



The lightning flash with an 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 appliance.

INFORMATION - This equipment has been tested and found to comply with limits for a Class A digital device, pursuant to part 15 of the FCC Rules & CE 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.

WARNING - Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

CAUTION : To prevent electric shock and risk of fire hazards:

- ◆ Do NOT use power sources other than those specified.
- ◆ Do NOT expose this appliance to rain or moisture.

This installation should be made by a qualified service person and should conform to all local codes.

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■ Features

Ultra High Resolution

By adopting a double-speed 410,000 pixel Sony CCD, the camera produces clear picture quality with a horizontal resolution of 580 TV lines for color, and 700 TV lines for BW.

Day & Night

The camera identifies whether it is day or night and automatically switches to the appropriate mode, depending on the environment. By day, the camera switches to color mode in order to maintain optimum color. At night, it switches to BW mode to give better picture definition.

Photo Sensor & IR LED (18pcs)

IR LEDs are auto switching according to the control of photo sensor.

DIS (Digital Image Stabiliser)

The DIS function compensates for any camera movement, to produce more stable pictures.

DNR (Digital Noise Reduction)

The amount of low illuminance noise has been significantly reduced and the signal-to-noise ratio (S/N ratio), as well as horizontal resolution, have been improved resulting in a clear and sharp image even in low light.

Motion Detection

The camera detects motion and generates a screen message without an external sensor.

Miscellaneous Functions

SYNC (INT/LL), SENS-UP, FREEZE, FLIP (HW-REV), D-ZOOM, SHARFNESS, MOTION DETECTION and PRIVACY functions are provided.

RS-485 Communication Control Support

Remote OSD menu control via an RS-485 interface is supported.

Language

The camera control is convenient by using 7 different foreign language O.S.D.
- NTSC : Korean, English, Spanish, Japanese, French
- PAL : English, French, German, Spanish, Italian, Chinese

3 Axis built-in Vandal Resistant Dome Housing

Heater for cold temperature (optional)

Weatherproof (IP66)

Warning ■

The camera requires periodic inspection.

Contact an authorised technician to carry out the inspection.

Stop using your camera when you find it malfunctioning.

If the camera emits smoke or is unusually hot for a long period, a fire may be caused.

Do not install the camera on a surface that can not support it.

If the camera is installed on an inappropriate surface, it may fall and cause injury.

Do not hold plug with wet hands.

It could cause an electric shock.

Do not dis-assemble the camera.

It may result in an electric shock or other hazards.

Do not use the camera close to a gas or oil leak.

It may result in a fire or other hazards.

■ Precautions

Do not install the camera in extreme temperature conditions.



Only use the camera under conditions where temperatures are between -10°C and +50°C. Be especially careful to provide ventilation when operating under high temperatures.

Do not install the camera under unstable lighting conditions.



Severe lighting change or flicker can cause the camera to work improperly.

Do not install or use the camera in an environment where the humidity is high.



It can cause the image quality to be poor.

Do not touch the front lens of the camera.



This is one of the most important parts of the camera. Be careful not to leave fingerprints on the lens cover.

Do not drop the camera or protect it from physical shocks.



It can cause malfunctions to occur.

Do not expose the camera to rain or spill beverage on it.



If it gets wet, wipe it dry immediately. Liquids can contain minerals that corrode the electronic components.

Never keep the camera pointed directly at strong light.



It can damage the CCD.

Do not expose the camera to radioactivity.



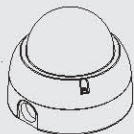
If exposed to radioactivity the CCD will fail.

Note

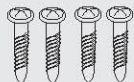
- If the camera is exposed to spotlight or object reflecting strong light, smear or blooming may occur.
- Please check that the power satisfies the normal specification before connecting the camera.

■ Components

1. COLOR DOME CAMERA



2. SCREWS



3. WRENCH



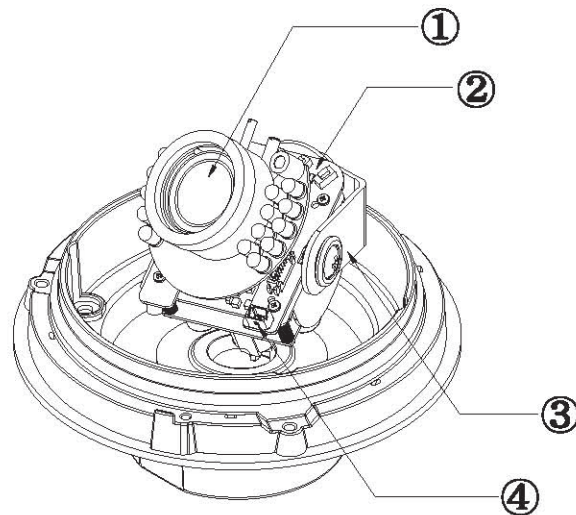
4. WIRE FOR VBS-EXTRA



5. INSTRUCTION GUIDE

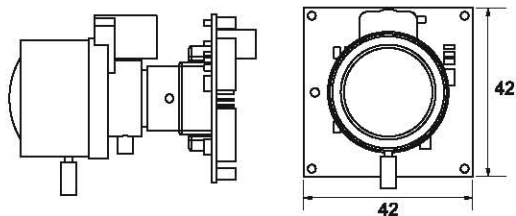


Names and Functions of Parts ■

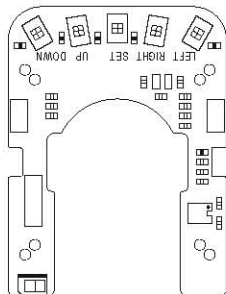


Names and Functions of Parts

① LENS : Vari-Focal DC Auto Iris Lens



② OSD PCB



- **SET button** : Used for the menu display. This button can be used to confirm settings after changing the value of the selected function or current conditions.
- **UP & DOWN buttons** : Used for selecting items by moving the cursor up or down on the menu screen.
- **LEFT & RIGHT buttons** : Used when changing item values, by moving the cursor to the left or right on the menu screen.

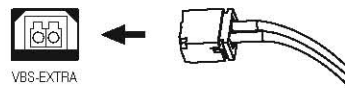
Names and Functions of Parts

③ 3 AXIS BRACKET

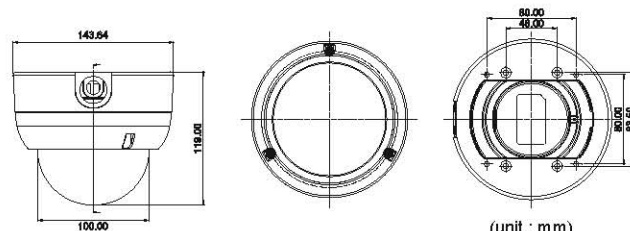
Loosen the fixing screws and fix in to the tilted and panned position.

④ VBS-EXTRA FOR CONNECTING TO A TEST MONITOR

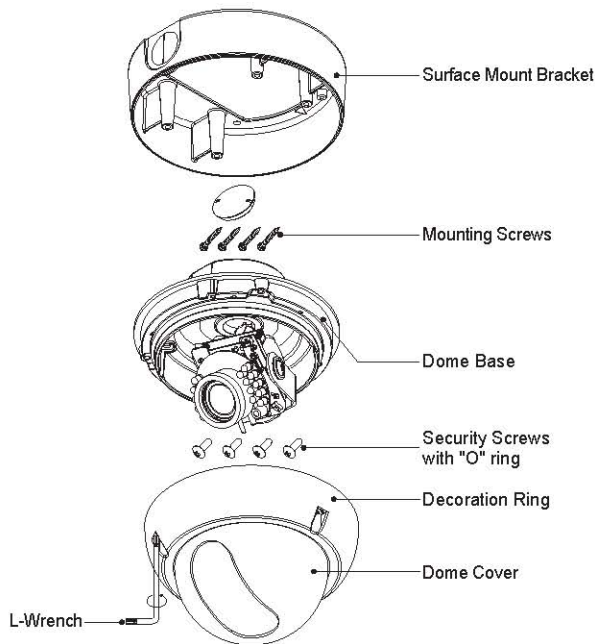
Use the supplied wire to connect to a test/service monitor.



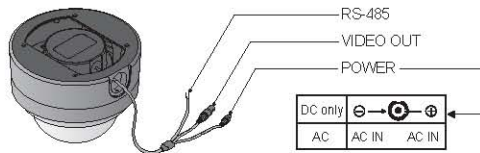
Dimensions



■ Installation



■ Cable Connections



1. Dome Base Mounting

- Open the dome cover by loosening 3 screws using special wrench provided.
- Mount the base of camera to a sturdy surface using 4 screws (1.5 inch) and 4 premade holes on the base of the dome.

2. Power Connect & Monitor Impedance

- DC 12V/300mA regulated power supply (DC 12V only)
- AC 24V Class 2 power supply (AC 24V/DC 12V)
- To avoid fire or shock hazard, must use a UL listed power supply.
- Set the monitor impedance switch to 75Ω. Check the impedance switch when the screen turns blurred.

3. Camera Module Adjustment

- Loosen screws for 3-axis camera bracket and adjust the direction and angle of camera.
- Make sure to retighten the screws for camera bracket.
- Set any function you wish to activate by using the OSD buttons.

4. Dome Cover Mounting

- Replace the dome cover to the base and tighten 3 screws.

Control via RS-485 Interface

The camera can be controlled by using external controllers like a Remote controller. (RS-485 Communication)

- To control using a DVR or System Controller
Connect the RS-485 cable (TRX+, TRX-) to the connection port of the 485 control board that is connected to the DVR or System Controller.

485 Control Board Connection Port	RS-485 Control Port
(+) CONNECTION TERMINAL (TRX+)	485+
(-) CONNECTION TERMINAL (TRX-)	485-



Note

- To control the camera by constructing an additional controller, use Pelco-D protocol.
(Go Preset 95 : Enters into OSD menu or Set key function)

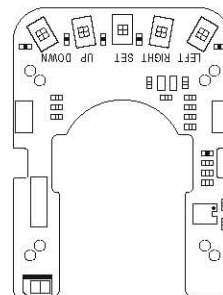
How to Use the Camera

Function Menu Structure

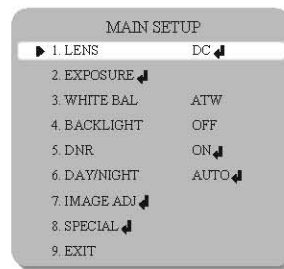
Setup Menu	
LENS	• DC • MANUAL
EXPOSURE	• SHUTTER • AGC • SENS-UP • RETURN
WHITE BALANCE	• ATW • MANUAL • AWC SET • OUTDOOR • INDOOR
BACKLIGHT	• OFF • BLC • HLC
DNR	• ON • OFF
DAY/NIGHT	• COLOR • B/W • AUTO • EXTERN
IMAGE ADJUSTMENT (IMAGE ADJ.)	• FREEZ • V-REV • H-REV • D-ZOOM • SHARPNESS • RETURN
SPECIAL	• CAMTITLE • SYNC • MOTION DET • PRIVACY • DIS • COMM ADJ • LANGUAGE • RESET • RETURN
EXIT	

How to Set up the Functions

Settings can be made using the 5 buttons located in the camera.



1. Press the SET button.
 - The Setup menu is displayed on the monitor screen.



2. Select a menu item using the Up and Down buttons.
 - Place the cursor over a desired item.

Setup Page Menu

SETUP		
▶ PRESETS	WD NORMAL	
	NORMAL	
	INDOOR	
	OUTDOOR	
	FLUOR1..	
	FLUOR2..	
LENS	DC..	
	VIDEO..	
	MANUAL	
WDR	AUTO	
	HIGH	
	USER..	BIAS, LIMIT
	LOW	
WHITE BAL.	ATW..	
	ATWDes..	
	AWC..	
	MANUAL..	RED, BLUE
AGC	MIDDLE	
	HIGH	
	OFF	
	LOW	
DNR	AUTO	
	OFF	
SENS-UP	AUTO..	
	OFF	
SPECIAL..		
EXIT		

Special Page Menu

SPECIAL		
▶ CAMERA ID	OFF	
	ON..	ID, Position
DAY&NIGHT	EXT	
FLIP	OFF	
	HORIZ	
	VERT	
	BOTH	
DZOOM	OFF	
	ON..	
MOTION	OFF	
	ON..	
PRIVACY MASK SETUP ...		
	PRIVACY MASK	
	MASK COLOR	
ADVANCED SETUP..		
RESET		
RETURN		

Advanced Page Menu

ADVANCED SETUP

- ▶ VIDEO STANDARD NTSC..
 PAL..

- RESOLUTION HIGH
 NORMAL

- BACKLIGHT OFF
 ON..

- SYNC INT
 LL..

- SHARPNESS -8 8

- APERTURE -8 8

- RS485 SETUP

- VERSION (D25_4.3H.DB.IR)

- RETURN

PRESETS

SETUP

- ▶ PRESETS WD NORMAL
- NORMAL
- INDOOR
- OUTDOOR
- FLUOR1..
- FLUOR2..

- LENS DC
- WDR AUTO
- WHITE BAL. ATW
- AGC MIDDLE
- DNR AUTO
- SENS-UP AUTO
- SPECIAL
- EXIT

• **WD Normal : WD Normal environment.**

WD NORMAL PRESET

> RETURN

H-Extra High/Shutter Pri
Preference = Highlights
Max DR = 17 bits

• **Normal : Normal environment.**

NORMAL PRESET (ONE)

> RETURN

H-Normal/Shutter Pri
Preference = Highlights
Max DR = 14 bits

• **Indoor : Indoor environment.**

INDOOR PRESET (TWO)

> RETURN

S-Normal/Shutter Pri
Preference = Shadows
Max DR = 16 bits

• **Outdoor : Outdoor environment.**

OUTDOOR PRESET (THREE)

> RETURN

H-High / Shutter Pri
Preference = Highlights
Max DR = 17 bits

• **FLUOR1 : Fluor1 environment.**

FLUORESCENT 1 PRESET

> RETURN.

FLUORESCENT 1
Preference = Highlights
LineLock Recommended

• **FLUOR2 : Fluor2 environment.**

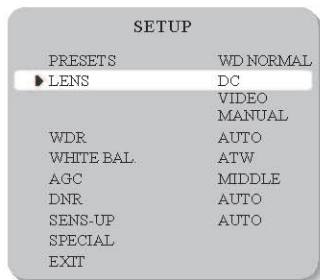
FLUORESCENT 2 PRESET

> RETURN.

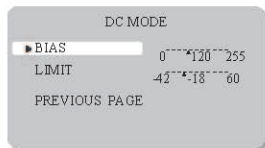
FLUORESCENT 2
Preference = Shadows
DC Iris Only

Setup Page Menu

LENS

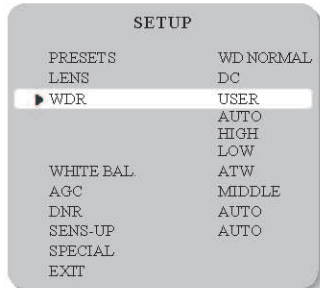


- **LENS**
Choose the lens type DC, Video and Manual lens by using the selector button.

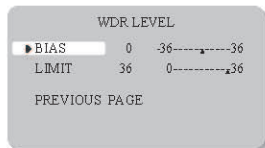


WDR

Wide Dynamic Range is essential for capturing the images at all light levels. The main function of the WDR is to accumulate the scope of contrast between the brightest and darkest points in the picture. With the AUTO option, the distribution of brightness values is automatically adapted to the recording scenario.



- User can select the desired level HIGH, USER & LOW, in addition to automatic adaptation (Auto), by moving the selector button.

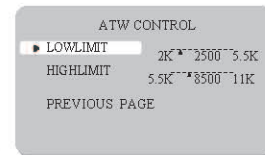
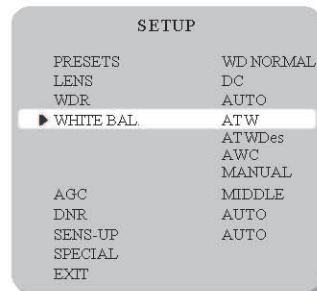


Setup Page Menu

WHITE BALANCE

White Balance is a function which compensates different colors of light being emitted from different light sources.

Users can select the above levels as they desire according to the environment.

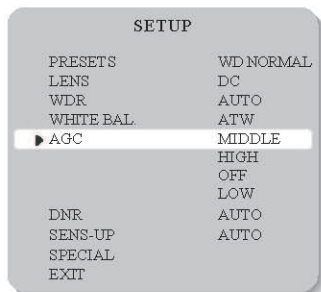


- **ATW (Auto Tracking White Balance)**
The ATW mode continuously monitors color temperature. With WB Control set to ATW, color temperature & White balance can be automatically adjusted accordingly.
- **ATWDesat (ATW Desaturating)**
When WB is set to ATWDesat, the Extended Color temperature is desaturated i.e when there is a excess of light temperature, ATWDesat Function is used as well as it reduces the Noise. The limits of the color temperature setting remain 2000K and 11,000K
- **AWC (Auto White Balance)**
When set to AWC, Color temperature of the Light is automatically adjusted.
- **Manual (Manual White Balance)**
Manual White Balance (MWB) Mode is used when other White Balance Options are failed.

Setup Page Menu

AGC

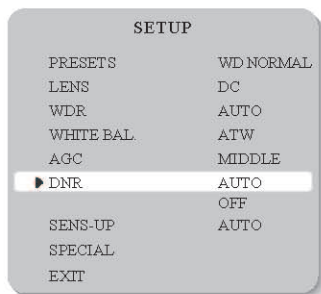
Automatic Gain Control is a feature which adjust automatically according to the incoming Signal. By positioning the arrow to 'AGC' on the SETUP menu with the help of UP and DOWN buttons, you can select the Mode you wish to go



- As the level of gain increases, the screen gets brighter and the level of noise also increases.

DNR

DNR is Digital Noise Reduction System with a maximum gain of 24 DB.

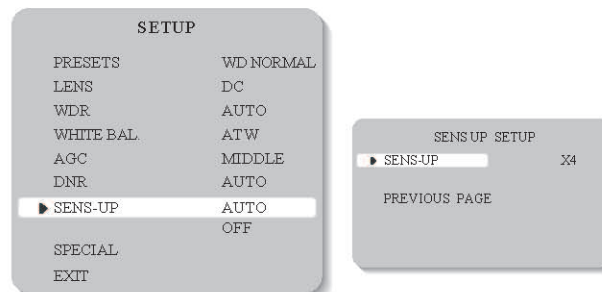


- **AUTO**
There is a reduction in noise level with almost no ghost image.
- **OFF**
There is no reduction in noise level.

Setup Page Menu

SENS-UP

Sens-up helps maintain a bright, clear screen image by automatically detecting changes in the level of light in low light level conditions.



- Position the arrow to point to 'SENS UP' on the SETUP menu by using the UP and DOWN buttons.
- Select the value required by pressing the LEFT or RIGHT button.
 - **AUTO** : Low light level automatic mode. (X2~X32)
 - **OFF** : The function does not operate.
- Press the SET button when all the settings are complete.

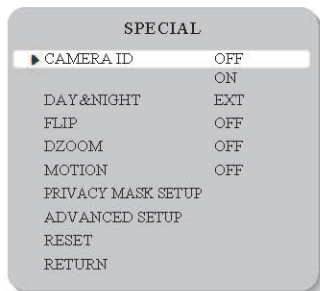
EXIT

Saves all the setting menus and then exits.

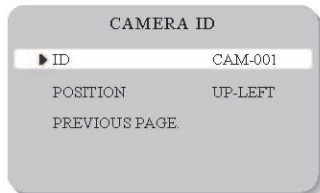
Special Page Menu

CAMERA ID

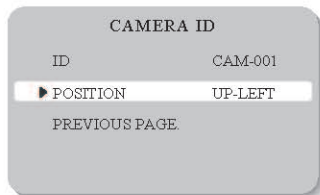
User can enter a unique name for the respective camera.
The maximum length of the ID is ten characters.



- You can choose the ON and OFF with the selector. If you select ON, the entered camera ID is displayed at the selected position in the video picture (normal operation).
- Please select the setup button while in ON mode.
- Select the desired position with the selector.



- ① Move the cursor to the letter required by using the Set-Up button.
- ② Select an ID from A,B~Y,Z, a,b~y,z 0,1~8,9 by using the LEFT and RIGHT buttons.
- ③ Repeat the above steps until the ID is complete.

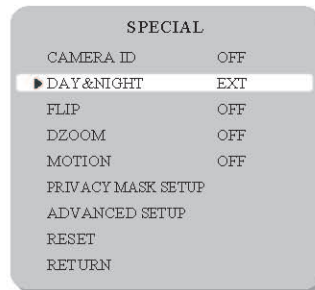


- ① Select the position where the ID is to be displayed by using the LEFT and RIGHT buttons.

Special Page Menu

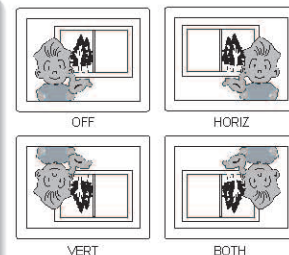
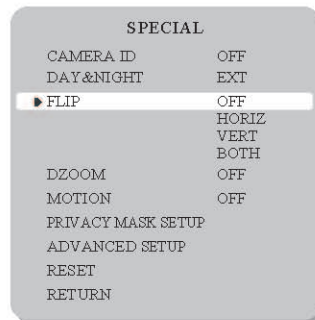
DAY & NIGHT

This camera has a function that automatically selects the mode that is appropriate for daytime or night-time conditions. The COLOR mode operates in daytime conditions to provide optimum colors, and BW mode operates in nighttime conditions to enhance the definition of the image.



FLIP

Select "OFF" to show the image as normal. Select "ON" to reflect image horizontally.



Special Page Menu

DZOOM

Digital P/T/Z are used to create a zoom lens effect. Zoom Factor (1X to 4X)
 Pan ($\pm 100\%$, center of image can be moved to left and right edges of screen)
 Tilt ($\pm 100\%$, center of image can be moved to top and bottom edges of screen)

SPECIAL	
CAMERA ID	OFF
DAY&NIGHT	EXT
FLIP	OFF
▶ DZOOM	ON
	OFF
MOTION	OFF
PRIVACY MASK SETUP	
ADVANCED SETUP	
RESET	
RETURN	

- By Selecting ON, DZoom is enabled.
- By Selecting OFF, DZoom is disabled.

DZOOM	
▶ ZOOM	1-----4
PAN	0 -100-----100
TILT	0 -100-----100
PREVIOUS PAGE	

MOTION

This product has a feature that allows you to observe movements of objects in on the screen, hence a single individual can conduct supervision efficiently. The camera detects an object's movement by sensing disparity of outline, and level of brightness and color.

SPECIAL	
CAMERA ID	OFF
DAY&NIGHT	EXT
FLIP	OFF
DZOOM	OFF
▶ MOTION	ON
	OFF
PRIVACY MASK SETUP	
ADVANCED SETUP	
RESET	
RETURN	

MOTION DETECTION	
▶ ACTIVITY THR.	0---25---255
MOTION ZONE..	
PREVIOUS PAGE	

MOTION ZONE SETUP	
	

- White : MOTION ZONE Position movement
- Green : MOTION ZONE Size enlargement
- Red : MOTION ZONE Size reduction
- For MOTION ZONE Confirm, long press SET button

Special Page Menu

PRIVACY MASK SETUP

Hide an area you want to hide on the screen.

SPECIAL	
CAMERA ID	OFF
DAY&NIGHT	EXT
FLIP	OFF
DZOOM	OFF
MOTION	OFF
▶ PRIVACY MASK SETUP	
ADVANCED SETUP	
RESET	
RETURN	

PRIVACY MASK SETUP	
▶ PRIVACY MASK	OFF
MASK COLOR	WHITE
PREVIOUS PAGE	

ENABLE MASKS (1 to 6)	
▶ MASK 1	ON
MASK 2	OFF
MASK 3	OFF
MASK 4	OFF
MASK 5	OFF
MASK 6	OFF
PREVIOUS NEXT	

ENABLE MASKS (7 to 12)	
▶ MASK 7	OFF
MASK 8	OFF
MASK 9	OFF
MASK 10	OFF
MASK 11	OFF
MASK 12	OFF
PREVIOUS	



- White : PRIVACY-ZONE Position movement
- Blue : PRIVACY-ZONE Size enlargement or reduction
- For PRIVACY-ZONE Confirm, long press SET button

Advanced Page Menu

VIDEO STANDARD

Choose video system between PAL and NTSC by moving the selector.

ADVANCED SETUP	
▶ VIDEO STANDARD	NTSC
	PAL
RESOLUTION	HIGH
BACKLIGHT	OFF
SYNC	INT
SHARPNESS	-8-----8
APERTURE	-8-----8
RS485 SETUP	
VERSION (D25_4.3H.DB.IR)	
RETURN	

NTSC	
▶ SETUP	ON
VIDEO LEVEL	80 110 150
SYNC LVL	0 -16-----15
BURST LVL	0 -16-----15
COLOR BAR	OFF
PREVIOUS PAGE	

PAL	
▶ VIDEO LEVEL	80 110 150
SYNC LVL	0 -16-----15
BURST LVL	0 -16-----15
COLOR BAR	OFF
PREVIOUS PAGE	

RESOLUTION

Choose resolution between high and normal with the selector (RIGHT/LEFT)

ADVANCED SETUP	
VIDEO STANDARD	NTSC
▶ RESOLUTION	HIGH
	NORMAL
BACKLIGHT	OFF
SYNC	INT
SHARPNESS	-8-----8
APERTURE	-8-----8
RS485 SETUP	
VERSION (D25_4.3H.DB.IR)	
RETURN	

- The high resolution supports Progressive Rate video up to 540 TV Line and normal resolution supports 480 TV Line.

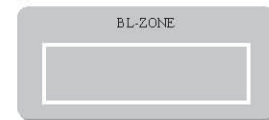
Advanced Page Menu

BACKLIGHT

Backlight is feature of a Camera which compensates when there is a large amount of background light.

ADVANCED SETUP	
VIDEO STANDARD	NTSC
RESOLUTION	HIGH
▶ BACKLIGHT	OFF
	ON
SYNC	INT
SHARPNESS	-8-----8
APERTURE	-8-----8
RS485 SETUP	
VERSION (D25_4.3H.DB.IR)	
RETURN	

- When Backlight is ON, Back Light gets activated.



- White : BL-ZONE Position movement
- Green : BL-ZONE Size enlargement
- Red : BL-ZONE Size reduction
- For BL-ZONE Confirm, long press SET button

SYNC

Two synchronization modes are available, INTERNAL and EXTERNAL LINE-LOCK. In LINE-LOCK mode, it synchronizes the video signal between cameras without a synchronous generator. The line-lock synchronization is only used in areas of 60Hz (NTSC) / 50Hz (PAL).

ADVANCED SETUP	
VIDEO STANDARD	NTSC
RESOLUTION	HIGH
BACKLIGHT	OFF
▶ SYNC	INT
	LL
SHARPNESS	-8-----8
APERTURE	-8-----8
RS485 SETUP	
VERSION (D25_4.3H.DB.IR)	
RETURN	

- INT : Internal synchronization
- LL : External line-lock synchronization
- If 'LL' is selected, it can be adjusted to the desired phase. Press the SET button.
- Adjust to the desired phase from 0 to 624.

LINE LOCK	
▶ V PHASE	0 519 624
PREVIOUS PAGE	

Advanced Page Menu

SHARPNESS

The outline of the video image becomes cleaner and more distinctive as the level of SHARPNESS increases. If the level goes up excessively, however, it may affect the video image and generate noise.

ADVANCED SETUP

VIDEO STANDARD	NTSC
RESOLUTION	HIGH
BACKLIGHT	OFF
SYNC	INT
▶ SHARPNESS	-8-----8
APERTURE	-8-----8
RS485 SETUP	
VERSION (D25_4.3H.DB.IR)	
RETURN	

• The available range of level is -8 ~ 8

APERTURE

The outline of the video image becomes cleaner and more distinctive as the level of APERTURE increases. If the level goes up excessively, however, it may affect the video image and generate noise.

ADVANCED SETUP

VIDEO STANDARD	NTSC
RESOLUTION	HIGH
BACKLIGHT	OFF
SYNC	INT
SHARPNESS	-8-----8
▶ APERTURE	-8-----8
RS485 SETUP	
VERSION (D25_4.3H.DB.IR)	
RETURN	

• The available range of level is -8 ~ 8

Advanced Page Menu

RS485 SETUP

This function sets up the camera communication status when controlling the camera through an external control device.

ADVANCED SETUP

VIDEO STANDARD	NTSC
RESOLUTION	HIGH
BACKLIGHT	OFF
SYNC	INT
SHARPNESS	-8-----8
APERTURE	-8-----8
▶ RS485 SETUP	
VERSION (D25_4.3H.DB.IR)	
RETURN	

RS485 SETUP

▶ CAMERA # :	1 < 1 > 255
PROTOCOL :	PELCO-D
BAUDRATE :	< 2400 >
	< 4800 >
	< 9600 >
	< 19200 >
PREVIOUS PAGE	

■ Troubleshooting

If you have trouble operating your camera, refer to the following table. If the guidelines do not enable you to solve the problem, contact an authorized technician.

Problem	Solution
Nothing appears on the screen.	<ul style="list-style-type: none"> • Check the power connections. • Check the VIDEO signal line connection.
The image on the screen is dim.	<ul style="list-style-type: none"> • Make sure the lens is clean. Clean the lens with a soft clean lint free cloth. • Adjust the monitor contrast & brightness controls. • Re-position the camera if necessary.
The image on the screen is dark.	<ul style="list-style-type: none"> • Adjust the contrast control of the monitor. • If you have an intermediate device, set the 75Ω Hi-z properly.
The camera is not working properly, and the surface of the camera is hot.	<ul style="list-style-type: none"> • Check that an appropriate power source is connected to the camera.
The DAY/NIGHT menu does not work.	<ul style="list-style-type: none"> • Check that AGC in the EXPOSURE menu is set to 'OFF'.
The SENS-UP function does not work.	<ul style="list-style-type: none"> • Check that AGC in the EXPOSURE menu is not set to 'OFF'. • Check that SHUTTER in the EXPOSURE menu is not set to 'FLK' or 'MANUAL'.

Problem	Solution												
The Motion Detection function does not work.	<ul style="list-style-type: none"> • Check that MOTION DET in the SPECIAL SETUP is not set to 'OFF'. 												
Color is not correct.	<ul style="list-style-type: none"> • Check the WHITE BAL settings in the SETUP menu. 												
The screen flickers continually.	<ul style="list-style-type: none"> • Check that the camera is not facing toward the sun. 												
RS-485 communication fails.	<ul style="list-style-type: none"> • Check the polarity between the RS-485 Control Pot and the RS-485 cable. <table border="1" data-bbox="1109 505 1476 568"> <thead> <tr> <th>485 Control Board Connection Port</th> <th>RS-485 Control Port</th> </tr> </thead> <tbody> <tr> <td>(+) CONNECTION TERMINAL (TRX+)</td> <td>485+</td> </tr> <tr> <td>(-) CONNECTION TERMINAL (TRX-)</td> <td>485-</td> </tr> </tbody> </table> • Check the RS-485 Communication default settings. <p>* RS-485 Communication default settings are:</p> <table border="1" data-bbox="1109 648 1476 694"> <thead> <tr> <th>Item</th> <th>Camera ID</th> <th>BAUDRATE</th> </tr> </thead> <tbody> <tr> <td>Initial value</td> <td>1</td> <td>2400</td> </tr> </tbody> </table> 	485 Control Board Connection Port	RS-485 Control Port	(+) CONNECTION TERMINAL (TRX+)	485+	(-) CONNECTION TERMINAL (TRX-)	485-	Item	Camera ID	BAUDRATE	Initial value	1	2400
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(-) CONNECTION TERMINAL (TRX-)	485-												
Item	Camera ID	BAUDRATE											
Initial value	1	2400											

Troubleshooting

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Initial value	1	9600	8-NONE-1	ENABLE													

Specifications

		NTSC		PAL	
Power Source	AC24V / DC12V	DC12V	AC24V / DC12V	DC12V	
	350mA(AC24V)/550mA(DC12V)	450mA	350mA(AC24V)/550mA(DC12V)	450mA	
CCD	Size	SONY 1/3" Super HAD High Sensitivity Color CCD			
	Total Pixels	811(H) x 508(V)		795(H) x 596(V)	
	Effective Pixels	768(H) x 494(V)		752(H) x 582(V)	
Scanning System		2:1 Interlace			
Sync	Synchronization	Internal / Line Lock			
	Frequency	Horizontal: 15.734 KHz, Vertical: 59.94 Hz		Horizontal: 15.625 KHz, Vertical: 50Hz	
O.S.D		Korean, English, Japanese, Spanish, French		English, French, German, Spanish, Italian, Chinese	
E L E C T R I C A L	Back-Light Comp.	OFF/BLC/HLC			
	Resolution	Color : 580 TV Lines		B/W : 700 TV Lines	
	S/N (Y signal)	52 dB (AGC Off, Weight ON)			
	Min. Illumination	0Lux with IR LED (18pcs)			
	White Balance	ATW / AWB / Manual / Outdoor / Indoor (1,800°K ~ 10,500°K)			
	Electronic Shutter Speed	1/60 ~ 1/120,000 sec		1/50 ~ 1/120,000 sec	
	Sens-up	AUTO / OFF (Selectable x2 ~ x256)			
	Gain Control	LOW / HIGH / OFF			
	DNR	ON / OFF (1~32 Level)			
	Motion Detection	ON / OFF (8 Zone, ALARM Output)			
	Privacy	ON/OFF (8 Zone)			
	V-REV	ON / OFF			
	H-REV	ON / OFF			
	Freeze	ON / OFF			
	Sharpness	ON/OFF (Level adjustable)			
	Day & Night	COLOR / Black & White / AUTO / EXT			
DIS	OFF / ON				
Digital Zoom	OFF / ON(x10)				
Operating Temperature / Humidity		-10°C to +50°C / 30% to 80% RH			
Storing Temperature / Humidity		-20°C to +60°C / 20% to 90% RH			
Weight		Approx. 1,100g			

MEMO



Model: HTC-11GWD28DID

**WDR True Day & Night
Vandal Resistant
Dome Camera**

Instruction Guide

Model: HTC-11GWD28DID

Super DNR High Resolution Day/Night Vandal Resistant IR Dome Camera

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