

PRODUCTION RELEASE & REVISION						
REV	DESCRIPT'N/BUYER	DWG No	PARTS No.	BY	CHK	DATE
A	INITIAL	-----	50303710	J.Y.LIU	M.J.KWON	03-03-M14
B	INITIAL	-----	50303710	J.Y.LIU	M.J.KWON	15-06-08

INSTRUCTION MANUAL

WDR Super High Resolution Day & Night Camera



1/3" INTERLINE TRANSFER
HIGH RESOLUTION

*Please read this manual thoroughly before use, and keep it handy for future reference.
Design and specifications are subject to change without notice.*

148(+/-5)mm

105(+/-5)mm

rev.B - 5p, 9~17 내용 수정

NOTES

- 1.MODEL: HCB-P61(5)DN(P)B6/NoBrand(Effio-V)
- 2.MATERIAL: 모조지 100g/m² WHITE
- 3.COLOR: BLACK
- 4.SIZE:105(+/-5)mm x 148(+/-5)mm
- 5.LABEL: -----
- 6.ANY CHANGE OR ALTERNATION MUST BE APPROVED BY HITRON DESIGN TEAM.

판의	전자
	장석원
	15-06-08

50303710		ITEM	DESCRIPTION/MATERIAL	QTY
PARTS LIST				
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN MM.		APPROVALS	DATE	HITRON
TOLERANCE		K.H.JUNG	15-06-08	
LABEL	+/- 3			Manual Instruction
MANUAL	+/- 5	CHKED	15-06-08	SIZE
GUIDE	+/- 5	M.J.KWON	15-06-08	REV. B
MATERIAL	2	DRAWN	J.Y.LIU	SCALE
COLOR	3			DO NOT SCALE

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FCC COMPLIANCE STATEMENT

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC INFORMATION : This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CAUTION : Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CE COMPLIANCE STATEMENT

WARNING : This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
 2. Keep these instructions.
 3. Heed all warnings.
 4. Follow all instructions.
 5. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
 6. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
 7. Only use attachments/accessories specified by the manufacturer.
 8. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/ apparatus combination to avoid injury from tip-over.
- 
- 9. CAUTION - THESE SERVICING INSTRUCTIONS ARE FOR USE BY QUALIFIED SERVICE PERSONNEL ONLY. TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT PERFORM ANY SERVICING OTHER THAN THAT CONTAINED IN THE OPERATING INSTRUCTIONS UNLESS YOU ARE QUALIFIED TO DO SO.**
- 10. Use satisfy clause 2.5 of IEC60950-1/UL 60950-1 or Certified/Listed Class 2 power source only.**
11. Indoor use only.

EXPLANATION OF GRAPHICAL SYMBOLS



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

LIMITATION OF LIABILITY

THE INFORMATION IN THIS PUBLICATION IS BELIEVED TO BE ACCURATE IN ALL RESPECTS, HOWEVER, WE CANNOT ASSUME RESPONSIBILITY FOR ANY CONSEQUENCES RESULTING FROM THE USE THEREOF. THE INFORMATION CONTAINED HEREIN IS SUBJECT TO CHANGE WITHOUT NOTICE. REVISIONS OR NEW EDITIONS TO THIS PUBLICATION MAY BE ISSUED TO INCORPORATE SUCH CHANGES

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CONTENTS OF PACKAGE

Installation of the camera must be performed by qualified service personnel in accordance with all local and national electrical and mechanical codes.

Carefully remove the color camera and its accessories from the carton and verify that they were not damaged in shipment.

The content of the package includes:

1. Color CCD camera
2. Mini-DIN connector (for dc-type auto-iris lens)
3. CS adapter ring for C mounting "C" lenses
4. This manual

INTRODUCTION

The camera provides a high-quality image using SONY Wide Dynamic 1/3" Super-HADII PS 960H CCD and digital signal processing LSI chips.

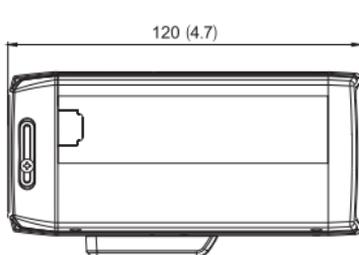
Features:

- 1/3" Super-HADII PS 960H CCD
- Super high-resolution of 750TV lines
- Wide Dynamic Range (~x512) -Double shutter+ATR-EX2
- Auto Electronic Shutter [1/50(60) ~ 1/100,000] and manual electronic shutter modes [1/50(60) ~ 1/10,000]
- 0.1 lux(Colour), 0.01 lux(B/W), 0.001 lux(Slow-Shutter) @ F1.2 50 IRE
- Digital Noise Reduction- 2D,3D
- Day & Night(Auto, Day, Night)
- Sens-Up (~x256)
- Various Detection Methods (zone detection, motion trace)
- Intelligent scene recognition - Provide the best image automatically for every scene
- Mechanical iris auto adjustment
- Privacy Mask or Mosaic (MAX. 15 area /4-point polygonal/transparency)
- E-Zoom
- White pixel detection and compensation
- Digital Effect-FLIP (H/V reverse, inverse)
- Defog(Auto) - Detects foggy condition automatically and provides high contrast picture
- IR Optimizer
- Coaxial communication (Coaxitron by Pelco)
- RS-485 Remote camera control(Pelco-D)-Option
- Support Line-Lock external synchronization (Line lock) -Option
- Quick connect for DC lens with 4-pin connector
- Operates in DC12V, AC24V, AC100-240V -Option

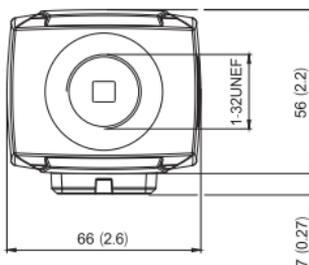


IMPORTANT : The user of this camera is responsible for checking and complying with local, state, and federal laws and statutes concerning the recording and monitoring of audio signals.

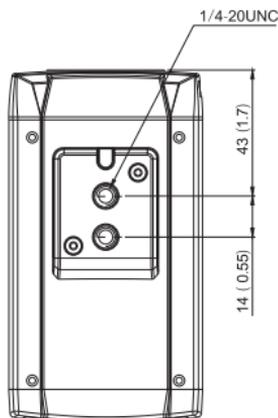
CAMERA OVERVIEW



SIDE VIEW

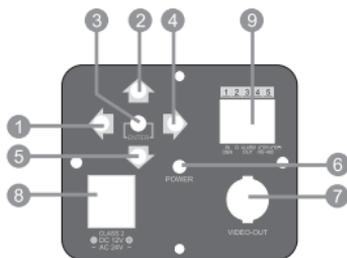


FRONT VIEW



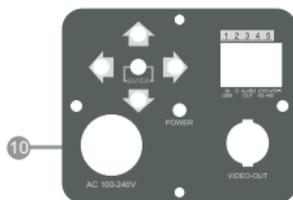
BOTTOM VIEW

Unit: mm (inches)

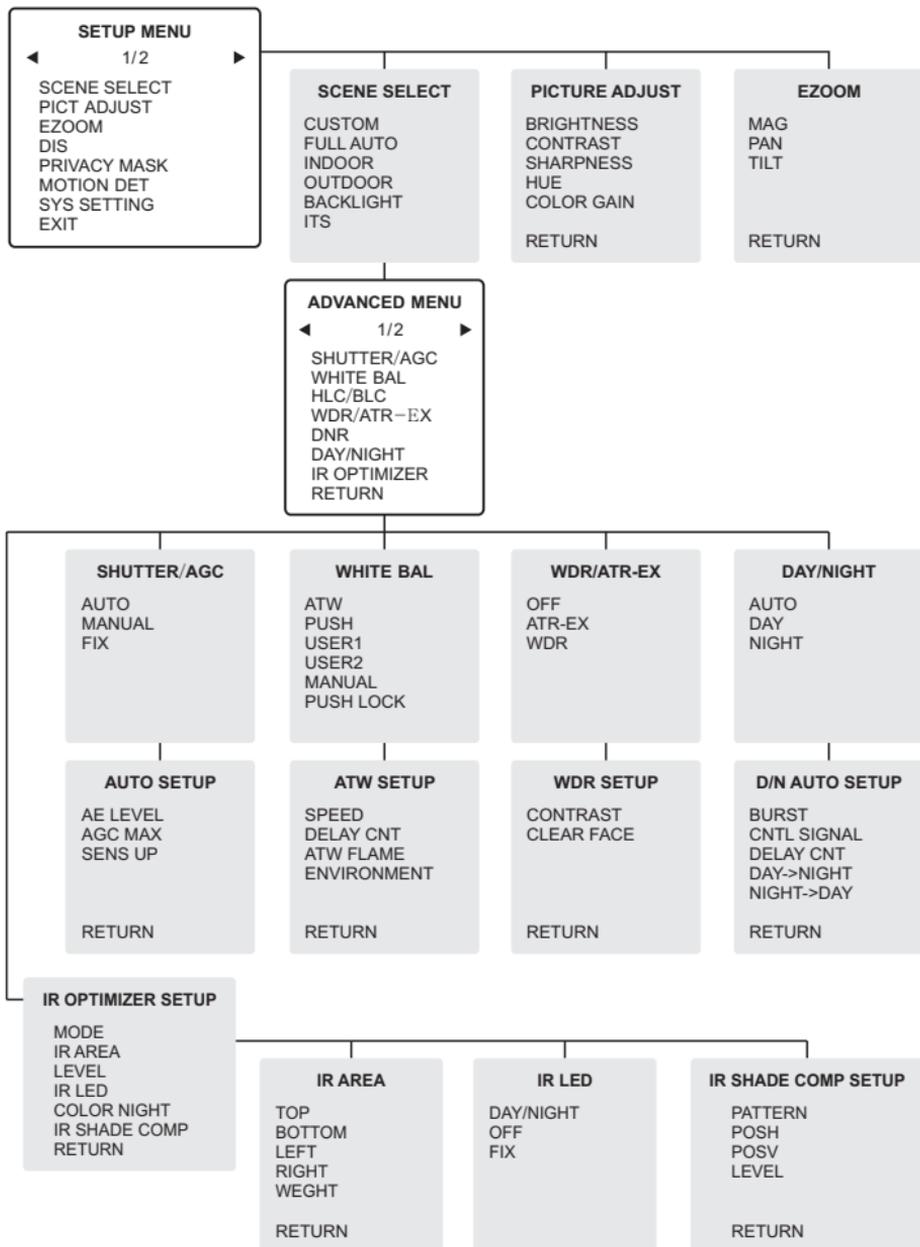


REAR VIEW

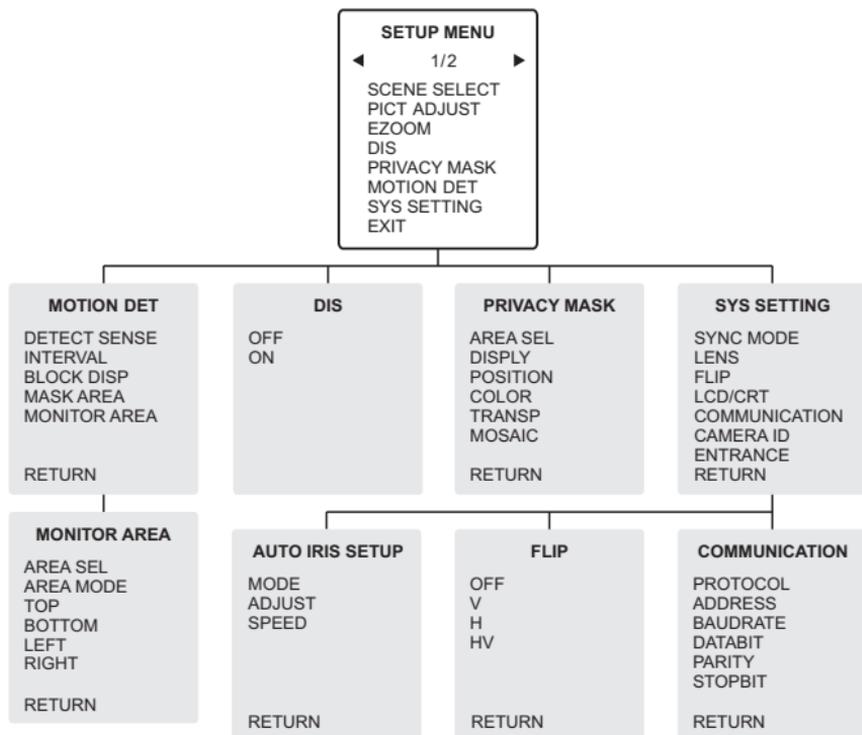
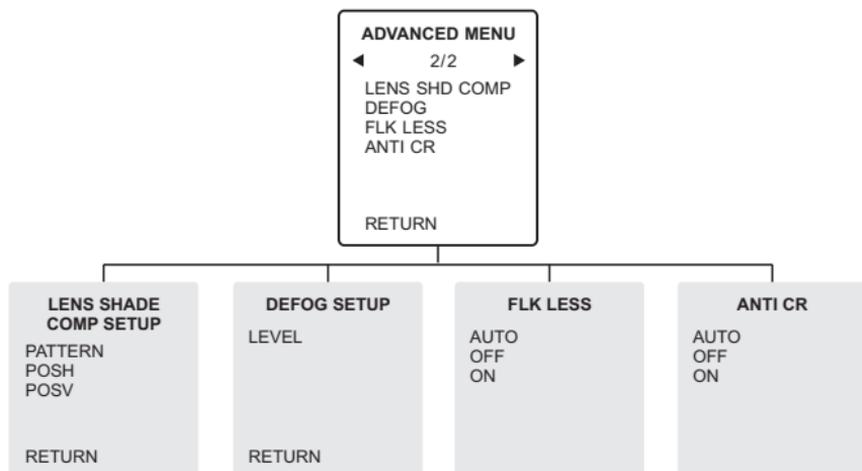
- 1 Left Button
- 2 Up Button
- 3 Enter Button
- 4 Right Button
- 5 Down Button
- 6 Power Indicator
- 7 Video Out Connector (BNC)
- 8 AC/DC Compatible Input Terminal (Option)
- 9 Terminals Block (Option)
- 10 AC Power Cord



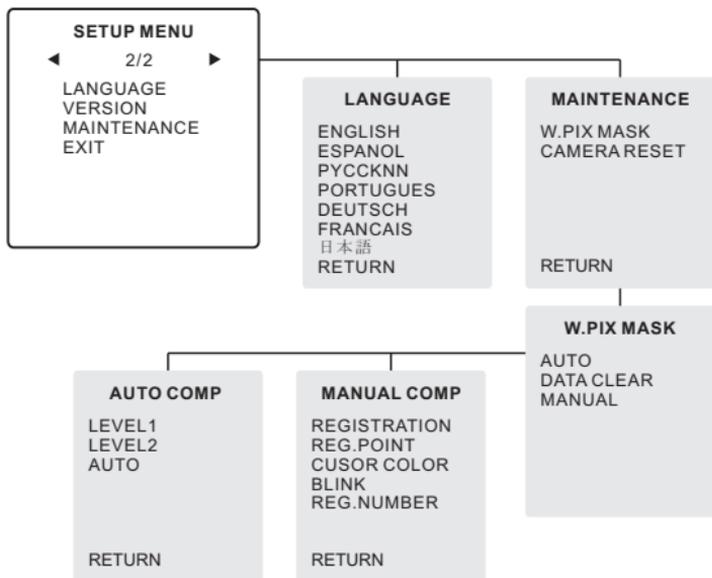
MENU MAP



MENU MAP



MENU MAP



<SETUP MENU>

1. Scene Select function

Select from six modes, CUSTOM/FULL AUTO/INDOOR/OUTDOOR/BACK LIGHT/ITS. All the selections other than Custom have been preset with settings considered optimal for that environment, although they can be changed. All functions can be set and adjusted manually from the Advanced Menu.

CUSTOM

Custom mode turns off the auto scene recognition.

FULL AUTO

Full Auto mode supports a variety of scene types. It is not specialized for any particular scene, so it allows average shooting in any situation.

INDOOR

Indoor mode is specialized for indoor scenes, such as indoor store surveillance. It allows natural shooting with high contrast.

OUTDOOR

Outdoor mode is specialized for outdoor scenes, such as road surveillance. It features high contrast and resolution, and allows shooting with high visibility even in foggy outdoor conditions.

BACKLIGHT

Backlight mode is specialized for scenes that mix indoor and outdoor conditions, such as entranceway surveillance. It allows shooting with high visibility and a high dynamic range, even under backlighting conditions.

ITS

ITS mode is specialized for scenes where moving subjects enter the picture, such as traffic surveillance scenes. It allows high-resolution shooting of moving subjects with low blur.

2. Picture Adjust function

This menu provides functions that enable users to easily adjust the image quality to suit the image output device used. Use the sliding scales to fine tune these adjustments.

Brightness - Adjusts the brightness, where a higher the number produces a brighter image.

Contrast - Adjusts the image contrast (light and shade differences) by raising or lowering this number.

Sharpness - Adjusts the crisp boundaries and details of the image (apparent resolution). A sharper image may increase image noise.

Hue - Adjusts the hue (gradation of color) by selecting a value.

Color Gain - Adjusts the intensity (brilliance) of the colors.

3. EZOOM (Electronic Zoom)

Ezoom - Select ON/OFF. When On is selected, the camera will simulate pan and tilt positions in the scene and optical zoom of the image; the following adjustment can be made. A sliding scale is provided.

MAG - Magnification rate = ZOOM (0~255).

PAN - Horizontal position settings.

TILT - Vertical position settings.

4. DIS (Digital Image Stabilizer)

Digital Image Stabilizer (DIS) function internally detects shaking of the image due to camera shaking, and performs digital compensation processing inside the DSP to suppress this shaking and stabilize the image output. Select ON or OFF.

5. PRIVACY MASK

The mask function hides one or more areas of the scene that the user does not want to be displayed on the screen. This setting is capable of outputting 15 masks to the display. Each of these 15 masks can be set with its own display area, color, darkness and mosaic processing.

AREA SEL - Select mask area (1-15).

DISPLAY - Select Mask to be ON or OFF. When ON, allows setting below:

POSITION - Allows setting the size and location of mask.

COLOR - Sets the color blend:

RED/ GREEN/ BLUE/ YELLOW/ CYAN/ MAGENTA/ WHITE/ BLACK

TRANSP - Sets the brightness blend ratio: 0%/50%/75%/100%.

MOSAIC - Sets the mosaic to ON or OFF (when transparency is set below 100%).

6. MOTION DET (Motion Detection)

By using the motion detection (MD) function, the camera is capable of detecting moving objects. The motion detection function identifies motion and outputs motion information when the difference in luminance exceeds a specific level between frames.

DETECT SENSE

Set the motion detection threshold using the sliding scale. Threshold detects the amount of change in the area. The higher the number, the more sensitive to motion the camera is.

INTERVAL

Set the MD detection interval using the sliding scale. Subjects are detected when an interval exceeding the set number of fields has elapsed from the previous motion detection event.

BLOCK DISP

When selected ON, motion detection frame display selections are available.

Displays the results of the motion detected in each block. Turn ON or OFF.

MASK AREA

This is used for setting the no-detection area.

The active point (MASK AREA 1~96) is displayed. Move from point to point using the joystick. Press the joystick to select edit point. (no-detection area).

MONITOR AREA

Set the position of the motion detection area. Select the area to be set up and turn area mode ON> The size of the frame can be adjusted using the Top, Bottom, Left and Right sliding scales.

7. SYS SETTING

7-1. SYNC MODE

Select how the camera is synchronized with other cameras in the system. External synchronization (line lock) is a function that synchronizes the phase between an output video signal and an external reference signal.

INT

Using this mode, timing is controlled by internal electronics in the camera; synchronization is not implemented with multiple cameras.

LL

In Line Lock mode, LL is used to synchronize the vertical sync signal with the AC power supply with a power line frequency of 60 Hz (for the NTSC format) or 50 Hz (for the PAL format). Line Lock is not available when using a 12 VDC power supply. Use line lock mode to minimize color rolling.

PHASE -Use the sliding scale to select a value from 0 to 524 (PAL, 624).

7-2. LENS

Set the lens type.

AUTO When Auto is selected, there are further menu options (Mode, Adjust, Speed).

Manual Allows manual adjustment of lens. Do not select this option.

7-2-1. MODE

AUTO Adjusts the iris in accordance with the subject brightness.

OPEN Fully opens the iris.

CLOSE Fully closes the iris.

7-2-2. ADJUST

When performing the automatic mechanical iris adjustments, a suitable convergence speed (how fast the lens responds) for the lens is calculated. View a high-brightness subject which will make the brightness of the whole screen uniform. Check that the scene conditions are sufficiently bright and stable.

7-2-3. SPEED

Manually sets the convergence speed for how fast the lens responds to lighting changes (autoiris).

7-3. FLIP

Digital Flip (rotation state) can be selected to be OFF/ V (top/bottom reversal)/H (left/right reversal)/HV (rotation by 180 degrees).

7-4. LCD / CRT

Select monitor mode of LCD or CRT.

7-5. COMMUNICATION (OPTION)

This sets up communication using the RS-485 format.

Protocol - RS-485 protocol (PELCO-D).

Address - Select the camera ID (001 - 255).

Baud Rate - Select serial communication speed.
(2400/4800/9600/19200/38400/57600/115200).

Databit - Internally fixed.

Parity - Select OFF/ODD/EVEN. This is used to find the Bit to extract an error on the keyboard.

Stopbit - Internally fixed.

Key of Keyboard Controller:

MENU Joystick Handle turn clockwise, ZOOMTELE

ENTER Joystick Handle turn clockwise, IRIS CLOSE

OSD Cursor Movement Joystick Up / Down / Left / Right

7-6. CAMERA ID

Set the camera ID ON or OFF. When ON, the CAMERA ID SETUP screen can be displayed.

A title of 64 characters per line can be configured.

Use the joystick to navigate the cursor.

Pushing centrally on the joystick will allow selection of that character.

The arrows at the bottom allow you to move the cursor without changing the character.

CAMERA ID SETUP

CAMERAID

```
ABCDEFGHIJKLMNPOQRSTUVWXYZ  
WXYZ0123456789!"#$%&'(  
)_.,:;=<=>?@/^*↑ ↓ ← →
```

CHR1

CHR2

→ + ↑ ↓

CLR POS

RETURN

CHR1

Select CHR1 is displayed Table of input Characters.

CHR2

Select CHR2 is displayed Table of input White Bar.

CLR

Select CLR to insert a space.

POS

Select POS to return to the live view screen to adjust the location of the camera ID title display. (If it is moved too much to the right side or down, the ID might move off the screen.)

8. EXIT-MENU

SAVE Save the settings (settings are saved).

NOT SAVE Exit menu without saving.

CANCEL Changes (restore settings to those selected when the menu was displayed).

BACK Return to previous menu.

9. LANGUAGE

Select a language from English, Spanish, Russian, Portuguese, German, French, or Japanese.

10. VERSION

Camera version information is displayed.

11. MAINTENANCE

W.PIX MASK

The white pixel detection and compensation function can automatically detect and compensate up to 64 white pixels (static detection). It is recommended that this be set to Auto and not modified.

AUTO

Auto mode performs the optimal operation for detecting white pixels and automatically detects the white pixels of CCD image sensors.

LEVEL1 - Normal Detect

Adjust the threshold value of the white pixel detection using the sliding scale.

LEVEL2 - Large Detect

Adjust the threshold value for very large white pixel detection using the sliding scale.

AUTO Press the joystick to enter White Pixel Compensation mode.

RUN Press joystick to start White Pixel Compensation process.

RUNNING Process to find white pixels.

SBC SUCCESS Process complete.

BACK Returns to the previous menu.

MANUAL

- REGISTRATION

Manual white pixel detection information registration

- 1) Press the joystick to turn white pixel compensation position marker display.
- 2) Use the joystick to align the marker with the position of the white pixel.
- 3) Press the joystick to exit and select EXIT to save.

Note: In manual detection mode, the detection data is always treated as a very large white pixel. Up to 64 white pixel compensation.

- NEXT REGISTRATION

Continue with another manual white pixel compensation setting.

- REG. POINT

Select whether to display the registered white or black pixels (OFF/WHITE/BLACK)

- CURSOR COLOR

Select cursor color during manual detect registration (white, black, red, green, blue).

- BLINK

Select to have cursor display blinking during manual detect registration (ON/OFF).

- REG. NUMBER

The number of registered white pixel detect counts (out of 64).

DATA CLEAR

Initialize the white pixel compensation information. Select Yes or No.

To erase white pixel data, select YES.

CAMERA RESET

Select Camera Reset or Back. Selecting Camera Reset returns the camera to factory default settings. Choosing Back returns to the previous menu.

<ADVANCED MENU>

12. SHUTTER / AGC

AEME (Auto Exposure/Manual Exposure) selection, (shutter/AGC). This control adjusts the amount of exposure using the shutter speed.

12-1. AUTO

Select Auto to have exposure control performed automatically.

AE LEVEL (Auto Exposure Level)

Set the AE level using the sliding scale. Set exposure control so that the output level (evaluation value) is the target brightness level (AE reference level). This control is called AE gain control.

AGC MAX

Set the AGC (Auto Gain Control) maximum setting to adjust brightness. This control adjusts the exposure amount.

SENS UP (Slow Shutter)

Adjust the proper brightness in Low-light conditions. Select the setting for slow shutter speed to allow extra light into the camera (AUTO and OFF). Select Auto to have the camera automatically make this adjustment. Select Off to disable this function.

12-2. MANUAL

Select Manual to have exposure control performed manually.

SHUTTER

Select the shutter speed.

AGC MAX

Set the maximum AGC (Automatic Gain Control, DB) to adjust brightness.

12-3. FIX

Exposure control is stopped. AE does not track even if the subject brightness changes.

SHUTTER

Select the shutter speed.

AGC

Set the AGC (Automatic Gain Control, DB) to adjust brightness.

13. WHITE BAL

Compensate for deviations in the white color caused by changes in the color temperature of the light source, so that the colors are reproduced correctly.

ATW - ATW mode (1800°K ~10500°K)

Performs indoor/outdoor identification, estimates the light source, and performs WB control automatically.

- | | |
|--------------------|---|
| SPEED | Use the sliding scale to adjust the ATW speed (0-255); 255: fastest, 0: slowest. |
| DELAY CNT | Use the sliding scale to adjust the number of fields for operation to start (1-255). When 1 is set, operation starts immediately. |
| ATW FRAME | Use the sliding scale to adjust the frame expansion or contraction rate (1-255) |
| ENVIRONMENT | Select from AUTO/INDOOR/SUNNY (outdoor)/SHADE (outdoor) environment. |

PUSH

The PUSH function performs White Balance control automatically, regardless of the indoor/outdoor and light source conditions. Compensation may be performed incorrectly since this control is easily affected by deeply colored subjects.

USER1

The USER1 functions set the White Balance gain in accordance with preset values (3200 K). WB control does not track even if the subject color temperature changes.

Use the sliding scale to adjust red or blue gain.

R (R-GAIN): Adjust R-GAIN value (0-255)

B (B-GAIN): Adjust B-GAIN value (0-255)

USER2

The USER2 functions set the White Balance gain in accordance with preset values (5800 K). WB control does not track even if the subject color temperature changes.

Use the sliding scale to adjust red or blue gain.

R (R-GAIN): Adjust R-GAIN value (0-255)

B (B-GAIN): Adjust B-GAIN value (0-255)

MANUAL

Manual White Balance allows WB control to be performed manually. The configurable color temperature setting range is 1500K to 15000K. Use the sliding scale to set the number of white balance steps; the setting can be performed in 64 steps.

PUSH LOCK

PUSH LOCK sets the White Balance based on the current scene. The PUSH LOCK function first transfers to PUSH mode and performs ATW operation and then transfers to HOLD mode when complete.

14. HLC/BLC

HLC (Highlight Compensation)

HLC luminance signal processing is a function that suppresses (masks) the luminance signal. It enhances visibility impaired by strong light sources or other factors by performing output while suppressing the brightness of high-brightness areas.

CLIP LEVEL Use the sliding scale to set the HLC mask level for optimum brightness.

BLC (Backlight Compensation)

The BLC function provides compensation by increasing the brightness of the overall screen, so that subjects with a loss of dark detail due to backlight will have just the right brightness level.

15. WDR/ATR-EX

Set the parameters below for either ATR-EX or WDR.

CONTRAST (LOW/MID/HIGH) Select for proper contrast.

CLEAR FACE (OFF/LOW/MID/HIGH) High-frequency component adjustment gain.

ATR-EX (Extended)

The ATR (Adaptive Tone Reproduction) function provides gradation compensation with to improve the contrast of subjects whose gradation has been lost in a scene, for example due to low-luminance and high-luminance areas existing in the same picture. The ATR function improves the visibility of the entire picture by providing the optimum gradation compensation for the image based on the luminance information, by compressing the dynamic range while storing the contrast component of the subject.

WDR (Wide Dynamic Range)

The Wide Dynamic Range (WDR) function improves video exposure quality in scenes with high contrast between bright and dark areas, for example if a shady area and a bright light area are in the same scene.

16. DNR

Digital Noise Reduction is used to reduce image noise, which is generated under low-light conditions and other high-gain states, in order to improve the image quality of the camera.

LEVEL Adjusts the NR (3D+2D) strength (0~6) using the sliding scale.

17. DAY/NIGHT

17-1 AUTO

Camera automatically switches between Day and Night modes according to the D>N and N>D levels.

BURST: Select B/W Burst ON/OFF.

CNTL SIGNAL: Select a brightness reference for identifying Day/Night Control Signal.

INT Internal AGC (ILM) levels.

EXT1 External sensor inverting.

EXT2 External sensor non-inverting.

- Ext: Camera switches between Day and Night modes according to the D/N EXT input.

Delay CNT: Adjust the time for the transition between the Day and Night (0-255).

DAY>NIGHT Level: Select switching level Day to Night (0-255).

NIGHT>DAY Level: Select switching level Night to Day (0-255)

DAY: Camera stays in Day mode (Color).

NIGHT: Camera stays in Night mode (B/W).

18. IR OPTIMIZER(Option)

When the Night operation mode of the Day/Night function is established, and used together with an external infrared LED light source, excessive front lighting may be generated, resulting in overexposure. IR Optimizer can be set ON to correct this.

18-1. IR OPTIMIZER SETUP

MODE

Select IR optimizer photometry mode, Auto or Center.

IR AREA

Set the IR optimizer area when in Center mode. Select values for top, bottom, left, right and weight using the sliding scale.

LEVEL

Use the sliding scale to set the IR optimizer intensity (0~12).

IR LED(IR Model only)

OFF LED light level is LOW.

FIX Adjust LED light level (0~255).

DAY/NIGHT LED light level determinate AE reference level.

COLOR NIGHT

The Color Night Mode (CNM) function allows images to be taken as color images even with infrared LED floodlighting under low-brightness conditions. Using signal processing that separates the infrared LED light components from the images taken, it extracts the original colors of the subject. This function takes effect during Night operations. Select ON or OFF.

COLOR GAIN LOW/MID/HIGH

IR SHADE COMP (IR Model only)

The IR-SHD function compensates for observable events in which the light passing through the lens is imaged non-uniformly.

Shading function ON/OFF selection

PATTERN

Select the shape of the ellipse (HIGH/MID/LOW)

POSH/POSV

Use the center coordinate settings to adjust the shading compensation to the center position of the optical axis.

LEVEL

The compensation level can be set to low, medium or high for basic shading compensation data.

19. LENS SHD COMP

The Lens Shade function compensates when the lens produces an image with uneven brightness, with the corners being less bright. Select ON or OFF. If ON is selected, more options are provided.

PATTERN

When the camera views a white image, the brightness is marked as a shape (i.e., ellipse or rectangle). Select (HIGH-SET3/MID-SET2/LOW-SET1), where low is a little compensation and high is maximum compensation to the brightness of the corners of the image.

POSH/POSV

Use the center coordinate settings to adjust the shading compensation to the center position of the optical axis.

20. DEFOG

Select Defogging function to be ON or OFF. The defog function raises the contrast to improve visibility. For example, in foggy conditions, contrast is reduced and visibility drops. In such cases, enabling the defog function prevents a drop in contrast. In addition to compensating for contrast, compensation is also made for the saturation, edges, and 3D-NR moving body identification threshold. The defog compensation strength can be set to three levels (Low, Mid, High) using the ON function.

21. FLK LESS

Select Flickerless function to be AUTO/ON/OFF.

MODE -When AUTO or ON is selected:

GAIN CNTL Selects gain modulation ON.

SHUTTER FIX Selects flickerless shutter fix ON.

22. ANTI CR (Anti Color-Rolling)

Anti color-rolling mode is valid when the AEME parameter is set to AE. When that parameter is set to HOLD, the status of the previous field is maintained. Anti color rolling compensates for proper color in certain lighting conditions.

Users can select from the following anti color-rolling modes.

AUTO Anti color-rolling is automatically detected and compensation is done.

ON Anti color-rolling is always compensating.

OFF Anti color-rolling is not compensating.

If the Auto anti color-rolling mode is selected, then the Auto flickerless mode is turned on at the same time.

*Note Coaxial Communication (32 Bit)

Controller can communicate with camera through the BNC port.

Recommended controller

- Coaxial Remote Controller: RM-1000

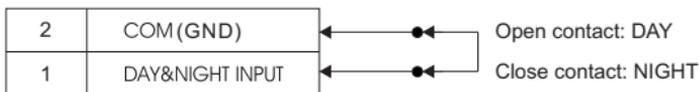
CONTROL AND CONNECTIONS/DAY&NIGHT IN/ALARM OUT TERMINALS

1. Terminal Block (Option)

1	2	3	4	5
D&N IN	GND	ALARM OUT	RS-485 +(RX)	RS-485 -(TX)

1-1. DAY&NIGHT EXTERNAL INPUT (1pin)

Switches the cameras D/N mode to either Day or Night based on the input status. Refer to the diagram below. The cameras D/N mode must be set to EXT for this to function.



1-2. Common/Ground – Used for D/N and Alarm connections

1-3. ALARM OUT - TTL level

Motion detection signals are output through this port. Active state is Low.(GND)
Normal : Open Collector, ALARM : Low.(GND)

1-4/5. CAMERA CONTROL

- 4 PIN: RS 485+ DATA
- 5 PIN: RS 485- DATA

2. POWER INPUT TERMINAL



CLASS 2
+ DC 12V -
~ AC 24V ~

- This terminal accepts a DC12V or AC24V (Option) power source from a DC12V or AC24V +/-10% 60/50Hz +/- 1Hz.
- Use Certified/Listed Class 2 power source only.
- In DC power, use the Adapter mode than DC 12V 500mA Capacity.



AC 100-240V

- It is recommended to use the DC power supply that can support inrush current over 0.55A.
- AC Power Cord -
This power cord accepts a 100-240V ~ 50(60)Hz ±1Hz.

3. VIDEO OUT CONNECTOR

BNC : This BNC connector provides a 1.0Vp-p/75 ohms composite video Signal.

LENS

The lens is not supplied with this camera. Purchase a lens suitable for your environment. This camera accepts the auto iris lens and both C-and CS-mount lens.

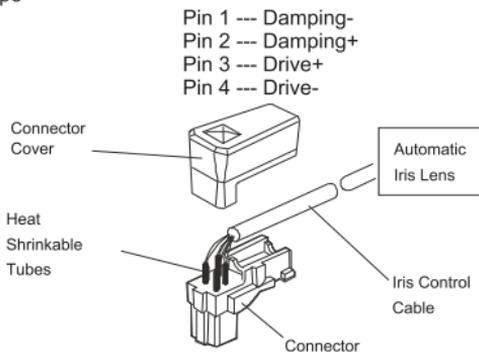
* Notes *

- For using main functions it is recommended to use Auto Iris Lens with DC type.
- If the lens is marked with fingerprints other marks, the image quality might be poor.
- It is recommended to use a high quality lens to improve the image quality under low illumination.

INSTALLING AUTO IRIS LENS

1. Remove the cover from the iris lens plug supplied, and solder the lens cable to the plug as shown below.

- DC type



2. Remove the protective cap, and attach the lens to the camera by turning clockwise.

SPECIFICATIONS

MODEL		NTSC	PAL	Free Voltage	
Power	Power source	DC12V/AC24V +/- 10%(Option)		AC100-240V-50(60)Hz±1Hz	
	Power consumption	AC24V / DC12V- 210mA(2.5Watts)		45mA(3.0Watts)	
		DC12V - 200mA(2.3Watts)			
General	Image sensor	1/3" Super-HADII PS 960H CCD			
	Total pixels	1028(H)x508(V)	1028(H)x596(V)		
	Effective pixels	976(H)x494(V)	976(H)x582(V)		
	Scanning system	2:1 interlace			
	Scanning frequency	15.734KHz(H) x 59.94Hz(V)	15.625KHz(H) x 50Hz(V)		
	Sync. system	Internal / Line Lock(Option)			
	Resolution	750TVL			
	Min. illumination	0.1 Lux(Color), 0.01Lux(B/W), 0.001Lux(Slow-shutter)			
	Video Output	1.0 Vp-p (75 ohm, Composite)			
	S/N Ratio	50dB (AGC off)			
	Camera Control	Tact Switch, Coaxial COMM(32BIT),RS485(Pelco D)			
	F U N C T I O N	Lens	DC / MANUAL		
		Scene Select	CUSTOM / FULL AUTO / INDOOR / OUTDOOR / BACKLIGHT / ITS		
		White Balance	ATW/ PUSH/ USER1/ USER2/ MANUAL/ PUSH LOCK		
		AGC	6~44.8DB		
		Shutter Speed	1/60-1/100,000 sec.(Auto)	1/50-1/100,000 sec.(Auto)	
		BLC	OFF / HLC / BLC		
		Camera Title	Alpha Numeric		
		DNR	2DNR, 3DNR : Gain Adjust		
		Day & Night	Auto / Day / Night		
		IR Optimizer	OFF / ON		
		Color Night	OFF / ON		
		Privacy zone	Max 15 (Tilt, Colour, Transparency, Mosaic)		
		Effect	V-Flip / Mirror / Rotation / Nega&Posi / Freeze / Sharpness		
		Sens-up	OFF / AUTO		
		Sharpness	0~15 steps		
		WDR	WDR/ATR-EX (LOW/MID/HIGH)		
		E-Zoom	OFF / 0 ~ x255(E-Zoom) / PAN/TILT		
		Bad Pixel	AUTO/MANUAL/Done (Max 64 point), Detected pixel display		
		MOTION	Detect Sense/Interval/Block DISP/Mask Area/Monitor Area		
Auto-color-roling		Auto / ON / OFF			
LANGUAGE	English, Spanish., Russian, Portuguese, German, French, Japanese(OPTION)				
Connector & etc.	Power input	Terminal block		Power Cord	
	Video output	BNC			
	Auto iris output	4-Pin Mini Din jack (standard connection)			
	Lens Mount	C/CS Mount			
	Operating temp.	14°F ~ 122°F (-10°C ~ +50°C)			
	Operating humidity	0 ~ 96% (non-condensing)			
	External Dimension	66(W) x 63(H) x 120(D) mm			
	Weight	260g(only camera)		450g	