VACRON

ADVANCES IN SECURITY SOLUTIONS

1/3" CCD Sony Effio-E
Wide Dynamic Color Camera

2013. V1.0

User Manual

Safety Precautions

Before using the product, please ensure that you read the safety precautions described below. Always ensure that the product is used correctly.

- Use only recommended power sources.
- Do not attempt to disassemble, alter or apply heat to the product.
- Avoid dropping or subjecting the product to severe impacts.
- To avoid the risk of injury, do not touch the interior of the product if it has been dropped or otherwise damaged.
- Stop using the product immediately if it emits smoke, a strange smell, or otherwise behaves abnormally.
- Do not use organic solvents such as alcohol, benzene, or thinner to clean the product.
- Do not allow liquids or foreign objects to enter the camera.
- Do not place the camera near or in direct flame.
- Do not handle the power cord with wet hands.
- Do not use the equipment in a manner that exceeds the rated capacity of the electrical outlet or wiring accessories. Do not use if the power cord or plug are damaged, or not fully plugged into the outlet.
- Do not allow dirt or metal objects (such as pins or keys) to contact the terminals or plug.

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A. Features

- 1/3" Digital Wide Dynamic Color Camera

- Color:680TVL, B/W:700TVL

- Color:0.03Lux / B/W:0.01Lux

- Multi-Language OSD Control

- ATR Digital Powerful 128X WDR (52dB)

- Anti-Headlight (HLC)

- 2D Noise Reduction

- High Contrast Images

- Ideal for Backlight Environments

- Mosaic Privacy Mask

- Advanced Motion Detection Function

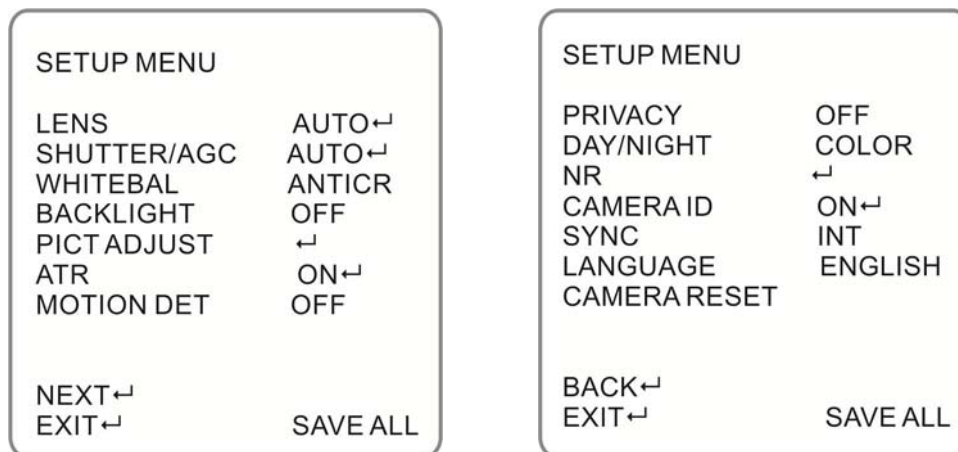- Picture Quality Adjustable (Contrast/Sharpness/Hue/Gain)

B. Standard Specifications

Mode	NTSC	PAL
Pick Up Element	1/3 Inch SONY 960H_ CCD Image Sensor	
Image Signal Process	Digital Signal Processing System	
Sensor	ICX672AKA	ICX673AKA
Number OF Pixel	1020 (H) × 508 (V)	1020 (H) × 596 (V)
Picture Element	Approximately 520K	Approximately 610K
Resolution	Color : 680TVL, B/W : 700TVL	
Power Supply	(1)12VDC / 24VAC (2)12VDC (Select one)	
Current Consumption	180 mA	
Synchronization	Internal	
Scanning System	2 : 1 Interlace	
Minimum Illumination	Color:0.03Lux / B/W:0.01Lux	
S/N Ration	Max 52 dB (AGC off, Weight on)	
Menu	Built - In OSD Control	
Title	Title	
Wide Dynamic Range	ATR Digital WD	
Back Light Compensation	HLC / BLC / OFF	
Automatic Gain Control	ON / OFF (4 Steps)	
Dynamic Noise Reduction	2D-NR	
Day & Night Mode	Color / B&W / AUTO	
Motion Detection	ON / OFF (24x16 Zones)	
Flicker less	ON / OFF	
Privacy Mask	ON / OFF (8 Zones Programmable, Mosaic)	
Mechanical Iris Automatic adj	DC Driver	
Blemish Compensation	Static(64 points) & Dynamic	
Auto White Balance	ATW/PUSH/USER1/USER2/ANTI CR/MANUAL/PUSH LOCK (1800°K to 10500°K)	
Language	ENGLISH/JAPANESE/GERMAN/FRENCH/RUSSIAN/ PORTUGUESE/SPANISH/SIMPLIFIED CHINESE	
Electronic Shutter	Auto:1/60(50)S TO 1/100,000 S / Manual: 1/60(50)S, FL1/120(100)S, 1/250S, 1/500S, 1/1,000S, 1/2,000S, 1/4,000S, 1/10,000S	
Analog Output	1 Vp-p Composite Video Output, 75 Ohms	
Operating Temperature	- 5°C ~ +40°C	

C. OSD Function

(1) MAIN MENU

In the main menu, each submenu is selected.

```
SETUP MENU

LENS              AUTO↵
SHUTTER/AGC       AUTO↵
WHITEBAL          ANTICR
BACKLIGHT         OFF
PICT ADJUST       ↵
ATR               ON↵
MOTION DET        OFF



NEXT↵
EXIT↵             SAVE ALL
```

```
SETUP MENU

PRIVACY           OFF
DAY/NIGHT         COLOR
NR                ↵
CAMERA ID         ON↵
SYNC              INT
LANGUAGE          ENGLISH
CAMERA RESET



BACK↵
EXIT↵             SAVE ALL
```

       1/2   2/2

◆ ↵ To Exit the OSD menu.

◆ △ UP / ▽ Down: Change Sub Menu Selection.

◆ ◁ Left / ▷ Right: Selec/Enter the Sub-menu.

Submenu	Function explanation
LENS	Enter the LENS/ settings menu.
SHUTTER/AGC	Enter the SHUTTER/AGC settings menu.
WHITEBAL	Enter the WHITEBAL settings menu.
BACKLIGHT	Enter to the BACKLIGHT settings menu.
PICT ADJUST	Enter the PICTURE ADJUST settings menu.
ATR	Enter the ATR detection settings menu.
MOTION DET	Enter the MOTION DET detection settings menu.
PRIVACY	Enter the PRIVACY Masking settings menu.
DAY/NIGHT	Enter to the DAY/NIGHT settings menu.
NR	Enter the NR settings menu.
CAMERA ID	Enter the CAMERA ID for other settings menu.
SYNC	Enter to the SYNC setting menu.
LANGUAGE	Enter to the LANGUAGE setting menu.
CAMERA RESET	Enter to the CAMERA RESET setting menu.

MENU	SUBMENU
LENS	1. MANUAL
	2. AUTO
SHUTTER/AGC	1. MANUAL
	2. AUTO
WHITEBAL	1. ATW
	2. PUSH
	3. USER1
	4. USER2
	5. ANTI CR
	6. MANUAL
	7. PUSH LOCK
BACKLIGHT	1. BLC
	2. HLC
PICT ADJUST	1. MIRROR
	2. BRIGHTNESS
	3. CONTRAST
	4. SHARPNESS
	5. HUE
	6. GAIN
ATR	1. LUMINANCE
	2. CONTRAST
MOTION DET	1. DETECT SENSE
	2. BLOCK DISP
	3. MONITOR AREA
	4. AREA SEL
	5. TOP
	6. BOTTOM
	7. LEFT
	8. RIGHT

MENU	SUBMENU
PRIVACY	1. AREA SEL
	2. TOP
	3. BOTTOM
	4. LEFT
	5. RIGHT
	6. COLOR
	7. TRANSP
	8. MOSAIC
DAY/NIGHT	1. AUTO
	2. COLOR
	3. B/W
NR	1. NR MODE
	2. Y LEVEL
	3. C LEVEL
CAMERA ID	1. CHR1
	2. CHR2
	3. A -) Each User Font
	4. ← → ↑ ↓
	5. CLR
	6. POS
SYNC	1. INT
LANGUAGE	1. ENGLISH
	2. 日本語
	3. DEUTSCH
	4. FRANCAIS
	5. РУССКИЙ
	6. PORTUGUÊS
	7. ESPAÑOL
	8. 中文
CAMERA RESET	-
SAVE ALL	-

(1.1) LENS

Sets the mechanical iris of the lens.：MANUAL and AUTO.
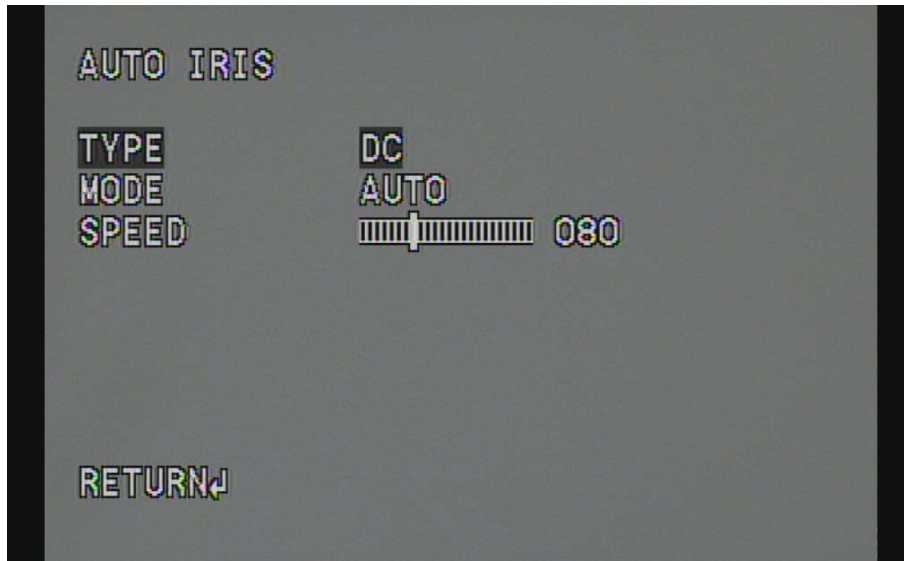
Function	Option	Description
TYPE	DC	DC AUTO IRIS
	VIDEO	VIDEO AUTO IRIS
MODE	OPEN	The mechanical iris is fixed to open.
	CLOSE	The mechanical iris is fixed to close.
	AUTO	The mechanical iris is controlled automatically
SPEED	000 – 255	Sets the convergence speed of the mechanical iris.

(1.2) SHUTTER/AGC

Sets the mechanical SHUTTER/AGC：MANUAL and AUTO.

◆ AUTO
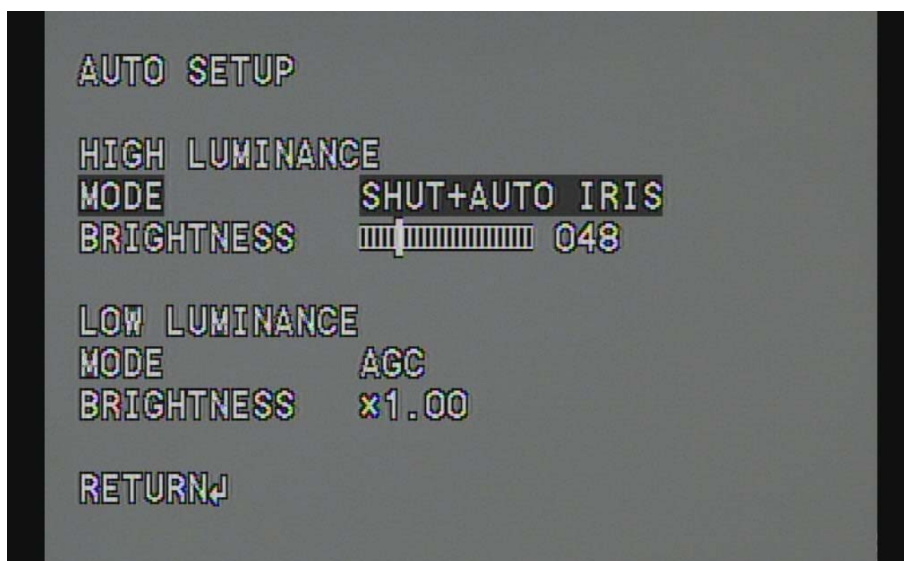
Function	Option	Description
HIGH LUMINANCE	MODE	SHUT+AUTO IRIS
		AUTO IRIS
	MODE	000~255
LOW LUMINANCE	MODE	OFF
		AGC
	BRIGHTNESS	x0.25,x0.50,x0.75,x1.00

◆ MANUAL

```
MANUAL SETUP

MODE          SHUT+AGC
SHUTTER       1/60
AGC           6.00




RETURN↵
```
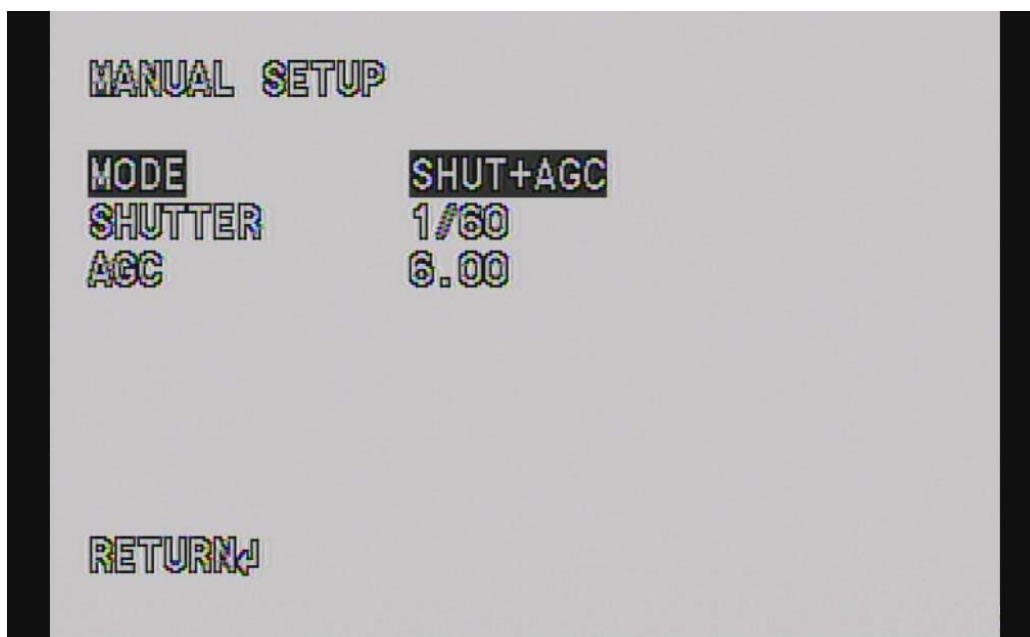
Function	Option	Description
MODE	SHUT+ AGC	"SHUT+AGC" is the only option available for the ME operation mode. There are no other options.
SHUTTER	1/60(1/50),1/100(1/120) 1/250,1/500,1/1000,1/2000 1/4000,1/10000	When the ME preset value is changed, the shutter speed will differ from the displayed value, so use the default value for "Preset value settings"
AGC	6.00,12.00,18.00,24.00,30.00 36.00,42.00,44.80	When the ME preset value is changed, the AGC value will differ from the displayed value, so use the default value for "Preset value settings"

(1.3) WHITEBAL

WHITEBAL	ATW	The display switches to the "ATW" branch menu screen when Enter is input from the ATW selection status.
	PUSH	FIX
	USER1	The display switches to the "USER1 WB" branch menu screen when Enter is input from the USER1 selection status.
	USER2	The display switches to the "USER2 WB" branch menu screen when Enter is input from the USER2 selection status.
	ANTI CR	FIX
	MANUAL	The display switches to the "MANUAL WB" branch menu screen when Enter is input from the MANUAL selection status.
	PUSH LOCK	FIX

◆ ATW
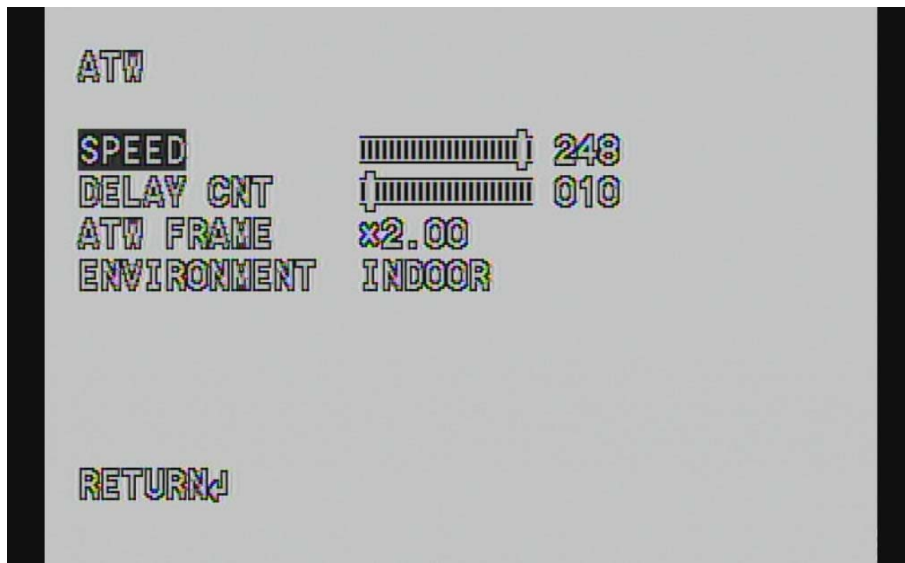
Function	Option	Description
SPEED	000-255	Adjusts the pull-in speed of ATW.
DELAY CNT	000-255	Sets the time-based hysteresis of ATW.
ATW FRAME	x0.50,x1.00 x1.50,x2.00	Sets the pull-in frame magnification.
ENVIRONMENT	INDOOR OUTDOOR	Sets the pull-in frame (indoor/outdoor) of ATW.

◆ PUSH
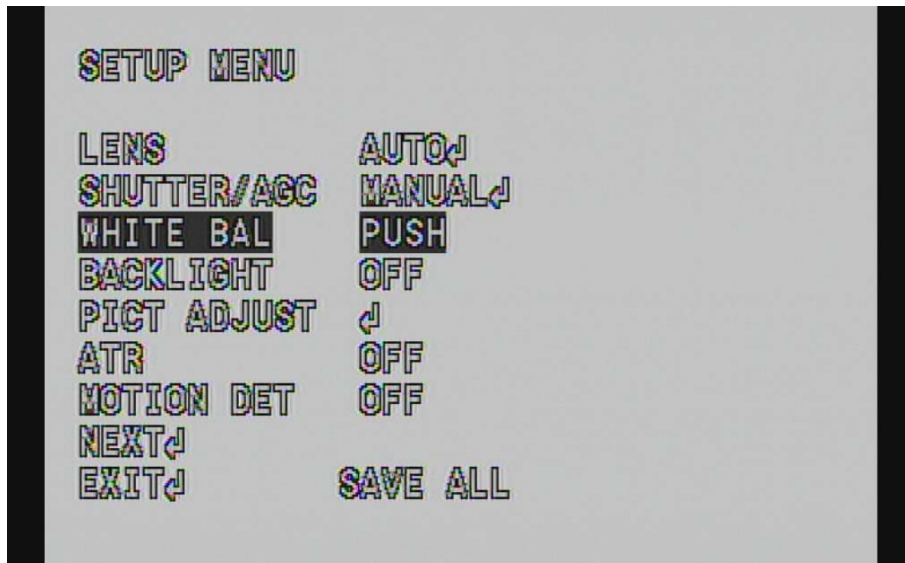
◆ USER1
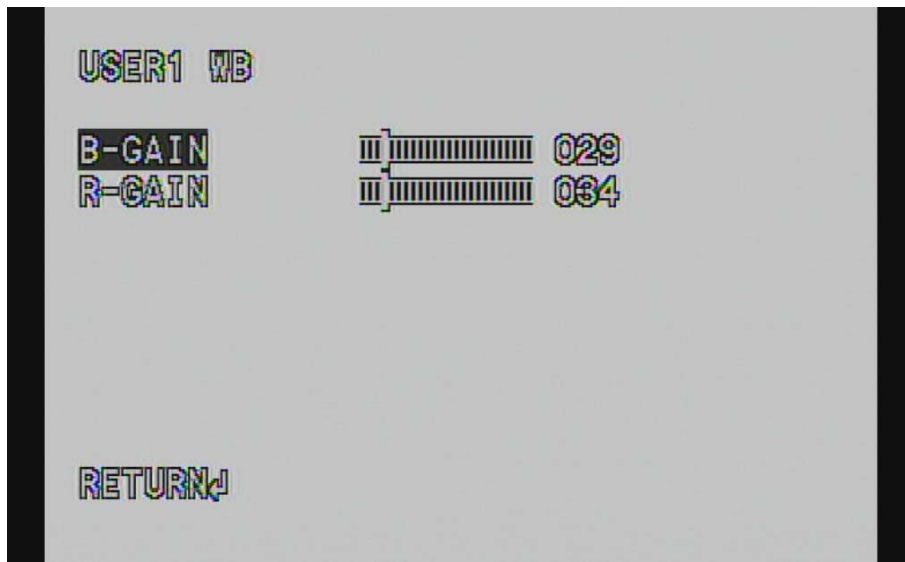
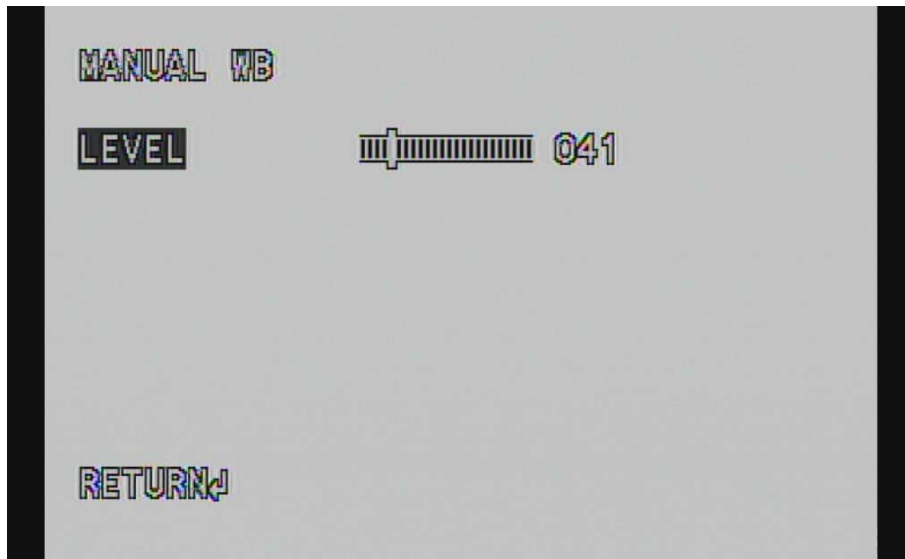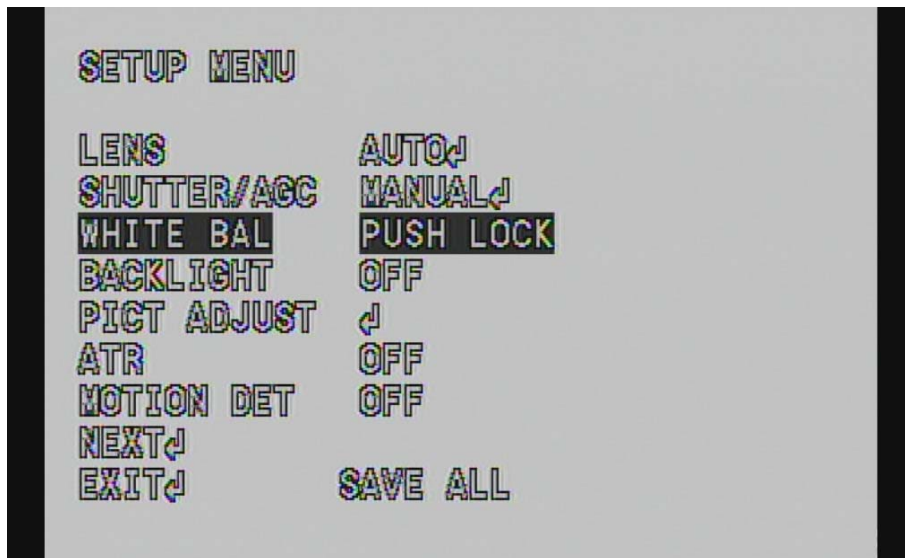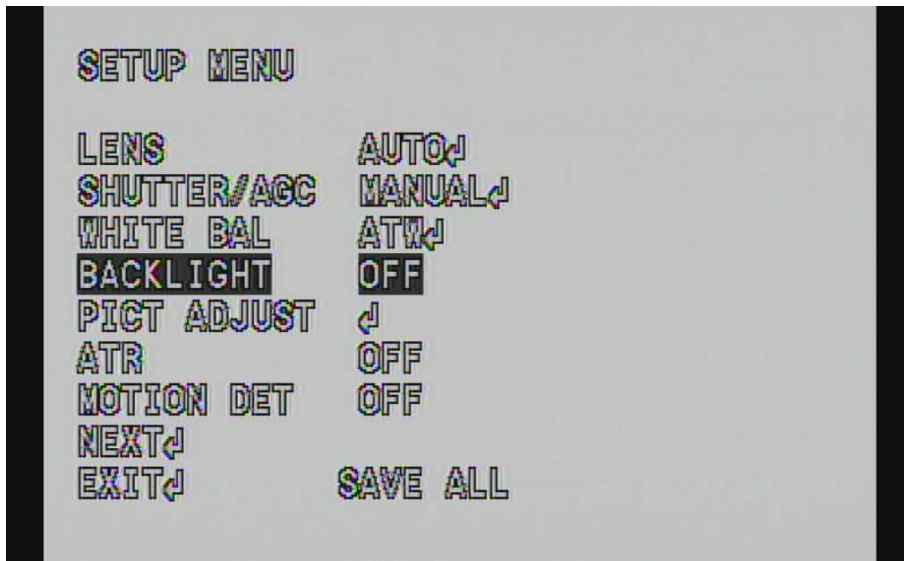| Function	Option	Description
B-GAIN	000-255	Used for operating the B gain in the WB fixed gain mode.
R-GAIN	000-255	Used for operating the R gain in the WB fixed gain mode.

◆ USER2
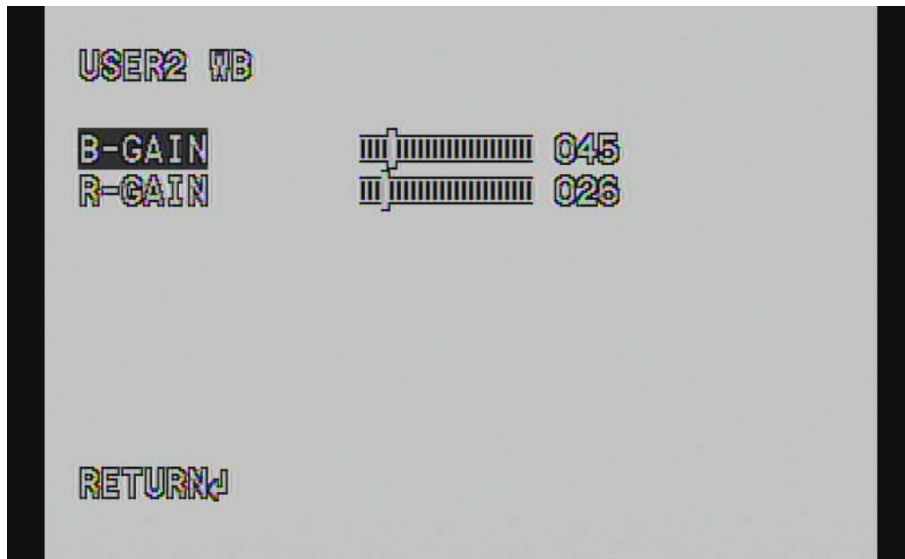
Function	Option	Description
B-GAIN	000-255	Used for operating the B gain in the WB fixed gain mode.
R-GAIN	000-255	Used for operating the R gain in the WB fixed gain mode.

◆ ANTI CR
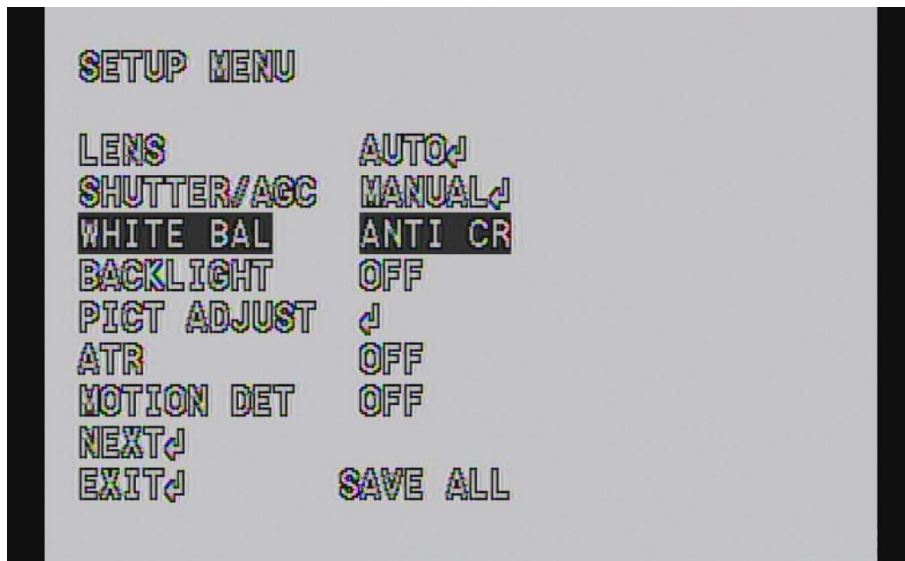
◆ MANUAL

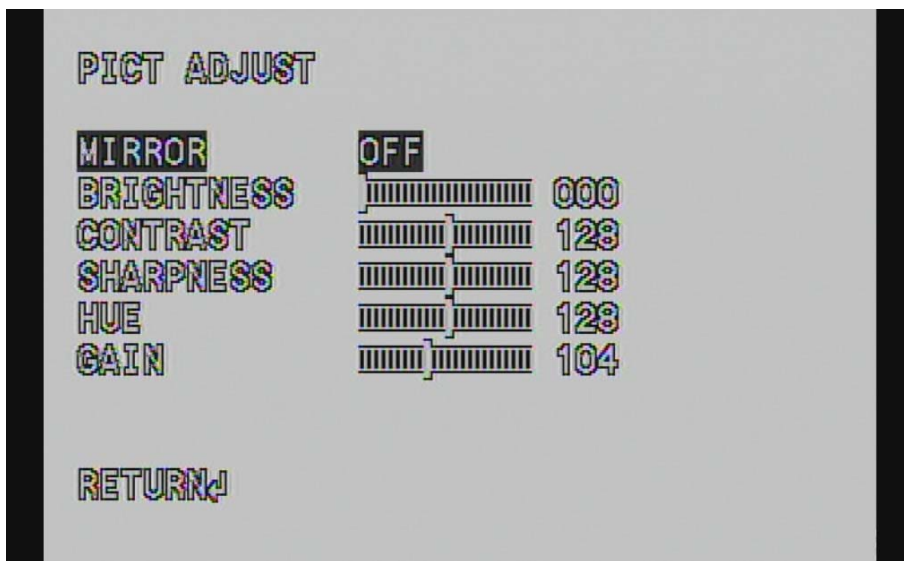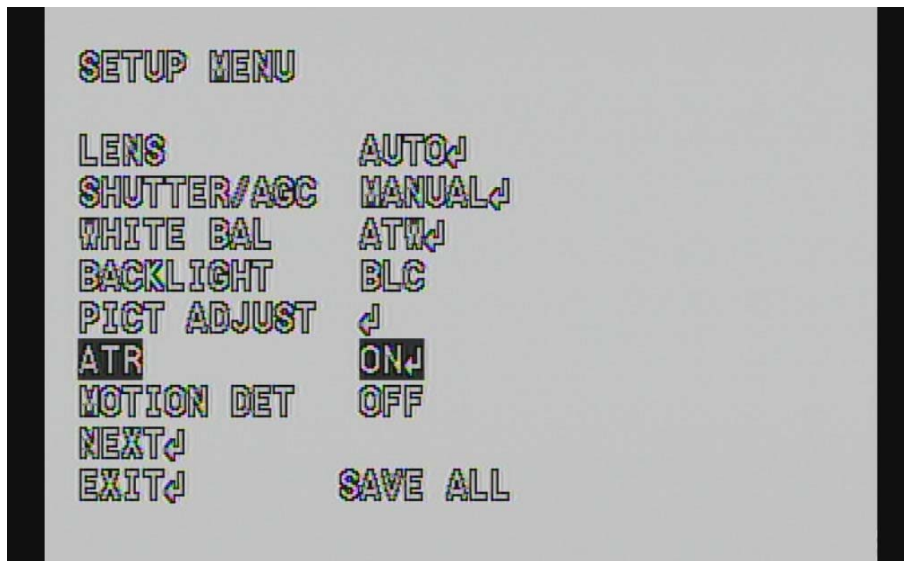| Function	Option	Description
LEVEL	000-255	Sets the B and R gain values for manual WB. By incrementing or decrementing the B gain value, the R gain value is also adjusted in tandem.

◆ PUSH LOCK

(1.4) BACKLIGHT

	OFF	Backlight compensation OFF
BACKLIGHT	BLC	Backlight compensation ON
	HLC	HLC function ON

(1.5) PICT AD JUST

Function	Option	Description
MIRROR	OFF/ON	Sets the horizontal flip for the display output.
BRIGHTNESS	000-255	Sets the screen brightness.
CONTRAST	000-255	Sets the screen contrast.
SHARPNESS	000-255	Sets the screen sharpness.
HUE	000-255	Adjusts the hue.
GAIN	000-255	Adjusts the gain.

(1.6) ATR

| Function	Option	Description
LUMINANCE	LOW / MID / HIGH	Sets the extent of the luminance compression.
CONTRAST	LOW / MIDLOW / MID / MIDHIGH / HIGH	Sets the extent of the contrast enhancement.

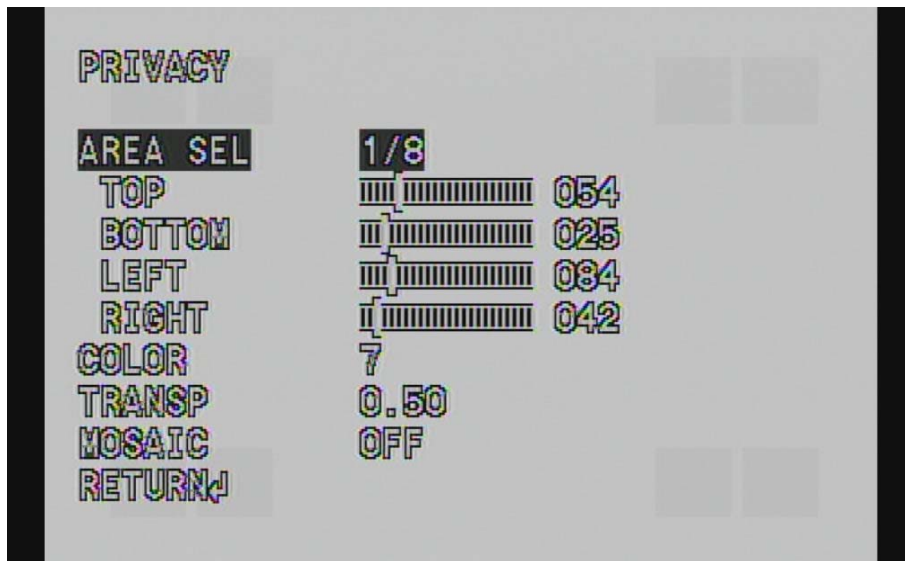## (1.7) MOTION DE
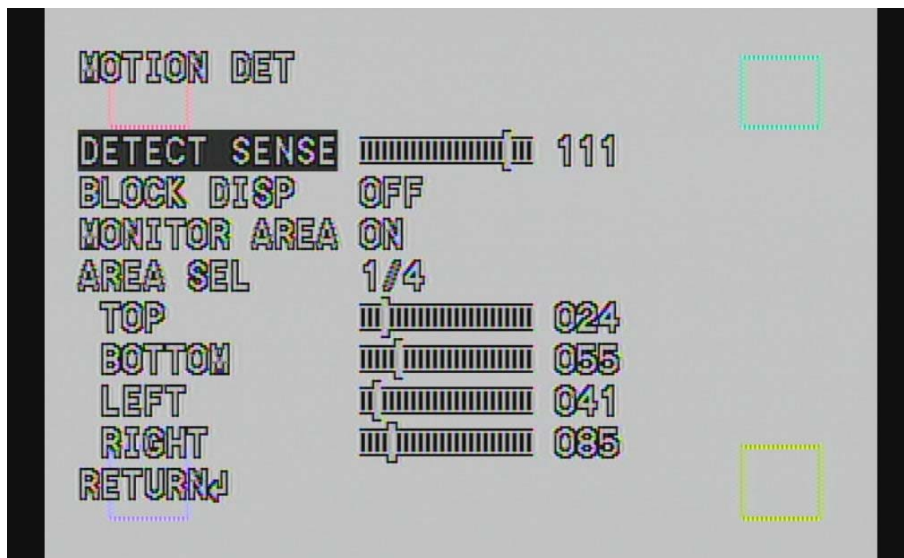
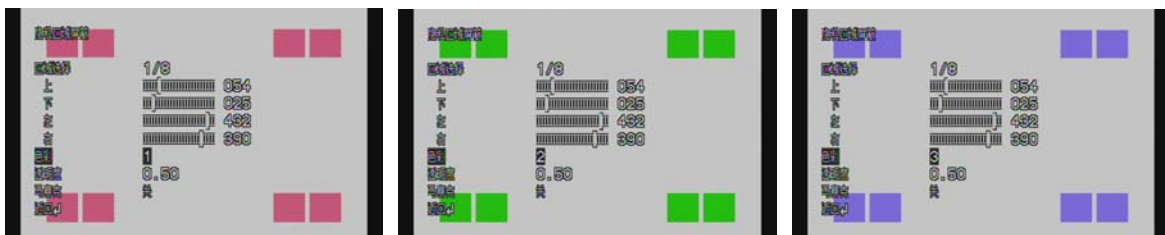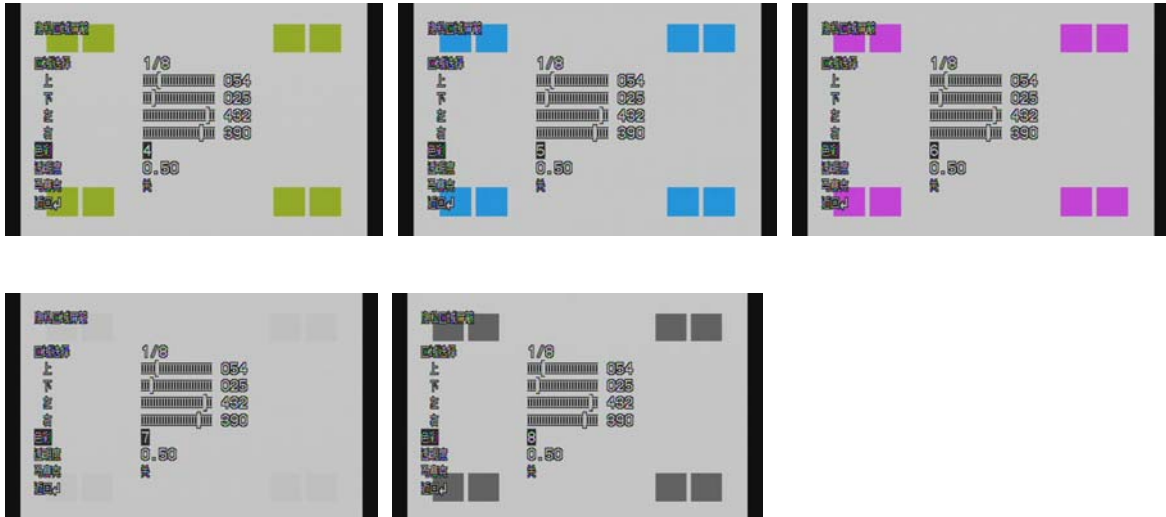| Function	Option	Description
DETECT SENSE	000-127	Sets the motion detection sensitivity.
BLOCK DISP	OFF	Controls the ON/OFF status of the motion detection block display
	ON	
	EBABLE	The display switches to the "dead band setting" screen when the Enter operation input is performed from the ENABLE selected status.
MONITOR AREA	ON	Sets whether to use the monitoring frames. OFF: The monitoring frames are not used.
	OFF	ON: The monitoring frames are used
AREA SEL	1/4,2/4 3/4,4/4	Selects the monitoring frame to be set.
TOP	000-244	Sets the TOP/BOTTOM/LEFT/RIGHT side of the monitoring frame selected by the AREA SEL parameter.
BOTTOM	000-244	
LEFT	000-244	
RIGHT	000-244	

◆ **Dead band setting**
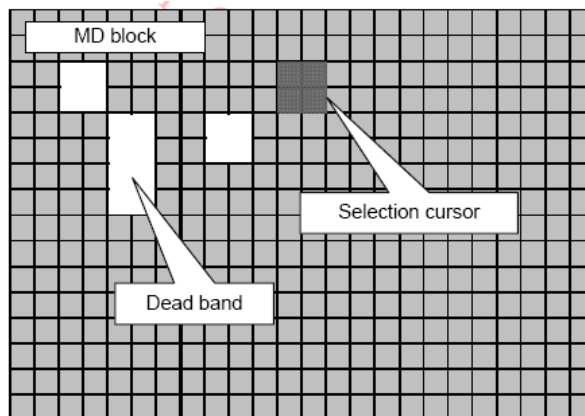
The dead band setting function enables the on-screen cursor to be moved in response to the input of operating Left, Right, Up and Down and whether to set the sensing band or dead band for the specified blocks to be selected by the Enter operation input.

(1.8) PRIVACY

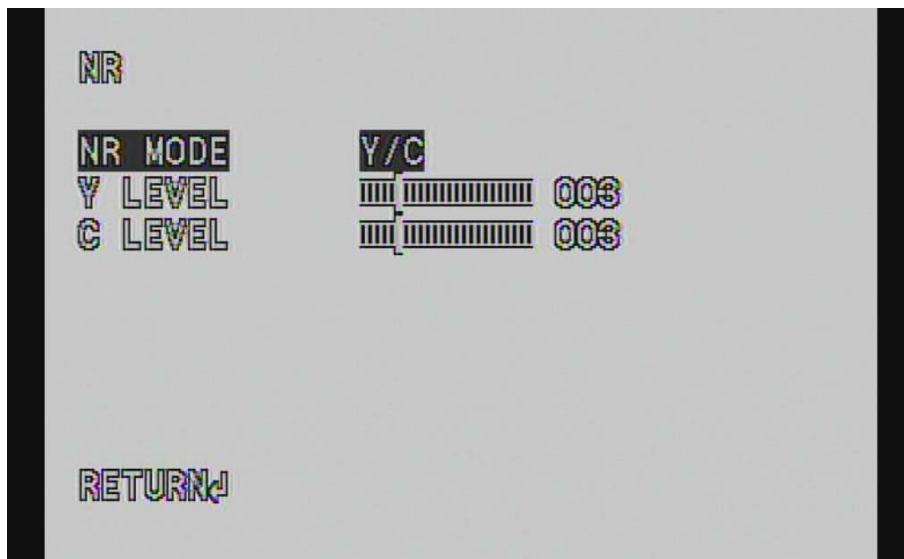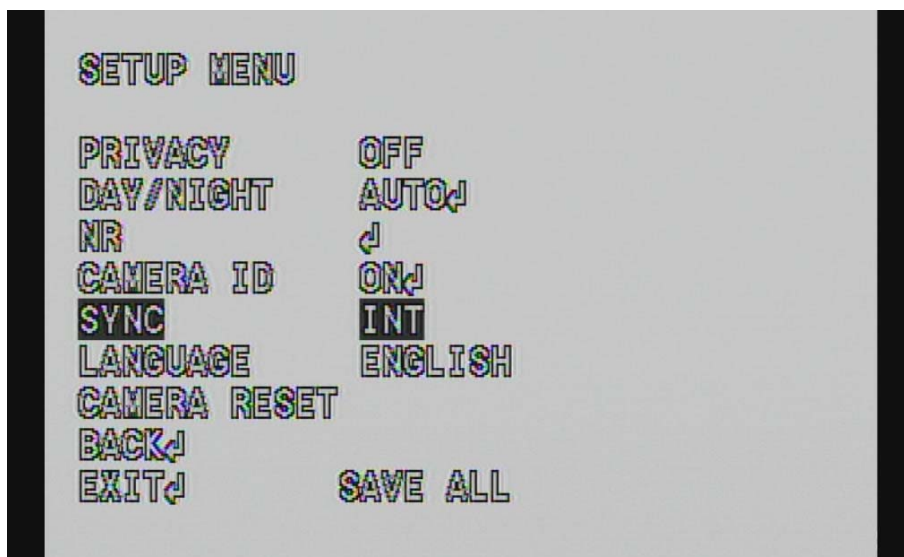| Function	Option	Description
AREA SEL	1/8,2/8,3/8,4/8 5/8,6/8,7/8,8/8	Selects the mask frame to be adjusted. *When MONITOR AREA has been set to ON by the MOTION DET setting, four frames--1/4, 2/4, 3/4 and 4/4--are selected.
TOP	000-244(NTSC) 000-288(PAL)	Sets the top side of the mask frame selected by the AREA SEL parameter.
BOTTOM	000-244(NTSC) 000-288(PAL)	Sets the bottom side of the mask frame selected by the AREA SEL parameter.
LEFT	000-251(NTSC) 000-246(PAL)	Sets the left side of the mask frame selected by the AREA SEL parameter.
RIGHT	000-251(NTSC) 000-246(PAL)	Sets the right side of the mask frame selected by the AREA SEL parameter.
COLOR	1/8	Sets the colors of the mask frames
TRANSP	0.00,0.50,0.75,1.00	Sets the transparency ratio of the mask frames.
MOSAIC	OFF/ON	Sets the mask frame mosaic function to ON or OFF.

(1.9) DAY/NIGHT
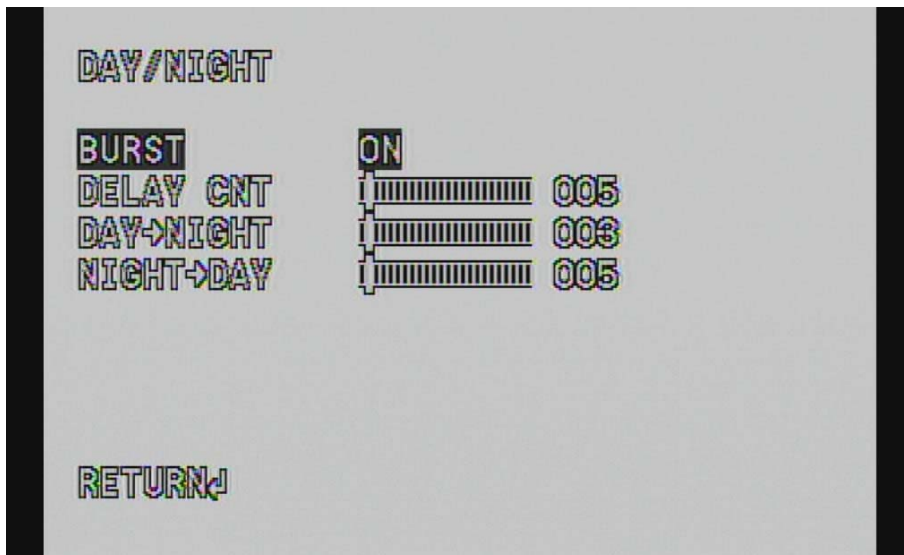
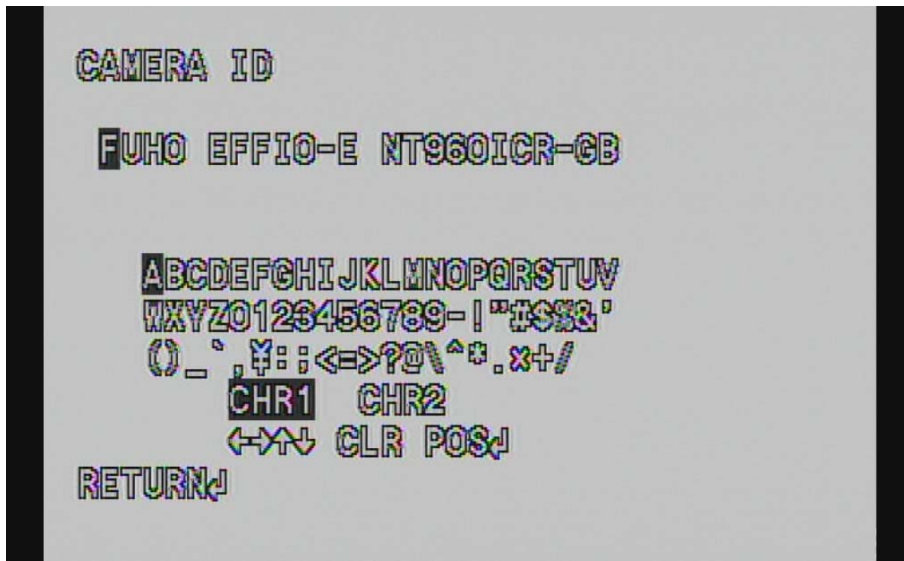| Function	Option	Description
DAY/NIGHT	AUTO	AUTO: Day or Night is automatically identified and controlled accordingly. The display switches to the "DAY/NIGHT" branch menu screen when the Enter operation input is performed from the AUTO selected status.
	COLOR	COLOR: The Day/Night function is set to OFF.
	B/W	B/W: The NIGHT mode is established forcibly, and chroma is set to OFF. The display switches to the "B/W" branch menu screen when the Enter operation input is performed from the B/W selected status.

(1.10) NR

Function	Option	Description
NR MODE	OFF	OFF: Y and C filters OFF
	Y	Y: Y filter ON
	C	C: C filter ON
	Y/C	Y/C: Y and C filters ON
Y LEVEL	000-015	Sets the Y filter strength.
C LEVEL	000-015	Sets the C filter strength.

(1.11) SYNC

(1.12)CAMERA ID

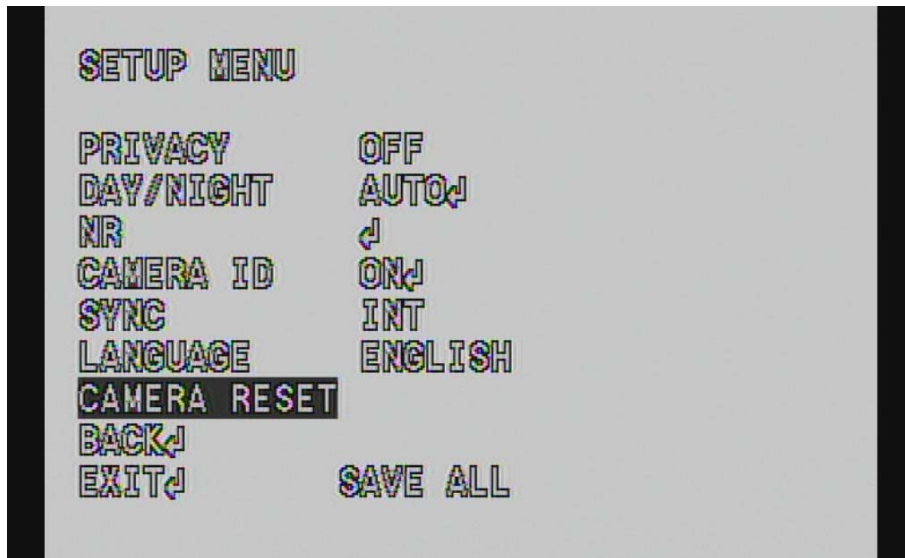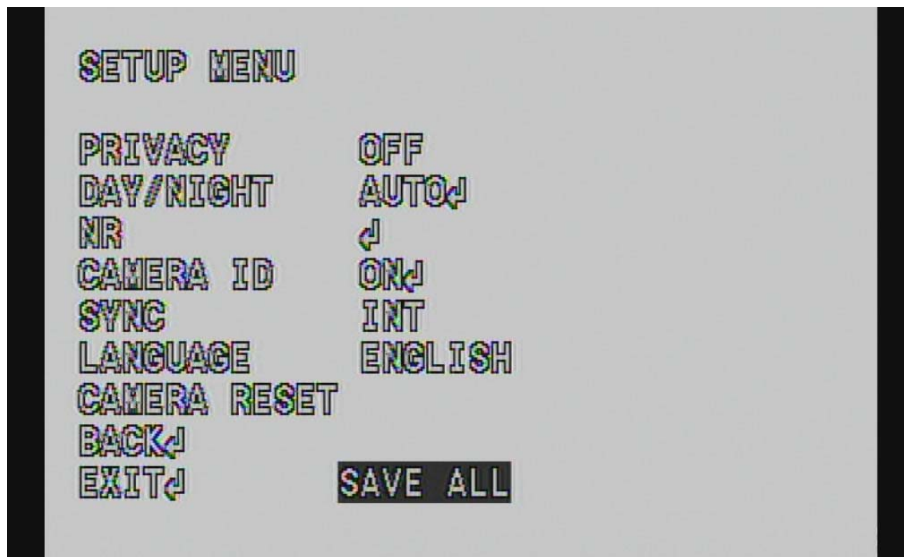| Option	Description
A -) Each User Font	A selected character is registered at the position selected by the CAMERA ID cursor when the Enter operation input is performed from the status in which the characters have been selected using the character selection cursor. The camera ID cursor then moves one character to the right.
CHR1 CHR2	The characters to be input are changed as shown below when the Enter operation input is performed from the status in which CHR1 or CHR2 has been selected using the character selection cursor. CHR1: Letters A to Z, numerals 0 to 9, symbols CHR2: User-registered fonts 0 to 39[d] The user-registered fonts that were used for the font patch function are removed from the CHR2 character selection.
←→↑↓	The camera ID cursor moves in the direction of the arrow when the Enter operation input is performed from the status in which ←, →, ↑ or ↓ has been selected using the character selection cursor.
CLR	The character selected by the camera ID cursor is cleared when the Enter operation input is performed from the status in which CLR has been selected using the character selection cursor
POS	The display switches to the camera ID display position setting screen when the Enter operation input is performed from the status in which POS has been selected using the character selection cursor. On the camera ID display position setting screen, the camera ID display position is changed in real time in response to the left, right, up or down operation input. When the Enter operation input is performed, the display position is entered, and the display returns to the camera ID setting screen.

(1.13) LANGUAGE

Function	Option	Description
LANGUAGE	ENGLISH 日本語 DEUTSCH FRANCAIS РУССКИЙ PORTUGUÊS ESPAÑOL 中文	Selects the language in which to display the internal OSD menu. The menus can be changed in real time in the selected language.

(1.14) CAMERA RESET

Function	Option	Description
CAMERA RESET	None	All the internal OSD menu settings are initialized when the Enter operation input is performed from the CAMERA RESET selected status.

(1.15) SAVE ALL

Function	Option	Description
SAVE ALL	None	All the settings of the internal OSD menu are saved in the EEPROM together when the Enter operation input is performed from the SAVE ALL selected status.

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ADVANCES IN SECURITY SOLUTIONS