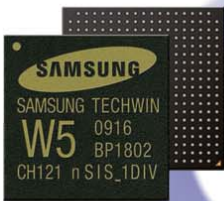


SAMSUNG W5 CCD Color Cameras (winner 5)



WV

- 1/3" Super Had Color CCD - Resolution: **600TVL Color & 700TVL B/W mode**
- S/N Ratio: 52dB • **WDR** (Digital Wide Dynamic Range) • **DIS** (Digital Image Stabilization)
- Privacy Masking 12 zones • **SSNR-III** upgraded 2D/3D noise reduction technology
- **SSDR** (Samsung Super Dynamic Range) • Day & Night Function
- Min. Illumination: **0.05 Lux-Color, 0.0001 Lux - B/W (sens-up)**
- Motion Detection • **HLC**(Highlight Compensation)
- 512x sens-up support • Zero Defect • **OSD**



HCD-907

1/3" CCD WDR Box Camera
600TVL Color & 700TVL B/W
Dim.: 0.00188m³ / 0.39Kg
65x65x120(L)mm • **OSD**
Power: 12VDC-140mA
Support DC Auto Iris
CS mount lens not included



DD-907

1/3" CCD WDR Dome Camera
IP65 - Vandal Resistant
DC-AI Lens 2.8~10mm/F1.2
Varifocal: HFOV 99°~27°
600TVL Color & 700TVL B/W
Dim.: 0.00354m³ / 1.05Kg
Ø140 X 115(H)mm • **OSD**
Power: 12VDC-140mA



AHDV-907

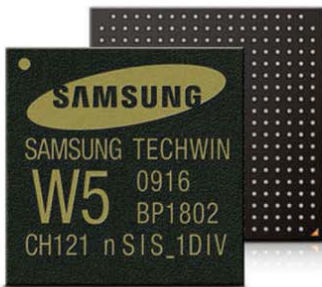
1/3" CCD WDR Dome Camera
IP65 - Vandal Resistant
DC-AI Lens 2.8~10mm/F1.2
Varifocal: HFOV 99°~27°
600TVL Color & 700TVL B/W
Dim.: 0.0018m³ / 0.70Kg
Ø142 X 85(H)mm • **OSD**
Power: 12VDC-140mA



HBV-907

1/3" CCD WDR Camera
delivery with U bracket & **OSD**
DC-AI Lens 2.8~10mm/F1.2
Varifocal: HFOV 99°~27°
600TVL Color & 700TVL B/W
Dim.: 0.00043m³ / 0.16Kg
60x60x83mm • **OSD**
Power: 12VDC-140mA

Features



- 1/3" Super HAD color CCD
- Based on W-V, the latest generation of Winner DSP engine
- **SSNR III**, Upgraded 2D/3D noise reduction technology
- Day & Night capability for 24/7 operation
- High resolution of 600TV lines (Color) / 700TVL (B/W)
- Min. illumination of 0.05Lux@F1.2 (Color)
0.0001Lux@F1.2 (Color sens-up)
- Privacy masking with 12 user programmable zones
- **SSDR** (Samsung Super Dynamic Range)
- **HLC** (Highlight Compensation)
- **DIS** (Digital Image Stabilization)
- Motion detection
- Coaxial control
- 512x sens-up support
- Multi-language OSD
- S/N ratio of 52dB

Technical Specifications

ELECTRICAL	
Input Voltage	12V DC
Power Consumption	Max. 2.5W
VIDEO	
Imaging Device	1/3" Super HAD CCD
Total Pixels	811(H) x 508(V)
Effective Pixels	768(H) x 494(V)
Scanning System	2 : 1 Interlace
Synchronization	Internal / Line lock Internal
Frequency	H : 15.734KHz / V : 59.94Hz
Horizontal Resolution	600TV lines (Min.)
Min. Illumination	Color : 0.05Lux (50 IRE@F1.2), 0.0001Lux (Sens-up, 512x)
S / N (Y signal)	52dB
Video Output	CVBS : 1.0Vp-p / 75Ω composite
OPERATIONAL	
On Screen Display	English, Japanese, Spanish, French, Portuguese, Taiwanese, Korean
Camera Title	Off / On (Displayed 15 characters)
Day & Night	Auto (Electrical) / Color / B/W
SSDR	On / Off (Level adjustable)
Backlight Compensation	BLC / HLC / Off
Motion Detection	On / Off (8 programmable zones)
Digital Zoom	On / Off (1x ~ 16x)
Digital Image Stabilization	On / Off
Privacy Masking	On / Off (12 programmable zones)
2D+3D Noise Filter (SSNR III)	On / Off
Sens-up (Frame Integration)	Auto / Off (Selectable 2x ~ 512x)
Gain Control	Low / High / Off
White Balance	ATW / Outdoor / Indoor / Manual / AWC (1,700°K ~ 11,000°K)
Electronic Shutter Speed	1/60 ~ 1/120,000sec 1/50 ~ 1/120,000sec
Sharpness	On / Off (Level adjustable)
Flip / Mirror	On / Off
Communication	
ENVIRONMENTAL	
Operating Temperature / Humidity	
MECHANICAL	
Dimension (WxHxD)	
Weight	
Certifications	
FCC (Class A), UL/cUL listed	FCC (Class A) CE (Class A)



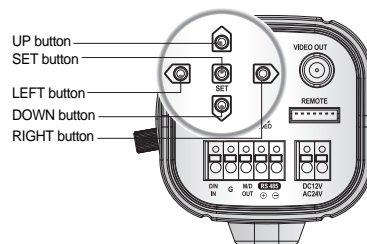
How to Use the Camera

Function Menu Structure

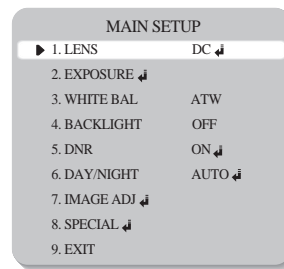
	Setup Menu
LENS	• DC • VIDEO • MANUAL
EXPOSURE	• SHUTTER • AGC • SENS-UP • RETURN
WHITE BALANCE	• ATW • MANUAL • AWC SET • OUTDOOR • INDOOR
BACKLIGHT	• OFF • BLC • HLC
DNR	• ON • OFF
DAY/NIGHT	• COLOR • B/W • AUTO • EXTERN
IMAGE ADJUSTMENT (IMAGE ADJ.)	• FREEZ • V-REV • H-REV • D-ZOOM • SHARPNESS • RETURN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

How to Set up the Functions

You can set up functions using the 5 buttons on the rear of the camera.

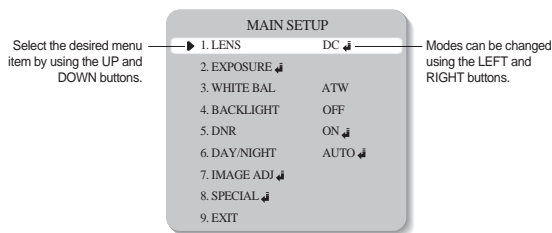


1. Press the SET button.
 - Main setup menu is displayed on the monitor screen.



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

How to Use the Camera



- Set up a selected item by using the Left and Right buttons.
- To finish the setting, select 'EXIT' and press the SET button.

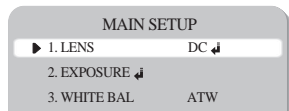
Note

- An item with the ↕ icon also has sub menus. To select a sub menu, select an item with the icon and press the SET button.
- An item with the - - - icon is unavailable due to function settings.

LENS

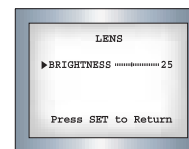
Using this function, you can control screen brightness.

- When the SETUP menu screen is displayed, select LENS by using the Up and Down buttons so that the arrow indicates LENS .
- Select the connected lens type by using the Left and Right buttons.



● DC/Video : Select Auto Iris Lens

- When DC is selected, you can control screen brightness. The range of brightness control is between 1 and 70 (40 in case of WDR mode). Adjust the brightness appropriately for optimal screen brightness.



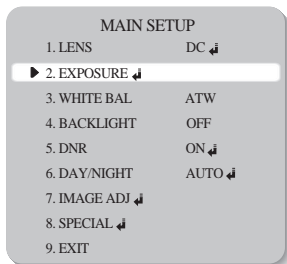
Note

- Some lenses may not work properly, depending on the setting of the BRIGHTNESS LEVEL.
- When Using a Video-Type Auto Iris Lens
 - Adjust the ALC adjustment terminal on the lens appropriately. In general, set it to AV (Average).
 - It may not work properly depending on the installed lens. Set the Level VR of the lens to the optimal value.
 - Set AGC / SENS-UP to OFF and adjust the Lens VR to an appropriate brightness.
 - Adjust the Lens VR, adjust the BRIGHTNESS, and then check if the screen brightness changes properly. Otherwise, adjust the Lens VR again.

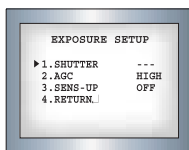
● Manual : Select Manual Lens

How to Use the Camera

EXPOSURE



1. When the SETUP menu screen is displayed, select EXPOSURE by using the Up and Down buttons so that the arrow indicates EXPOSURE .
2. Select a desired mode using the Up and Down buttons.



- SHUTTER : You can select either auto or manual shutter.
 - A.FLK : Select this when you experience picture flicker, which can happen when there is a clash with the frequency of the installed lighting.
 - ESC : Select this to control the shutter speed automatically. If ESC is selected, the shutter speed is automatically controlled depending on the ambient illumination of the subject.
 - MANUAL : You can control shutter speed manually.

Note

- To produce better results with A.FLK, do not use it in conjunction with the WDR mode of the BACKLIGHT menu.
- When the SHUTTER is set to ESC after selecting the Internal Synchronization Type, the picture may become unstable if the camera faces a bright fluorescent light. Therefore, take care when choosing the installation position.
- ESC and MANUAL modes are only available together when the lens is set to MANUAL.
- When the SHUTTER is set to MANUAL or A.FLK mode, SENS-UP will be disabled.

● AGC (AUTO GAIN CONTROL):

- The higher the gain level, the brighter the screen - but the higher the noise.
- OFF : Deactivates the AGC function.
- LOW : Allows automatic gain control from 0 to 24dB.
- HIGH : Allows automatic gain control from 0 to 42dB.

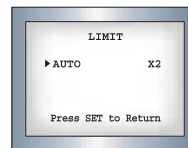
● SENS-UP :

When it is night or dark, the camera automatically detects the light level and maintains a clear picture if this mode is activated.

- OFF : Deactivates the SENS-UP function.
- AUTO : Activates the SENS-UP function.

● RETURN :

Select this to save the changes in the EXPOSURE menu and return to the SETUP menu.



Note

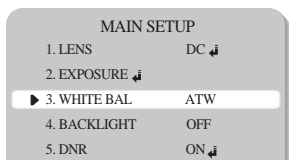
- If you press the SET button in 'AUTO' mode, You can adjust brightness by increasing or decreasing the shutter speed. (X2~X256)
- Note that the higher the zoom level, the brighter the screen, but the more likely it is that an after-image will appear.
- Although Noise, Spots, and Whitish symptoms may occur in SENS-UP operation when the zoom level is increased, this is normal.

How to Use the Camera

White Balance (White Bal.)

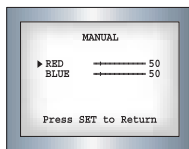
Use the White Balance function to adjust the screen color.

1. When the SETUP menu screen is displayed, select 'White Bal.' by using the Up and Down buttons so that the arrow indicates 'White Bal.'
2. Select a desired mode using the Up and Down buttons.



※ Select one of the following 5 modes, as appropriate for your purpose.

- **ATW** : Select this when the color temperature is between 1800°K and 10500°K
- **INDOOR** : Select this when the color temperature is between 4500°K and 8500°K
- **OUTDOOR** : Select this when the color temperature is between 1800°K and 10500°K. (sodium light inclusion)
- **AWC SET** : To find the optimal setting for the current luminance environment in this mode, set the point the camera towards a sheet of white paper and press the SET button. If the environment changes, readjust it.
- **MANUAL** : Select this to fine-tune White Balance manually. Set White Balance first by using the ATW or AWC mode. After that switch to MANUAL mode, fine-tune the White Balance and then press the SET button.



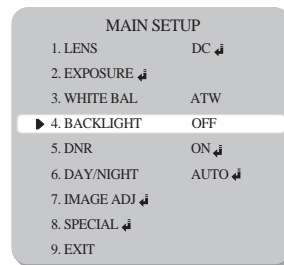
Note

- White Balance may not work properly under the following conditions. In this case select the AWC mode.
 - ① When the color temperature of environment surrounding the subject is out of the control range (e.g. clear sky, or sunset)
 - ② When the ambient illumination of the subject is dim.
 - ③ If the camera is directed towards a fluorescent light or is installed in a place where illumination changes dramatically, the White Balance operation may become unstable.

BACKLIGHT

This camera is designed so that it delivers a distinctive subject and background at the same time, even when the subject is in backlight, unlike conventional cameras, by adopting a proprietary SV-IV DSP chip.

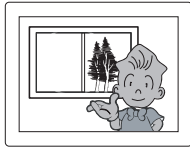
1. When the SETUP menu screen is displayed, select 'BACKLIGHT' by using the Up and Down buttons so that the arrow indicates BACKLIGHT.



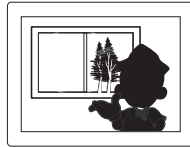
2. Select a desired mode using the Left and Right buttons depending on the camera purpose.

How to Use the Camera

- BLC : Enables a user to directly select a desired area from a picture, and to view the area more clearly.



BLC ON



BLC OFF

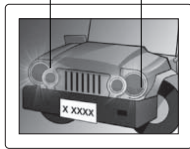
- HLC (High Light Compensation) :

If there is a high light installed in a limited environment such as an apartment parking garage or gas station entrance, removing the high light makes it possible to view car license plates efficiently.

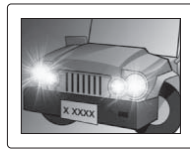
- DAY : In normal daylight conditions, the HLC is not activated.

- NIGHT : If a high light that is larger than a certain size is present on the screen, remove the high light to see license plates clearly.

HLC MASKING AREA



HLC ON

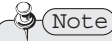
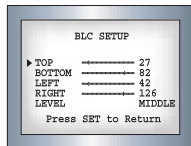


HLC OFF

- OFF : Not being used

3. Select a desired mode using the Left and Right buttons and press the SET button.

- Select 'BLC' to adjust the area to be enhanced and enhancement level.
- HLC : Enable a user to select a mask color of high light area from a picture.



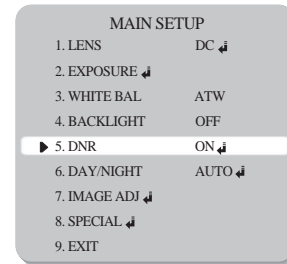
Note

- Because there can be a difference in the effectiveness of HLC according to the amount of light area in the screen, optimize the installation angle for the best HLC performance.
- In a dark environment, the HLC is only activated when a high light that is larger than a certain area is present.
- The HLC is not activated in light or overly dark conditions.

DNR

This function reduces the background noise in a low luminance environment.

1. When the SETUP menu screen is displayed, select 'DNR' by using the Up and Down buttons so that the arrow indicates 'DNR'.



2. Select a desired mode using the Left and Right buttons.

- OFF : Deactivates DNR. Noise is not reduced.
- ON : Activates DNR so that noise is reduced.

How to Use the Camera

- Set the DNR mode to 'ON' and press the SET button. Then you can adjust the noise reduction level.



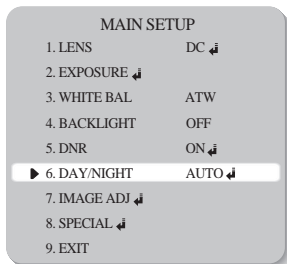
Note

- You cannot set the DNR to 'ON' or 'OFF' when the AGC mode of the EXPOSURE menu is 'OFF'.
- When adjusting the noise reduction level of the DNR mode, remember that the higher the level set, the more the noise level will be reduced but that after image may also occur.

DAY/NIGHT

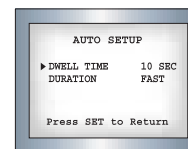
You can display pictures in color or black and white.

- When the SETUP menu screen is displayed, select 'DAY/NIGHT' by using the Up and Down buttons so that the arrow indicates DAY/NIGHT .



- Select a desired mode using the Left and Right buttons according to the picture display you want.

- COLOR** : The picture is always displayed in color.
- B/W** : The picture is always displayed in black and white.
- AUTO** : The mode is switched to Color in a normal environment, but switches to B/W mode when ambient illumination is low. To set up the switching time or speed for AUTO mode, press the SET button.



- EXTERN** : This mode allows you to apply a desired filter to external signals.

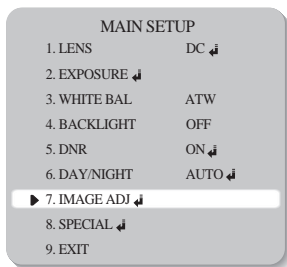
Note

- When using a Video Auto Iris Lens, if you set the lens level to low, automatic switching between Color and Black & White may not occur.
- You cannot control the DAY/NIGHT menu when AGC in the EXPOSURE menu is 'OFF'. At this time, the exchange between DAY mode and NIGHT mode operates as like selecting 'COLOR' mode.
- The OSD key does not work for 3 seconds when switching to Color or B/W, to ensure stable camera operation.
- The camera may focus less well under infrared illumination than under normal illumination.
- Since the camera may not focus as well under infrared illumination at night as it does under normal illumination, install an Extra-low Dispersion Lens to obtain sharp pictures.

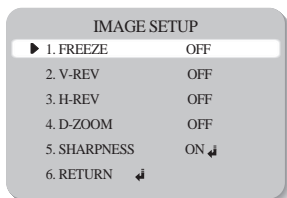
How to Use the Camera

IMAGE ADJ.

1. When the SETUP menu screen is displayed, select 'IMAGE ADJ.' by using the Up and Down buttons so that the arrow indicates IMAGE ADJ.

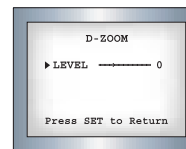


2. Select a desired mode using the Up and Down buttons.

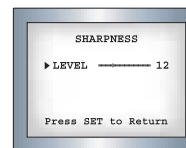


- FREEZE : You can view still or moving pictures.
- V-REV : You can flip the picture vertically on the screen.
- H-REV : You can flip the picture horizontally on the screen.

- D-ZOOM : You can use a digital zoom of x1~x10.



- SHARPNESS : As you increase this value, the picture outline becomes stronger and clearer. Adjust this value appropriately depending on the sharpness of the picture.



- RETURN : Select this to save the settings for the IMAGE ADJ. menu and to return to the SETUP menu.

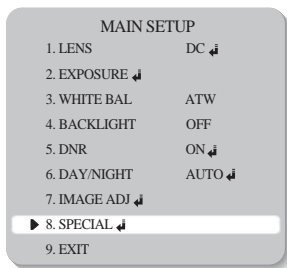
Note

- When H-REV or V-REV is selected, any text in the picture also will be flipped horizontally or vertically.
- If you increase the SHARPNESS level too high, the picture may become distorted or noise may appear.

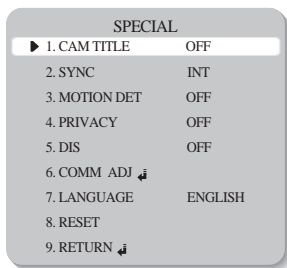
How to Use the Camera

SPECIAL

1. When the SETUP menu screen is displayed, select 'SPECIAL' by using the Up and Down buttons so that the arrow indicates 'SPECIAL'.



2. Select a desired mode using the Up and Down buttons.



- CAM TITLE : If you enter a title, the title will appear on the monitor.

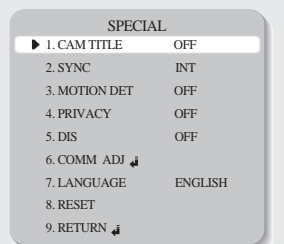
- ① If the SPECIAL menu screen is displayed, use the Up and Down buttons so that the arrow indicates 'CAM TITLE'.

- ② Set it to 'ON' by using the Left and Right buttons.

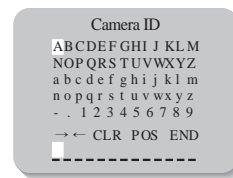


Note

- When the CAM TITLE menu is 'OFF', no title will be displayed on the monitor screen even if you enter one.



- ③ Press the SET button.



- ④ Use the 4 direction buttons to move to a desired letter and select the letter by pressing the SET button. Repeat this to enter multiple letters. You can enter up to 15 letters.



Note

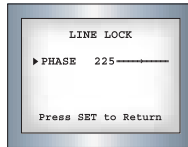
- If you move the cursor to CLR and press the SET button, all the letters are deleted. To edit a letter, change the cursor to the bottom left arrow and press the SET button. Move the cursor over the letter to be edited, move the cursor to the letter to be inserted and then press the SET button.

How to Use the Camera

- ⑤ Enter a title, move the cursor to 'POS' and press the SET button. The entered title appears on the screen. Select the position to display the title on the screen by using the 4 direction buttons and press the SET button. When the position is determined, select 'END' and press the SET button to return to the SPECIAL menu.



- **SYNC** : In areas where the supply is at 60Hz, you can synchronize the output phase of multiple cameras using the power synchronization function (Line-Lock) without using a synchronization signal generator.
 - INT : Internal Synchronization Type
 - L/L : Power Synchronization Type, Line-lock
- Press the SET button.
- You can select a desired phase between 0 and 359.

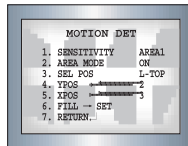


Note

- When using AC power at 60Hz frequency, you can use the L/L type synchronization.
- When the power is DC 12V, the SYNC. menu is fixed to the 'INT' mode.

● MOTION DET:

If you connect an alarm device to this camera, you can monitor activity more efficiently, because a signal is generated by the camera whenever motion is detected. The motion detection signal is output through the MD OUT port.



- ① When the SPECIAL menu screen is displayed, press the Up and Down buttons so that the arrow indicates MOTION DET .
- ② Set up the mode using the 4 direction buttons.
 - SENSITIVITY : You can select up to 8 MD areas. When SENSITIVITY number is high, motion detection sensitivity is increased to recognize even small movement.
 - AREA MODE : Determines whether to use the MD area selected in SENSITIVITY.
 - SEL POS : Determines which of the 4 vertices of each MD area is to be used.
 - YPOS : Determines the coordinate of the vertical axis for SEL POS.
 - XPOS : Determines the coordinate of the horizontal axis for SEL POS.
 - FILL→ SET : Fills in a selected MD area. The color of filling is sequentially selected as brown, orange, blue, cyan, yellowish green, yellow and red.
 - RETURN : Select this to save the MOTION DET menu settings and return to the SPECIAL menu.

Note

- MD areas show only MOTION DET menu. Therefore, MD areas don't display on the monitor screen.

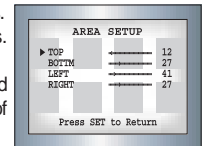
● PRIVACY : Hide an area you want to hide on the screen.

- ① When the SPECIAL menu screen is displayed, press the Up and Down buttons so that the arrow indicates 'PRIVACY' .



- ② Set up the mode using the 4 direction buttons.

- AREA SEL : You can select up to 8 areas.
- AREA MODE : Determines whether to use the area selected in the AREA SEL, and the size and position of the area.



How to Use the Camera

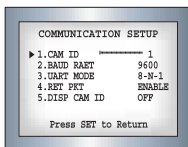
- MASK COLOR : Determine area color. You can select Gray, Green, Red, Blue, Black, White.
- TRANSP : Determine the transparency of selected area as controlling number from 0 to 3.
- RETURN : Select this to save the PRIVACY menu settings and return to the SPECIAL menu.

● DIS (Digital Image Stabilizer) :

This function mitigates any picture movement due to external factors such as wind.

● COMM ADJ (Communication Adjustment) :

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



① When the SPECIAL menu screen is displayed, press the Up and Down buttons so that the arrow indicates 'COMM ADJ'.

② Set up the mode using the 4 direction buttons.

- CAM ID : Determines the camera's identification number (between 0 and 255).
- BAUD RATE : You can select 2400/4800/9600/19200/38400/57600 bps.
- UART MODE : You can select NONE, EVEN or ODD for the parity bits.
- RET PKT : Determines whether to send a command back to the controller device when a communication control command is sent to the camera.
- DISP CAM ID : Display camera title on top left corner of the screen.

● LANGUAGE : You can select the menu language according to your requirements.

● RESET : Resets the camera settings to the factory defaults.

● RETURN : Select this to save the SPECIAL menu settings and return to the SPECIAL menu.

EXIT

Press the SET button in the EXIT menu to save the current settings and exit the SET menu.

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 that the power cord and line connection between the camera and monitor are fixed properly. • Check that you have properly connected VIDEO cable to the camera VIDEO output jack.
The image on the screen is dim.	<ul style="list-style-type: none"> • Is lens stained with dirt? Clean your lens with soft, clean cloth. • Set the monitor to proper condition. • If the camera is exposed to too strong light, change the camera position.
The image on the screen is dark.	<ul style="list-style-type: none"> • Adjust the contrast feature of the monitor. • If you have an intermediate device, set the 75 / 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 you have properly connected the camerato an appropriate power source.
The DAY/NIGHT menu does not work.	<ul style="list-style-type: none"> • Check that AGC of EXPOSURE SETUP menu is 'OFF'.
The SENS-UP function does not work.	<ul style="list-style-type: none"> • Check that AGC of EXPOSURE SETUP menu is 'OFF'. • Check that SHUTTER of EXPOSURE SETUP menu is 'A.FLK' or 'MANUAL'.