OSD menu.

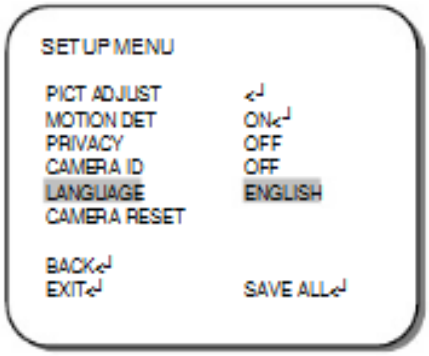
Select to set the language displayed in the OSD menus.

The menus will be changed to the selected language in real time.

Function	Option
LANGUAGE	ENGLISH [illegible] DEUTSCH FRANCAIS РУССКИЙ PORTUGUÊS ESPAÑOL

4.13 CAMERA RESET

Click to restore all the settings to the default values.



4.14 SAVE ALL

Click to save all the settings made.

> **NOTE:**
> There will be no prompt windows while the settings are being saved.

4.15 EXIT

Click to exit the OSD menu.

> **NOTE:**
> Before exit the OSD menu, please click **SAVE ALL** to save all the settings made. Fail to do that, all the settings will not take effect once the power is reconnected.

Technical Specifications

Imaging Sensor	1/3" SONY EXVIEW CCD II + Sony Effio-E 4127 DSP
Pixel	PAL：976（H）×582（V）； NTSC：976（H）×494（V）
Signal System	PAL/ NTSC
Syn. System	Internal Synchronization
Shutter speed	PAL：1/50～1/100000s； NTSC：1/60～1/100000s
S/N Ratio	More than 50dB（AGC OFF）
Video Output	1.0Vp-p, 75 ohms
Horizontal resolution	Color: 700TVL, B/W: 730TVL
Minimum Illumination	Color 0.1Lux(F1.2,50IRE,AGC ON) B/W:0.001Lux(F1.2,50IRE,AGC ON) 0 Lux when IR on
D/N Switch	Auto/Color/B/W/External Control
Brightness Switch	Color to B/W & B/W to Color for option
D/N Switching Time	0～255
IR Leds’	42 IR Leds’
IR Distance	40M = 120 FEET
Image Brightness	0～255 adjustable
OSD	CHINESE/ENGLISH/JAPANESE/PYCCKNN/PORTUGUESE/ESPANOL/DEUTSCH/ FRANCAIS
PRIVACY	1～4 Zones
Privacy Zone Color	Color 1～Color 8 optional
Motion Detection	On / Off (multi-sensitivity settings, alarm time optional)
Alarm Display	Icon
AWB	ATW, PUSH, USER1, USER2, ANTI CR, MANUAL or PUSH LOCK
Sharpness	0～255 adjustable
DNR	2D DNR
Power Supply	DC12V±10%
Power consumption	1AMP Power Supply < 100FT Cable. 2AMP Power Supply > 100FT Cable.
Operation Temperature	-10^{0}C～+50^{0}C Camera Housing has a Rating of IP66
Operation Humidity	20~80%
Storage Temperature	-40^{0}C ~60^{0}C
Storage Humidity	20~95%