

Introduction

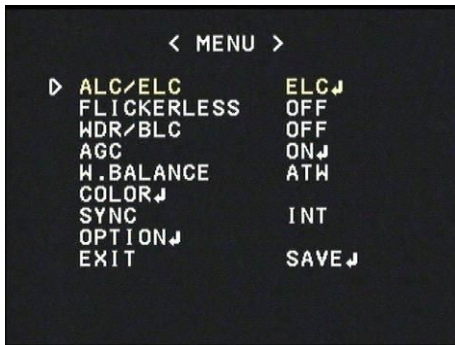
1. OSD KeyPad Button

(※ This operation manual are in accordance with special OSD Key Pad)



Button	Motion
	Move to each item
	Change each item's level
ENTER	OK

(Process when Enter Key button)



Menu Screen

2. To enter to setting screen

Press "ENTER" Key to display a setting screen. Cursor position is shown as  mark.

Press "ENTER" Key to go to the next page of the item with mark.



Initial Setting Value (Each item is set as below at the same time Initial Setting Value (Each item is set as below at the same time of factory shipment)

ALC/ELC	<input checked="" type="checkbox"/> ALC <input type="checkbox"/> ELC (Default : level 20)					
	Shutter Speed at ALC					
	PAL(PA-315) <input checked="" type="checkbox"/> OFF (1/50) <input type="checkbox"/> 1/250 <input type="checkbox"/> 1/500 <input type="checkbox"/> 1/700 <input type="checkbox"/> 1/1,000 <input type="checkbox"/> 1/1,600 <input type="checkbox"/> 1/2,500 <input type="checkbox"/> 1/5,000 <input type="checkbox"/> 1/7,000 <input type="checkbox"/> 1/10,000 <input type="checkbox"/> 1/30,000 <input type="checkbox"/> 1/60,000					
	NTSC(PA-310)					
	<input checked="" type="checkbox"/> OFF (1/60)	<input type="checkbox"/> 1/120	<input type="checkbox"/> 1/250	<input type="checkbox"/> 1/700	<input type="checkbox"/> 1/1,000	<input type="checkbox"/> 1/1,600
	<input type="checkbox"/> 1/2,500	<input type="checkbox"/> 1/5,000	<input type="checkbox"/> 1/7,000	<input type="checkbox"/> 1/10,000	<input type="checkbox"/> 1/30,000	<input type="checkbox"/> 1/60,000
FLICKERLESS	<input type="checkbox"/> OFF <input checked="" type="checkbox"/> ON					
WDR/BLC	<input checked="" type="checkbox"/> OFF <input type="checkbox"/> BLC <input type="checkbox"/> HLC <input type="checkbox"/> WDR+BLC <input type="checkbox"/> WDR					
	WDR level :		<input type="checkbox"/> LOW	<input checked="" type="checkbox"/> MIDDLE	<input type="checkbox"/> HIGH	
	BLC Area Setting :		Top: 54	Bottom: 122	Left: 95	Right: 129
AGC	<input type="checkbox"/> OFF <input checked="" type="checkbox"/> ON					
	ON Max Gain level (0-20dB) :		(27) dB			
	OFF Manual Gain level (0-20dB) :		(00) dB			
W.BALANCE	<input checked="" type="checkbox"/> ATW <input type="checkbox"/> W.B FTX <input type="checkbox"/> AWC <input type="checkbox"/> NATW					
COLOR (C.KILLER)	<input checked="" type="checkbox"/> OFF <input type="checkbox"/> ON					
SYNC	<input checked="" type="checkbox"/> INT <input type="checkbox"/> L/L					
CAM TITLE	<input checked="" type="checkbox"/> OFF <input type="checkbox"/> ON					
	ON Title Position :		<input type="checkbox"/> UL	<input type="checkbox"/> UR	<input type="checkbox"/> DL	<input checked="" type="checkbox"/> DR
D/N	<input checked="" type="checkbox"/> AUTO <input type="checkbox"/> DAY <input type="checkbox"/> NIGHT <input type="checkbox"/> EXT					
	AUTO ON Setup for Duration Time/Level Shifting					
	NIGHT (5-20/20 level)		(18)			
	DAY (0-15/20 level) :		(02)			
CONTINUOUS Duration Time Setting (0-255 sec.) :		(1) sec				
NIGHT ON BURST Signal			<input checked="" type="checkbox"/> OFF <input type="checkbox"/> ON			
SMART IR						
	<input type="checkbox"/> LED POWER		<input type="checkbox"/> FULL	<input type="checkbox"/> DIMMING	<input type="checkbox"/> OFF	
	ANTI-SAT(level-20)		SAT.AREA(level 1-20)			
H.MIRROR	<input checked="" type="checkbox"/> OFF <input type="checkbox"/> ON					
PRIVACY	Each Area Setting (8 Areas)					
	MASK No.:	Area Number (1 to 4)				
	DISPLAY:	<input checked="" type="checkbox"/> OFF <input type="checkbox"/> ON				
	LOCATE:	TOP[]	BOTTOM[]	LEFT[]	RIGHT[]	
	MASK LV	BLUE	RED	CYAN	MAGENTA	BLACK
	GRAY-1	GRAY-2	GRAY-3	GRAY-4	WHITE	
	YELLOW	GREEN				
SHARPNESS	<input checked="" type="checkbox"/> ON (Default : level 20)					
BLINK_POS	<input checked="" type="checkbox"/> OFF <input type="checkbox"/> U_LEFT <input type="checkbox"/> U_RIGHT <input type="checkbox"/> L_LEFT <input type="checkbox"/> L_RIGHT					
DNR	<input type="checkbox"/> OFF <input type="checkbox"/> LOW <input type="checkbox"/> MIDDLE <input type="checkbox"/> HIGH					

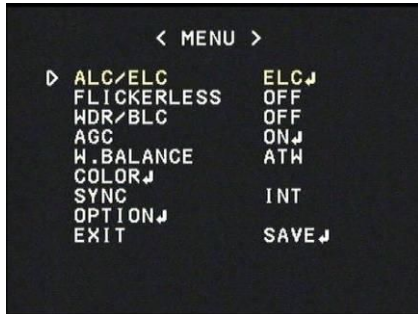


MOTION DETECT	Each Area Setting (4 Areas)					
	AREA:	Area Number (1 to 4)				
	DISPLAY:	<input checked="" type="checkbox"/> OFF	<input type="checkbox"/> ON			
	TOP	BOTTOM	LEFT	RIGHT	SENSITIVITY	









<MENU> Setting Item

Set those items below on this MENU page



Menu Screen

- ALC/ELC 
- FLICKERLESS
- WDR/BLC 
- AGC
- W. BALANCE 
- COLOR 
- SYNC 
- OPITION  (Other Sett, Go to Page 7.)
CAM TITLE, DAY/NIGHT, H-MIRROR, PRIVACY,
SHARPNESS, BLINK_POS, OTHERS
- EXIT (Go to Page 11)

ALCの調整

1. ALC*/ELC* (Light Adjustment)

Switching –over ALC/ELC

Press () Key to switch –over ALC/ELC.

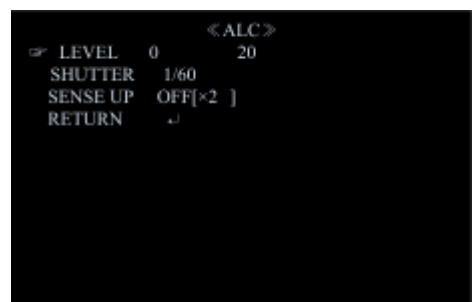
ALC (Auto Light Control) adjustment

ALClevel

It sets an average of light on screen. Use this function when an auto iris lens is used or an electrical shutter speed is fixed. Adjust ALClevel by () Key. Level extent is from 20 levels.



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Shutter Speed

Shutter speed is fixed to protect from shaking for subject moves at high speed or road surveillance

Select depend on the below value.

PA-295 PAL	OFF (1/50)	1/120	1/250	1/500	1/700
	1/1,000	1/1,600	1/2,500	1/5,000	1/7,000
	1/10,000	1/30,000	1/60,000		
PA-290 NTSC	OFF (1/60)	FL (1/100)	1/120	1/250	1/700
	1/1,000	1/1,600	1/2,500	1/5,000	1/7,000
	1/10,000	1/30,000	1/60,000		

ELC (Electro Luminance Control) Adjustment

It sets an average range of light on screen. Use this function when an electrical shutter is used. Adjust ELC level by key. Level extent is from 20 levels.

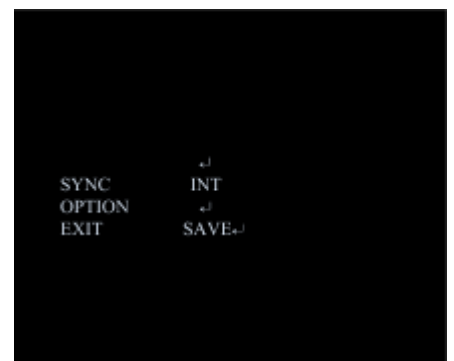
Shutter max at ECL set the upper limit of electronic shutter

Flicker less

2. FLICKERLESS

Reduce flicker level. Switch-over [ON/OFF] by key. When you select [ON] on this menu, Item ALC/ELC is set automatically as [ALC].

Model	Shutter Speed at flicker less setting
PA-290 (NTSC)	1/60
PA-295 (PAL)	1/50



3. WDR*/BLC*  —Picture adjustment with a large contrast.

Switch-over WDR & BLC

Switch-over [OFF/WDR/BLC/WDR+BLC] by key.

***WDR (Wide Dynamic Range)**

It makes an entire screen clear by decreasing a large contrast under back light condition.

Adjust WDR level 

***BLC (Back Light Compensation)**

It shows images naturally automatically adjusting the contract between light and dark when WDR is set. Set the level of WDR by pressing key after entering the sub menu. Select [LOW/HIGH/MIDDLE] by key.

***HLC (High Light Compensation)**

Convert a part of the high brightness into black

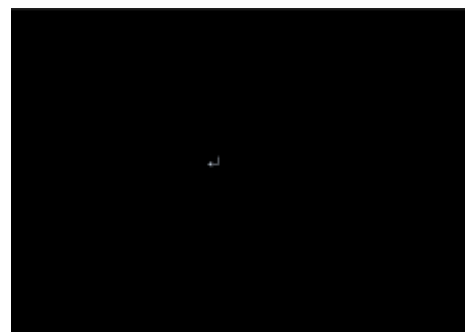
BLC AREA (default value)

Set the variable area BLC 

Set freely the photometric area of BLC which is adjusted to the under central position of people at factory setting. Set the area based on the coordinate number of each area; TOP/BOTTOM/LEFT/RIGHT by key.

Convert a part of the high brightness into black of HLS level

Select LOW/MIDDLE/HIGH.



4. AGC*

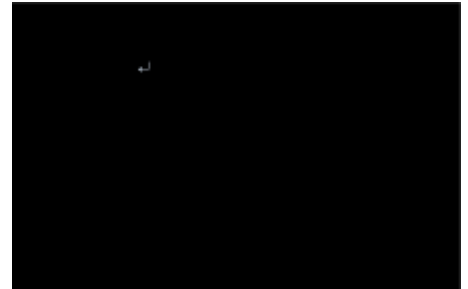
Switch-over [ON/OFF] by  key. Adjustment level extent is as below.

It is the max level when it is ON. On the other hand, it sets a fixed manual gain and its value is set despite the condition between light and dark. The adjusting level for each as followed.

AGC—ON(AGC-MAXレベル)


AGC—OFF (manual Gain)

-  ON : AGC MAX GAIN : 0~20dB
- OFF : Manual set GAIN : 0~20dB



W.B FIX adjustmen

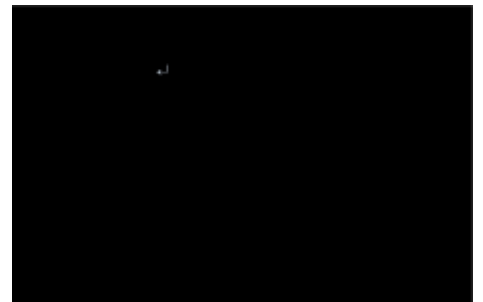
5. W. BALANCE*

Select White Balance from [ATW / N.ATW / FIX* / AWC] by  key.

Level adjustment of each item is as below.

o

ITEM	Contents
ATW	Normal white balance setting
AWC	It is displayed as "PUSHING" while pressing 'ENTER' key. White balance is calculated in the meantime, and then it is fixed once releasing



NATW	It shows a natural color which people see without pulling colors in.	
W.B FIX	R-GAIN (0~160)	Adjusts gain which was fixed at AWC setting
	B-GAIN (0~160)	



Color Adjustment

6. COLOR —Chroma Gain Adjustment

Adjust color level by key. Level extent is 0-20.
With C.KILLER*, you can select [ON/OFF].

*C.KILLER (Chroma Killer)

Adjust chromatic gain in accordance with the effect of AGC.

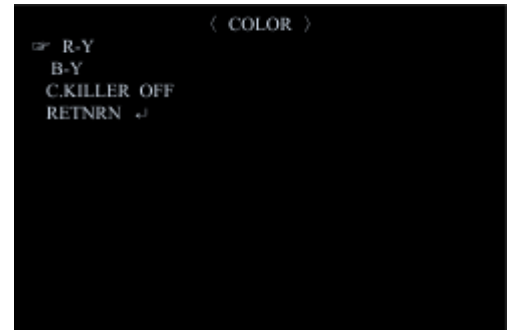
7. SYNC

—Switch-over between internal synchronization & external synchronization

You can select a way of synchronization between [INT] (Internal synchronization) & [L/L] (Line Lock). Change it by key. From this item; [L/L] (Line lock), you can go to the sub menu where you set phase.

L/L selection

Power Input	3.3~5.0 V	
Frequency Extent	49.5~50.5 Hz	59.5~60.5 Hz
Phase Extent	30~330°	0~360°



*About L/L (Line Lock)

Line Lock setting [L/L] will be [L/L(OFF)] to show an idle activity which works as an internal synchronization until it is input an enough line lock signal in case it is cut or out of frequency extent (central frequency level $\pm 0.5\text{Hz}$) which shows as above. It is automatically back to [L/L] from [L/L (OFF)] to re-supply line lock signal or receive a frequency which shows as frequency extent above.

-0.5Hz +0.5Hz

*L/L (Line Lock: ラインロック)設定について

ラインロック信号が断絶、または上図の周波数範囲(中心周波数 $\pm 0.5\text{Hz}$)外の信号が入力されたときには[L/L (OFF)]と表示され、内部同期による待機状態になります。

絶たれていたラインロック信号が再供給されるか、指定された周波数範囲内へと戻ること、待機状態[L/L (OFF)]からラインロック[L/L]同期状態へと自動で復帰します。

Effective frequency range

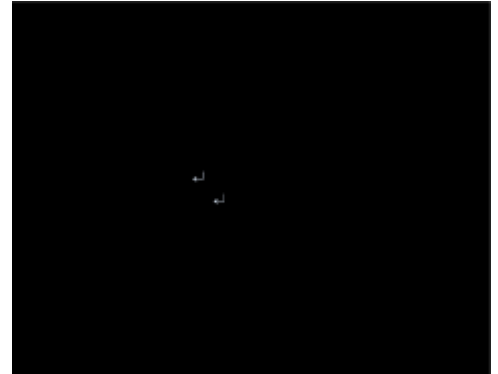


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<< OPTION>> Additional setting

You can set those items below on this OPTION page.

- TITLE ↵
- DAY/NIGHT ↵
- H-MIRROR
- MASK ↵
- SHARPNESS ↵
- BLINKING_POSITON
- OTHERS(2D DNR, INITIALIZE etc) ↵



Additional Setting

Additional Setting



Camera Title

1. CAM TITLE ↵ —Select name for each camera & position which the name is displayed on screen

You can input 8 characters (MAX.) for each camera. Select alphabet by key and press 'ENTER' key.





AUTO ON Setting

2. DAY/NIGHT

Switch-over Day/Night function Select from [AUTO/DAY/ NIGHT/EXT].

At NIGHT mode, it sets not only to switch over into monochrome also to cut a burst signal in order to improve resolution.

Also it sets to switch over to infrared filter to synchronize DAY/NIGHT setting at a D/N unit model.

AUTO

It switches over automatically to DAY/NIGHT based on the AGC level. The AGC level can be selected as followed.

- AGC Increase⇒to NIGHT mode : 05~20 level (Default : 18)
- AGC Decrease⇒to DAY mode : 00~15 level (Default: 02)

CONTINUOUS —Duration time of DAY/NIGHT

CONTINUOUS is a function to set a duration time from Day to Night or vice versa. Adjust key. Once it reaches to the value you set, it switches between Day and Night within the time you set not to move back to threshold.

NIGHT Sub menu

It cuts a burst signal in order to improve resolution at a night mode (monochrome mode) by sub menu.

EXT

It switches over [DAY/NIGHT] by controlling terminal level by a switch or driver IC, using the 7th pin of OSD key connector (CN5). FIY, this function cannot be used while OSD menu is shown on screen.

3. H-MIRROR — Horizontal Reversal Function

It is used when you want to flip mirror image to horizontal axis. Switch over [ON/OFF] by key.



4. PRIVACY —Privacy masking

It sets an area which you don't record. 4 masks are available to use.

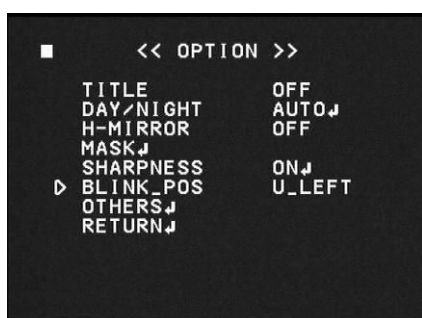
When you use mask, switch-over [ON/OFF] on item; DISPLAY. Set the masking position by [TOP/BOTTOM/LEFT/ RIGHT].

[BLACK/GRAY1~4/WHITE/RED/GREEN/BLUE/YELLOW/CYAN/MAGENTA]

5. SHARPNESS

Make a sharp image by emphasizing the edge.

Select a sharp image not only by [ON/OFF] also by an extent value from 20 level at [ON] mode.



Blinking function

6. BLINK_POS —Blinking function

At surveillance with recorder, there is such a case which cannot be judged if the camera is working even if an image doesn't find any movement on screen or if the recorder is broken. This function is easy to avoid such problems to put a blinking mark on each position.

U_LEFT	Upper left (initial value)
U_RIGHT	Upper right
D_LEFT	Down left
D_RIGHT	Down right

Remarks) Item; MOTION DETECT (Go to Page 11) is prior to Item; BLINK_POS.



<<<OTHERS>>> Others

You can set those items below on this OTHERS page.

- DNR 
- MOTION DETECT 
- GAMMA
- SETUP LEVEL
- SERIAL Com ID
- COLOR ADJ.
- INITIAL

1. DNR*

Select level of DNR. Select [LOW/MIDDLE/HIGH/AUTO/OFF] by key.

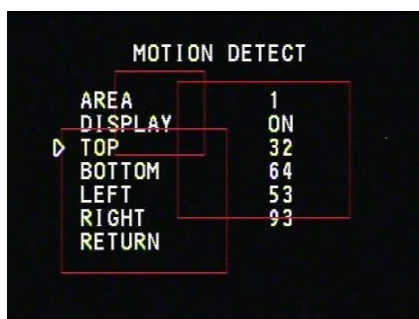
※ It adjusts DNR level automatically when you set as AUTO by AGC [ON/OFF].

*DNR (Digital Noise Reduction)

It reduces noise on screen by digital processing.

2.MOTION DETECT  — Motion Detect function

Motion detect function



Motion Detect

It shows a box-shaped mark in yellow on the upper left of screen when it detects people, car etc on screen. 4 areas are available to set. In addition, you can set a detection area with mixing these 4 areas.

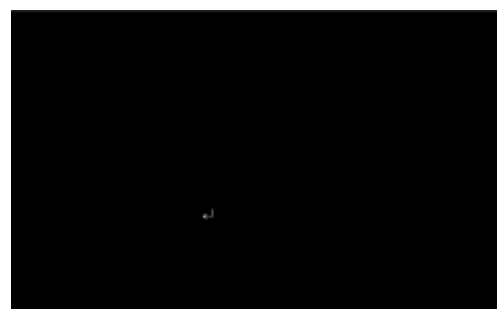
To see each area, switch-over [ON/OFF] by DISPLAY. Change those area position by TOP/BOTTOM/LEFT/ RIGHT by key.

It positions upper and left side of the monitor (coordination:0,0,0,0) as images shown.

3. GAMMA

Use the setting [0.35-0.70] on normal operation.

In case that there is no necessary for Gamma correction such as image processing, use the setting [1.0]



4. SETUP LEVEL

Choose [LOW]/ [MIDDLE] / [HIGH]. Adjust Select key.

5.SERAIL Com

Set camera ID to use at the time of communication.
Effective range (0~255) . Push () Key and set ID

6.COLOR ADJ.

Choose 8 level (RY-GAIN+/ RY-GAIN-/ BY-GAIN+/
BY-GAIN-/RY-HUR+/RY-HUR-/BY-HUR+/BY-HUR-) for adjustment.
Effective range (0~255) .。

7.INITIALIZE —Setting initialization

Change to set for initialization as page 2

Push ENTER KEY then automatically saved and out of menu screen.

Remarks) you cannot go back to the set you saved once pressing 'ENTER' key. Please re-set in case it happens.

EXIT — Save the setting

It set the saved condition before it is out of setting screen.

Select from [SAVE / NOSAVE / RELOAD]. More in detail is as below.

- **SAVE:** Save the function you set. You can use the same after turning electricity on.
- **NOSAVE:** Not to save the function you set. Therefore it returns to the function you previously save.
- **RELOAD:** Return to the function you previously save without a need to turn electricity on.

