



## **Users Manual**

Please read this manual carefully and be fully aware of the contents in it before installing and using the camera.

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## Safety Instructions



- Avoid the place where is exposed direct to the sun or gives off the heat (for example, the place around heating equipment)
  - It may cause some mechanical troubles.
- Avoid the place where is so dusty, humid or soot-covered.
  - It may cause electric shock or fire.
- Never disassemble, repair or remodel the product.
  - It may cause fire, electric shock or injury due to abnormal functioning.
- Do not drop the thing or give a strong impact to the product.
  - It may cause some mechanical troubles.
- When the exterior of the product gets grimy,
  - Rub its surface lightly with the dried towel. Never use chemicals or detergents because they may cause corrode the surface or harm its coating.
- Do not attempt to repair the camera with users' own hands when a disorder or breakdown brings out in the camera.
  - When these things happen, you should entrust the agency you purchased the product with its repair.

## Pre-use Instructions

- Use any other products connecting to this camera only after the leakage current on circuit ground(AC line etc.) or connected circuit is kept below 1A.
- Use the camera only after the static electricity (both from the human body and the circuit) is flowed out through an earth or other methods, when it is charged with the things with strong static electricity.
- Do not use the camera under other voltages than the pre-regulated input voltage.
- Use control terminals of all sorts with the added application circuits under the condition that those terminals are completely insulated with other products.
  - Photo coupling applied control method etc.

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## Contents/Product Features

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- Product Specifications

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## Product Features

This product is based on 26× optical zoom and 10× digital zoom technologies and, thus, can be applied to various fields such as security camera for surveillance(CCTV camera), data viewer(or document camera) and speed dome camera.

- 1/4 Inch SONY CCD Type

Adopting high sensitive CCD(Charge Coupled Device), this product has superb color reproduction capacity and sharpness on the basis of the horizontal resolution of 470 lines and the effective pixel numbers of 380,000

- Built in Optical Power Zoom Lens

Adopting 26× optical zoom and 10× digital zoom, this product can enlarge a subject to maximum 260×.

- AI(Artificial Intelligence) and Fuzzy control with DSP

Auto Exposure Compensation by digital exposure detection

White balance function by digital color detection

Auto focus function with the position change of zoom lens

Back light compensation function

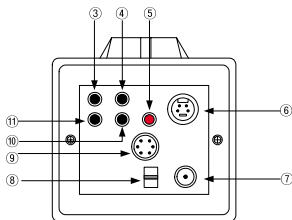
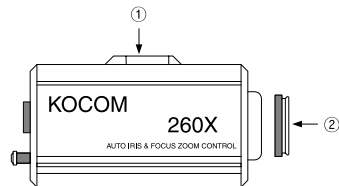
- Remote Control

RS-232 and RS-485 (Optional) Interface possible

Control by wired remote controller (Optional) available

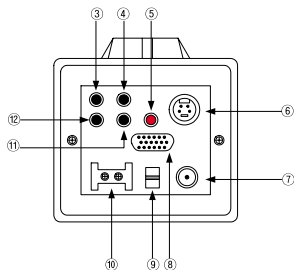
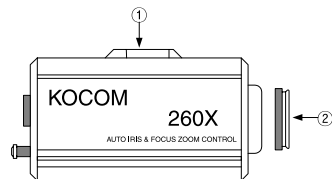
## Components Descriptions

### ● Circular Type



- ① Camera Mount Part (can be conjoined to both the upper and bottom side of the camera)
- ② Lens Mount Cap
- ③ OSD MENU UP Switch
- ④ OSD MENU BACK Switch
- ⑤ POWER LED
- ⑥ Image Output Jack (S-VIDEO TYPE)
- ⑦ Image Output Jack (BNC TYPE)
- ⑧ RS232/485 Conversion Switch
- ⑨ Power and External Control Connection Jack (6PIN Circular TYPE)
- ⑩ OSD MENU ENTER/MENU Switch
- ⑪ OSD MENU DOWN Switch

## ● D-SUB Type



- ① Camera Mount Part (can be conjoined to both the upper and bottom side of the camera)
- ② Lens Mount Cap
- ③ OSD MENU UP Switch
- ④ OSD MENU BACK Switch
- ⑤ POWER LED
- ⑥ Image Output Jack (S-VIDEO TYPE)
- ⑦ Image Output Jack (BNC TYPE)
- ⑧ Power and External Control Connection Jack (15PIN D-SUB TYPE)
- ⑨ RS232/485 Conversion Switch
- ⑩ POWER Input Connector
- ⑪ OSD MENU ENTER/MENU Switch
- ⑫ OSD MENU DOWN Switch



## External Control Connection Jack Specifications

### ● Circular Type

According to the pin specifications listed below, each relevant function can be controlled through adjusting the pins located in the rear side of the camera (Circular Type).



Pin number	Specifications	Pin Color
1	Power Input (+)	Red
2	RXD(232) / 485-	Blue
3	TXD(232) / 485+	Green
4	External Input Key(AD)	Brown
5	ALARM Input	White
6	GND	Black

※ Both No.1 and 6 pins are input voltages.

## ● D-SUB Type

According to the pin specifications listed below, each relevant function can be controlled through adjusting the pins located in the rear side of the camera (D-SUB Type).



Pin Number	Specifications	Pin Color
1	3.3V Output	Black
2	LINE LOCK	Brown
3	Motion Detection Output	Red
4	ALARM Input	Orange
5	Power Input	Yellow
6	GND	Green
7	IR Input	Blue
8	External Input Key(AD)	Violet
9	RXD(232) / 485-	Gray
10	TXD(232) / 485+	White
11	GND	White,Brown
12	Focus (-: FAR)	White,Pink
13	Focus (+: NEAR)	Sky-blue
14	Zoom (-: WIDE)	Light Green
15	Zoom (+: TELE)	Pink

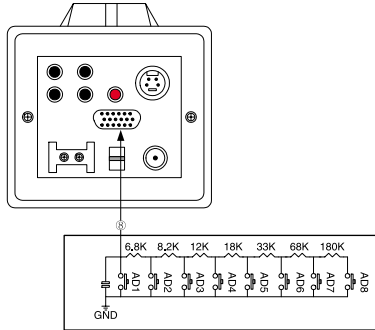
※ Both No.5 and 6 pins are input voltages.

► ZOOM & FOCUS DC Control Connection

Zoom(+ : TELE)	- - - →	ACTIVE HIGH (+5V ~ +9V)
Zoom(- : WIDE)	- - - →	ACTIVE HIGH (-5V ~ -9V)
Focus(+ : NEAR)	- - - →	ACTIVE HIGH (+5V ~ +9V)
Focus(- : FAR)	- - - →	ACTIVE HIGH (-5V ~ -9V)

## External Connection Key Specifications

- The figure display an outline of wired remote controller.



- ① OSD MENU ENTER/MENU
- ② OSD MENU BACK
- ③ OSD MENU UP
- ④ OSD MENU DOWN
- ⑤ ZOOM IN
- ⑥ ZOOM OUT
- ⑦ FOCUS IN
- ⑧ FOCUS OUT

## Product Components

- D-SUB TYPE

- KZC-261
- 15Pin DSUB Cable

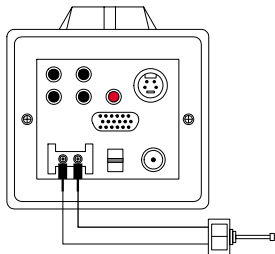
- CIRCULAR TYPE

- KZC-261
- 6 Pin CIRCULAR Cable

## Connection

### Power Connection

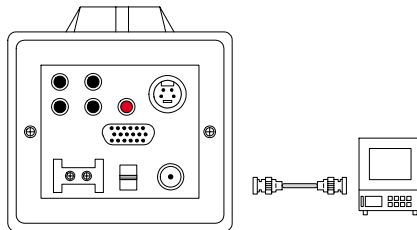
- As shown in the Figure, supply power for the product through connecting the DC12V( $\pm 1$ V, 3.6W) power to the power connector locating in the rear side of the product.



※Warning:

Please be cautious not to connect electric phases reverse.  
Use the adaptor with the rated capacity (DC12V( $\pm 1$ V, 3.6W).

## Monitor Connection



- As shown in the Figure, connect the cable.

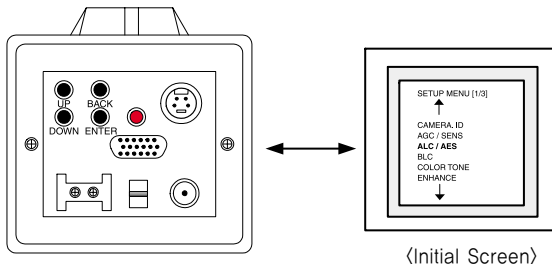
## Menu Setup

⦿ This function can be set up with either using external controllers (RS232/RS485) or operating the switch on OSD MENU KEY locating in the rear side of the product (please note that external controller is optional).

### OSD Menu Key Setup

### Menu Setup

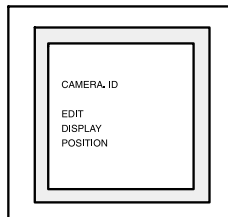
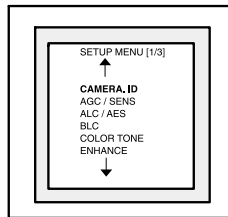
Each menu item is displayed on monitor screen when users push the marked part of 4 switches connected as shown in the figure below.





- (1) ENTER : Use when entering the menu screen or saving the setting values.
- (2) BACK : Use when going back from sub-menu to main-menu or going outside from sub-menu without saving setting values.
- (3) UP : Use when increase data values or moving upward.
- (4) DOWN : Use when decrease data value or moving downward.

## Camera Identification Number Input



When users use several cameras, this function is used in setting their ID to identify them easily.

### ● EDIT Screen

UP            Move arrow mark right

DOWN        Move arrow mark left

ENTER        Display selected letters on screen

BACK        Return to CAMERA. ID menu

E D I T



## Camera Identification Number Input

### ● SPACE Screen

UP Move arrow mark right

DOWN Move arrow mark left

ENTER Select the letters displayed on screen

BACK Cancel the selected letters or return to EDIT menu

※ Letters can be used.

0123456789

ABCDEFGHIJKLMNOPQRSTUVWXYZ  
YZ.....

abcdefghijklmnopqrstuvwxyz

+ - \* / . ! " # \$ % & ' ( ) = ?  
@ ; : , . [ ]

● ■ (left ▲) (right ▲) (woman X  
man) (space)



## Camera Identification Number Input

### ● DISPLAY Screen

- UP Move arrow mark
- DOWN Move arrow mark
- ENTER Save setup and return to menu screen
- BACK Return to menu screen without saving setup

### ● DISPLAY Screen

D I S P L A Y



ON

OFF

### ● POSITION Screen

- UP Move arrow mark
- DOWN Move arrow mark
- ENTER Save setup and return to menu screen
- BACK Return to menu screen without saving setup

### ● POSITION Screen

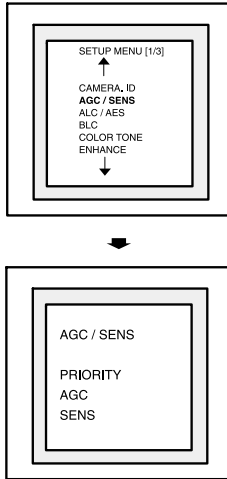
POSITION



ON

OFF

## AGC/SENSITIVE Control



It controls AGC function which keeps either stronger signals over or weaker signals below the fixed level in constant level when they are input, and SENSITIVE function which increases product's performance in case of low intensity of illumination.

### ● PRIORITY Screen

UP Move arrow mark

DOWN Move arrow mark

ENTER Save setup and return to menu screen

BACK Return to menu screen without saving setup

P R I O R I T Y



AGC S E N S

## AGC/SENSITIVE Control

### ● AGC Screen

- UP      Move arrow mark right
- DOWN   Move arrow mark left
- ENTER   Save setup and return to menu screen
- BACK   Return to menu screen without saving setup

A G C

B A S E   - - - -   ■   - - -   M A X

### ● SENS Screen

- UP      Move arrow mark upward
- DOWN   Move arrow mark downward
- ENTER   Save setup and return to menu screen
- BACK   Return to menu screen without saving setup

S E N S

→ O F F    × 3 2

× 2        × 6 4

× 4

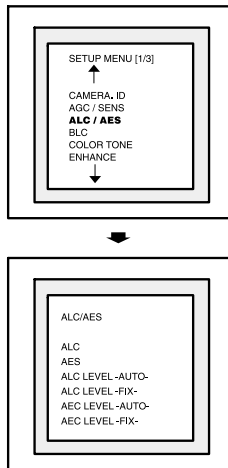
× 6

× 8

× 1 2

× 1 6

## Exposure Compensation (ALC/AEC)



Users can automatically or manually control the brightness of the images on screen as well as that of the subjects through the control of electric shutter.

### ● ALC Screen

UP Move arrow mark

DOWN Move arrow mark

ENTER Save setup and return to menu screen

BACK Return to menu screen without saving setup

A L C



A U T O F I X

## Exposure Compensation (ALC/AEC)

### ● ALC LEVEL FIX screen

- UP Move arrow mark right
- DOWN Move arrow mark left
- ENTER Save setup and return to menu screen
- BACK Return to menu screen without saving setup

### ● ALC LEVEL FIX screen

A L C L E V E L - F I X -

M I N - - - - ■ - - - M A X

### ● AES LEVEL AUTO screen

- UP Move arrow mark right
- DOWN Move arrow mark left
- ENTER Save setup and return to menu screen
- BACK Return to menu screen without saving setup

### ● AES LEVEL AUTO screen

A E S L E V E L - A U T O -

M I N - - - - ■ - - - M A X



## Exposure Compensation (ALC/AEC)

### ● AES Screen

- UP Move arrow mark right
- DOWN Move arrow mark left
- ENTER Save setup and return to menu screen
- BACK Return to menu screen without saving setup

### ● AES Screen

A E S



A U T O F I X

### ● ALC LEVEL AUTO screen

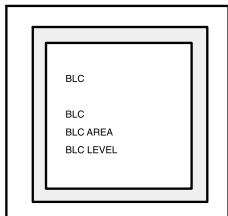
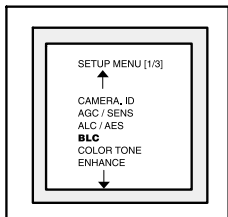
- UP Move arrow mark right
- DOWN Move arrow mark left
- ENTER Save setup and return to menu screen
- BACK Return to menu screen without saving setup

### ● ALC LEVEL AUTO screen

A L C L E V E L - A U T O -

M I N - - - - ■ - - - - M A X

## Back Light Compensation (BLC)



When the subject is taken by camera under the back light, background is get bright while the subject get dark. Thus, this function is used to prevent the subject from getting undiscernible and to improve the quality of images under the back light condition.

### ● BLC Screen

UP            Move arrow mark

DOWN        Move arrow mark

ENTER       Save setup and return to menu screen

BACK        Return to menu screen without saving setup

B L C



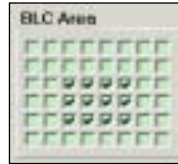
ON

OFF

## Back Light Compensation (BLC)

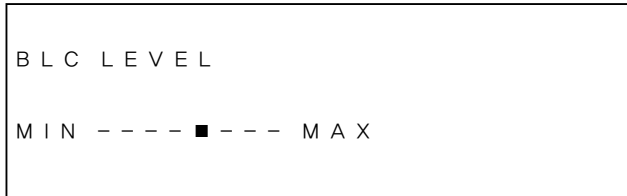
### ● BLC AREA Screen

- UP      Move arrow mark upward.  
DOWN   Move arrow mark downward.  
ENTER   Save setup and return to menu screen.  
BACK   Return to menu screen without saving setup.

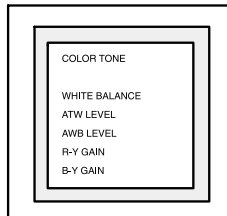
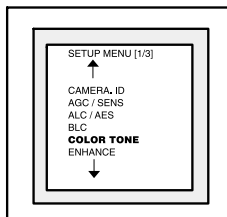


### ● BLC LEVEL Screen

- UP      Move arrow mark right.  
DOWN   Move arrow mark left.  
ENTER   Save setup and return to menu screen.  
BACK   Return to menu screen without saving setup.



## Color Compensation (Color Tone)



With using menu key, users can adjust the ratio between red and blue color of the subject.

### ● ATW Screen

UP            Move arrow mark.

DOWN        Move arrow mark.

ENTER        Save setup and return to menu screen.

BACK        Return to menu screen without saving setup.

W H I T E   B A L A N C E



A T W    A W B

## Color Compensation (Color Tone)

### ● ATW LEVEL Screen

- UP Move arrow mark right.  
DOWN Move arrow mark left.  
ENTER Save setup and return to menu screen.  
BACK Return to menu screen without saving setup.

### ● ATW LEVEL Screen

A T W L E V E L

R E D - - - - ■ - - - - B L U E

### ● AWB LEVEL Screen

- UP Move arrow mark right.  
DOWN Move arrow mark left.  
ENTER Save setup and return to menu screen.  
BACK Return to menu screen without saving setup.

### ● AWB LEVEL Screen

A W B L E V E L

R E D - - - - ■ - - - - B L U E

## Color Compensation (Color Tone)

### ● R-Y GAIN Screen

- UP Move arrow mark right.  
DOWN Move arrow mark left.  
ENTER Save setup and return to menu screen.  
BACK Return to menu screen without saving setup.

### ● R-Y GAIN Screen

R - Y G A I N  
M I N - - - - ■ - - - - M A X

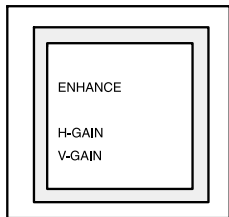
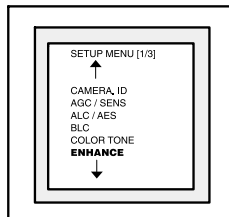
### ● B-Y GAIN Screen

- UP Move arrow mark right.  
DOWN Move arrow mark left.  
ENTER Save setup and return to menu screen.  
BACK Return to menu screen without saving setup.

### ● B-Y GAIN Screen

B - Y G A I N  
M I N - - - - ■ - - - - M A X

## Contour or Aperture Compensation (ENHANCE)



This function is used to make the quality of images more clear-cut by emphasizing the contour of the taken subject and users can control both horizontal and vertical gain with this function.

### ● H-GAIN Screen

UP            Move arrow mark right.

DOWN        Move arrow mark left.

ENTER        Save setup and return to menu screen.

BACK        Return to menu screen without saving setup.

H - G A I N

M I N - - - - ■ - - - M A X

## Contour or Aperture Compensation (ENHANCE)

### ● V-GAIN Screen

- UP        Move arrow mark right.  
DOWN     Move arrow mark left.  
ENTER    Save setup and return  
          to menu screen.  
BACK     Return to menu screen  
          without saving setup.

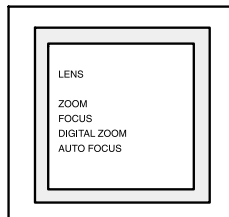
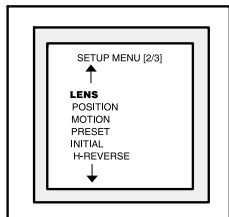
### ● V-GAIN Screen

V - G A I N

M I N - - - - ■ - - - M A X



## Lens Control



This function controls the optical and digital zoom and focus function of lens.

### ● ZOOM Screen

UP Move arrow mark right.

DOWN Move arrow mark left.

ENTER Save setup and return to menu screen.

BACK Return to menu screen without saving setup.

Z O O M

W I D E - - - - ■ - - - - T E L E

## Lens Control

### ● FOCUS Screen

- UP Move arrow mark right.  
DOWN Move arrow mark left.  
ENTER Save setup and return to menu screen.  
BACK Return to menu screen without saving setup.

### ● FOCUS Screen

F O C U S

F A R - - - - ■ - - - - N E A R

### ● DIGITAL ZOOM Screen

- UP Move arrow mark right.  
DOWN Move arrow mark left.  
ENTER Save setup and return to menu screen.  
BACK Return to menu screen without saving setup.

### ● DIGITAL ZOOM Screen

D I G I T A L Z O O M



ON

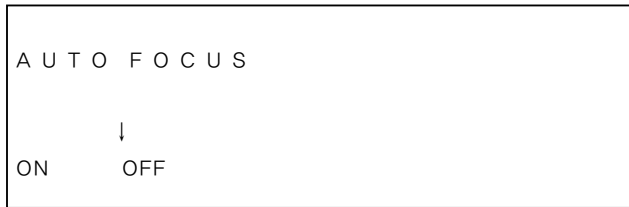
OFF

## Lens Control

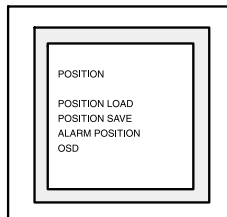
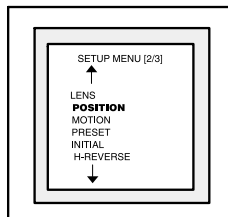
### ● AUTO FOCUS Screen

- UP      Move arrow mark right.  
DOWN   Move arrow mark left.  
ENTER   Save setup and return to menu screen.  
BACK   Return to menu screen without saving setup.

### ● AUTO FOCUS Screen



## POSITION



Users can assign the position of the subject so far as to 64 places by presetting such functions as the zoom, focus, color tone, exposure compensation and gain of the camera one by one.

### ● POSITION LOAD Screen

UP Increase position number.

DOWN Decrease position number.

ENTER Save setup and return to menu screen.

BACK Return to menu screen without saving setup.

P O S I T I O N L O A D

P O S I T I O N No . 1

## POSITION

### ● POSITION SAVE screen

- UP Increase position number.  
DOWN Decrease position number.  
ENTER Save setup and return to menu screen.  
BACK Return to menu screen without saving setup.

### ● POSITION SAVE screen

P O S I T I O N   S A V E

P O S I T I O N   N o .   1

### ● ALARM POSITION screen

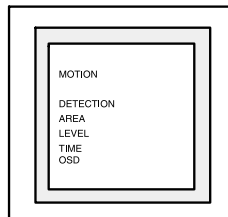
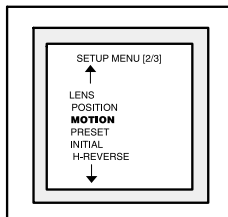
- UP Increase the connected alarm port number.  
DOWN Decrease the connected alarm port number.  
ENTER Save setup and return to menu screen.  
BACK Return to menu screen without saving setup.

### ● ALARM POSITION screen

A L A R M   P O S I T I O N

A L A R M   P O S I T I O N   N o .   O F F

## Motion Detection



This function enables users to setup the motion detection and area on display screen.

### ● DETECTION screen

UP Move arrow mark.

DOWN Move arrow mark.

ENTER Save setup and return to menu screen.

BACK Return to menu screen without saving setup.

D E T E C T I O N



O N

O F F

## Motion Detection

### ● MOTION AREA screen

- UP Switch      Move arrow mark left and upward.
- DOWN Switch      Move arrow mark right and downward.
- ENTER Switch      Save setup and return to menu screen.
- BACK      Return to menu screen without saving setup.

### ● MOTION AREA screen



### ● MOTION LEVEL screen

- UP      Move arrow mark right.
- DOWN      Move arrow mark left.
- ENTER      Save setup and return to menu screen.
- BACK      Return to menu screen without saving setup.

### ● MOTION LEVEL screen

L E V E L

M I N - - - - ■ - - - - M A X

## Motion Detection

### ● MOTION TIME screen

- UP Move arrow mark upward.
- DOWN Move arrow mark downward.
- ENTER Save setup and return to menu screen.
- BACK Return to menu screen without saving setup.

T I M E

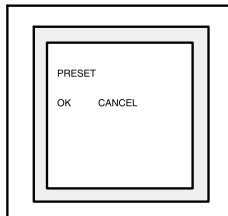
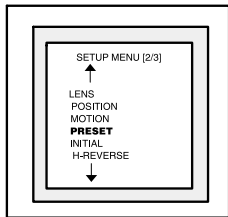
→ 1 0 s e c

3 0 s e c

6 0 s e c



## PRESET Setup



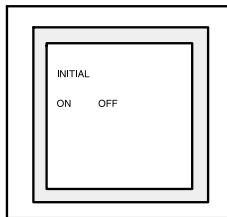
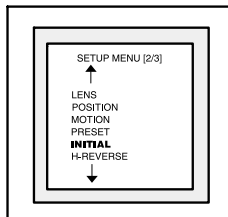
In case this function setup as on-mode, previously saved data return to the default value set in factory.

### ● PRESET screen

- UP Move arrow mark.
- DOWN Move arrow mark.
- ENTER Save setup and return to menu screen.
- BACK Return to menu screen without saving setup.



## INITIAL Setup



In case this function setup as on-mode, the product is used in ordinary CCTV camera mode without running the default mode.

※ Zoom function of lens not available when in ON-mode

### ● INITIAL screen

UP        Move arrow mark.

DOWN    Move arrow mark.

ENTER    Save setup and return to menu screen.

BACK    Return to menu screen without saving setup.

I N I T I A L



O N

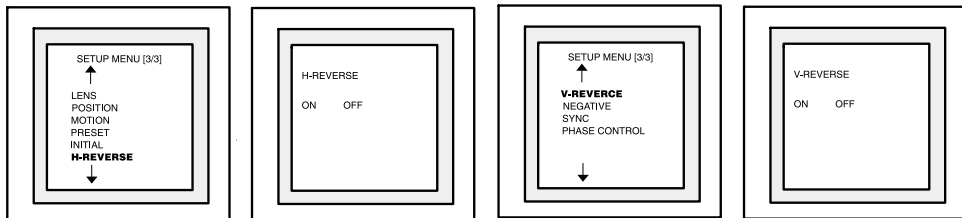
O F F

## Left/Right and Up/Down Reverse Function

The left/right and up/down of the subject on display screen can be reversed to each other freely.

(1) H-REVERSE : With menu key, left/right reverse function can be turned on/off.

(2) V-REVERSE : With menu key, up/down reverse function can be turned on/off.



## Left/Right and Up/Down Reverse Function

- UP Move arrow mark.
- DOWN Move arrow mark.
- ENTER Save setup and return to menu screen.
- BACK Return to menu screen without saving setup.

- V-REVERS screen

- H-REVERS screen

H - R E V E R S



O N

O F F

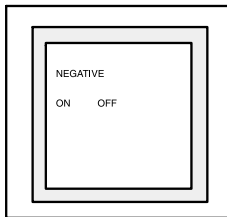
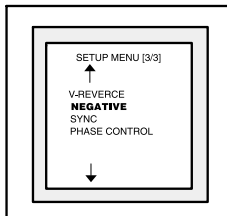
V - R E V E R S



O N

O F F

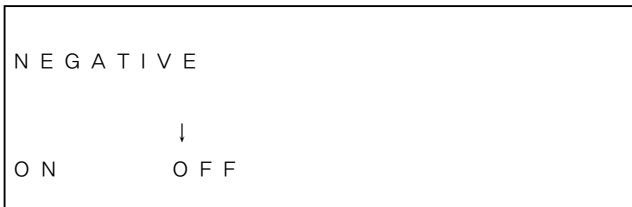
## Positive/Negative Reverse Function



With this positive/negative reverse function, users can enlarge and see films for camera and OHP slide.

- UP Move arrow mark.
- DOWN Move arrow mark.
- ENTER Save setup and return to menu screen.
- BACK Return to menu screen without saving setup.

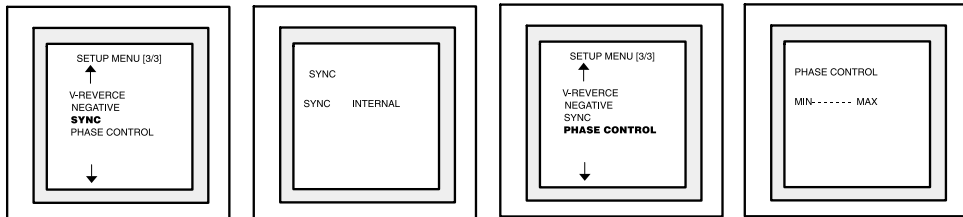
### ● Positive/Negative screen



## Camera Synchronization Setup

Users can selectively setup both internal and external SYNC of the camera, and can control the camera phase by using Line-Lock function without SYNC generator when selecting external SYNC.

- (1) SYNC : Users can select external or internal SYNC with up/down menu keys.
- (2) PHASE CONTROL : Users can control camera phase with up/down menu keys.



## Camera Synchronization Setup

UP Switch      Move arrow mark.  
DOWN Switch   Move arrow mark.  
ENTER Switch   Save setup and return to menu screen.  
BACK            Return to menu screen without saving setup.

### ● CAMERA SYNC screen



## Remote Control (RS232, RS485)-Optional

This camera control is the control method that has the separate function performing serial communication built-in within the camera and provided as optional basis.

### Camera Identification Number Input

When users use several cameras, this function is used in setting their ID to identify them easily.



- EDIT : Total 20 letters are available.

※ The letters can be used

0123456789

ABCDEFGHIJKLMNOPQRSTUVWXYZ.....

abcdefghijklmnopqrstuvwxyz

+ - \* / . ! " # \$ % & ' ( ) = ? @ ; : , . [ ]

- ■ (left ▲ ) (right ▲)(woman X man)(space)
- DISPLAY : Turn on/off the displayed letters on screen.
- POSITION : Change the position of letters upward/downward.



## AGC/SENSITIVE Control



It controls AGC function which keeps either stronger signals over or weaker signals below the fixed level in constant level when they are input, and SENSITIVE function which increases product's performance in case of low intensity of illumination.

- PRIORITY : Give priority on AGC or SENS.
- AGC/SENS LEVEL : Set the level of AGC and SENS into 8 degrees.

## Exposure Compensation (ALC/AEC)



Users can automatically or manually control the brightness of the images on screen as well as that of the subjects through the control of electric shutter.

- ALC : Auto Lighting Control. Set the level of images' brightness on screen by auto and fix mode respectively.
  - AEC : Auto Electron Shutter. Control the images' brightness on screen by setting the speed of lens shutter as auto or fix, and set their levels by modes respectively.
- ※ When using SLOW SCAN mode, set the AEC mode as the OFF position of FIX mode.

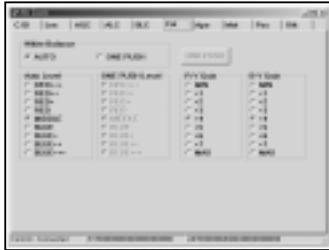
## Back Light Compensation (BLC)



When the subject is taken by camera under the back light, background is get bright while the subject get dark. Thus, this function is used to prevent the subject from getting undiscernible and to improve the quality of images under the back light condition.

- ON/OFF : Turn on/off the BLC mode.
- LEVEL : Control the level of BLC mode.
- AREA : Divide the display screen into several blocks.

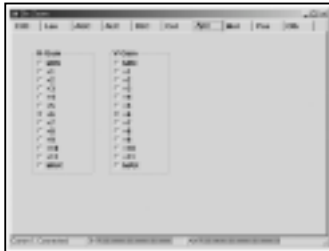
## Color Compensation (Color Tone)



Users can adjust the ratio between red and blue color of the subject.

- **White Balance** : It is the mode that determine the white color among the various light sources and its level can be set as AUTO or ONE PUSH mode.
- **R-Y/B-Y GAIN** : Control the ratio between red and blue color by levels.

## Contour or Aperture Compensation (Enhance)



Users can make the quality of images more clear-cut by emphasizing the contour of the taken subject and control both horizontal and vertical gain with this function.

- **H/V GAIN** : Adjust the vertical and/or horizontal size of images by levels.

## Lens Control



Users can control the optical and digital zoom and focus function of lens.

- ZOOM : Control the optical and/or digital zoom function with TELE/WID button.
- FOCUS : Control the focus function manually with FAR/NEAR button .
- AUTO FOCUS : Set the focus automatically.
- AF after Tracking : Set the focus to adjust moving subject automatically.
- One Push AF : When set, this function makes focus adjust to the subject automatically at the outset, and then makes focus keep in an initial state even the motion of the subject will change.
- ※ This mode should be used after AFAfter Tracking mode is activated and is useful in such equipment as Data Viewer (or Document Camera) etc.

## Motion Detection



This function enables users to setup the motion detection and area on display screen.

- DETECTION : Turn on/off the motion setup.
- Motion Level : Control the motion sensitivity by adjusting the motion level, when motion setup is in on-mode.
- OSD : On/off mode possible. When in on-mode, the word "MOTION" is displayed on screen in case of detecting the motion.
- Motion Time : Control the displaying time on screen of the OSD letters.

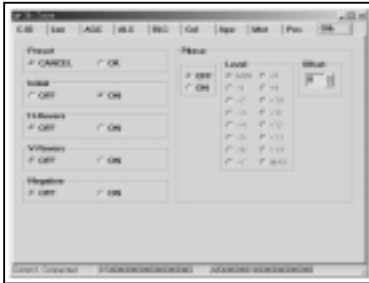
## POSITION



Users can assign the position of the subject so far as to 64 places by presetting such functions as the zoom, focus, color tone, exposure compensation and gain of the camera one by one.

- Position Load : 64 positions can be assigned one by one.
- Alarm Position : The position receiving signals from external alarm port can be selected among 64 positions.
- ※ External Alarm Port : Operates through ACTIVE LOW.
- Position Save : Respectively set and save lens zoom and color function of each position.

## Motion Detection



- **PRESET** : Return to the default value of lens set in factory.
- **Initial** : When used as on-mode, the product is used in ordinary CCTV camera mode without running the default mode.
- **H/V Reverse** : Turn on/off the left/right and up/down reverse function.
- **Negative** : Turn on/off the positive/negative reverse function.



## Camera Specifications

	NTSC	PAL		
TV SYSTEM	NTSC 60Hz	PAL 50Hz		
IMAGE DEVICE	1/4 " SONY CCD	1/4 " SONY CCD		
	ICX228AK CCD SENSOR	ICX229AK CCD SENSOR		
TOTAL PIXELS	410,000(H811xV508)	470,000(H795xV596)		
EFFECTIVE PIXELS	380,000(H768xV494)	430,000(H752xV582)		
TOTAL ZOOM	260X (Optical 26X : CANON LENS, Digital 10X)			
FOCAL LENGTH	F1.6~ F3.8, f=3.5mm~ 91mm			
VIEW ANGLE	Wide:H47.5° V36.5°, Tele:H1.55° V1.26°			
MINIMUM FOCUSING	Wide : 63mm Tele : 1,486mm			
FOCUS	Auto / Manual			
POSITION	64 Presets (Zoom, Focus)			
MOTION DETECTION	ON(ALARM: TTL OUT) / OFF			
REVERSE FUNCTION	H Reverse , V Reverse ON / OFF			
NEGATIVE FUNCTION	ON / OFF			
PHASE CONTROL	MIN / MAX			
ENHANCE FUNCTION	MIN/MAX (H-Gain , V-Gain)			
SCANNING SYSTEM	1 : 2 Interlace			
SYNCHRONIZING SYSTEM	Internal & External (AC Line Lock) Mode			
HORIZONTAL FREQUENCY	15.734 KHz	Standard	15.625 KHz	Standard
VERTICAL FREQUENCY	59.94 Hz	NTSC	50.00 Hz	PAL

## Camera Specifications

<b>HORIZONTAL RESOLUTION</b>	470 TV Lines
<b>VIDEO SIGNAL OUTPUT</b>	VBS :1.0Vp-p
<b>Y/C OUTPUT</b>	Y : 1.0Vp-p, C : 0.3Vp-p
<b>S/N</b>	46dB High
<b>SHUTTER SPEED</b>	Auto, 1/60 ~ 1/10000
<b>SENSITIVITY</b>	1 Lux (F1.6, 30 IRE)
<b>SLOW SCAN</b>	0.05 Lux
<b>AGC</b>	Auto / Fix
<b>ALC</b>	Auto / Fix
<b>AES</b>	Auto / Fix
<b>BLC</b>	On / Off
<b>WHITE BALANCE</b>	Auto (ATW Or AWB) / Fix
<b>EXTERNAL CONTROL</b>	RS-232C/485 (Remote Control : Optional)
<b>OSD CONTROL</b>	Zoom, Focus, Iris, WB, AGC Gain, Position, C Gain
	Motion Detection, Mirror
<b>OPERATING TEMPERATURE</b>	-10°C ~ +60°C
<b>POWER SOURCE</b>	DC12V +/- 1.0V
<b>POWER CONSUMPTION</b>	3.6W (Max)
<b>WEIGHT</b>	600g(Max)
<b>SIZE</b>	130 X 62 X 67 mm (MAX)

※This specifications are subject to changes to improve the quality of product without giving an advance notice.

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