

HD



Marshall

1080 HD-SDI

OPERATION GUIDE

Models:

CV340 Series

CV500 Series

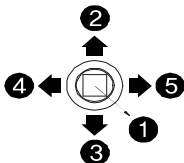
Please read this guide carefully before installing and using the camera.
Please retain this guide for reference.

MENU STRUCTURE

LENS	DC	OUTDOOR, INDOOR
	VIDEO	
	MANUAL	
EXPOSURE	SHUTTER	AUTO 1/30sec ~ 1/50,000sec, x2~x30
	AGC	LOW, MIDDLE, HIGH
	SENSE-UP	AUTO (x20 ~ X30) OFF
	BRIGHTNESS	1 ~ 100
	D-WDR (ACCE)	OFF, LOW, MIDDLE, HIGH
	DEFOG	OFF, LOW, MIDDLE, HIGH
	BACKLIGHT	BLC HSBLC OFF
WHITE BALANCE	ATW	
	AWC-SET	
	INDOOR	
	OUTDOOR	
	MANUAL	1 ~ 100
DAY & NIGHT	AUTO	DELAY D-->N (AGC) N-->D (AGC)
	COLOR	
	B/W	BURST IR SMART IR LED IR PWM
	EXT	
NR	2DNR	
	3DNR	S-LEVEL: 0 ~ 100 E-LEVEL: 0 ~ 100
	LEVEL	0 ~ 100
	SMART IR	ON, OFF

MENU STRUCTURE

SPECIAL	CAM TITLE		
	D-EFFECT	FREEZE MIRROR D-ZOOM NEG.IMAGE	
	MOTION	SELECT DISPLAY SENSIVITY MOTION VIEW DEFAULT	
	PRIVACY	SELECT DISPLAY COLOR DEFAULT	
	LANGUAGE		
	DEFECT	LIVE DPC LEVEL STATIC DPC START LEVEL SENS-UP	
	RS485		
	VERSION		
	ADJUST	SHARPNESS	SHARPNESS LEVEL RESOLUTION
		MONITOR	LCD CRT
		OSD	TEXT COLOR OUTLINE
		LSC	
		NTSC/PAL	
RESET			
EXIT			

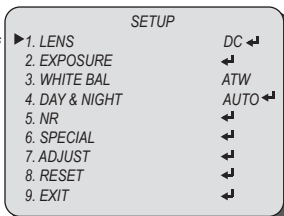


- ①SET : Used to access the menu and confirm selection.
- ②UP : Used to move the cursor up.
- ③DOWN : Used to move the cursor down.
- ④LEFT : Used to move the cursor to left and change the value.
- ⑤RIGHT : Used to move the cursor to right and change the value.

Press SET button to access the SETUP menu.

Select each sub-menu by using the UP, DOWN, LEFT, and RIGHT buttons.
Press the SET button to select.

Use the UP & DOWN buttons to select the desired item.



Use the LEFT & RIGHT buttons to change the sub-item.

◀ Icon indicates "Press OSD Button" or "Enter Sub Menu".

--- Icon indicates "Not Available".

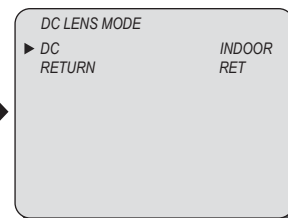
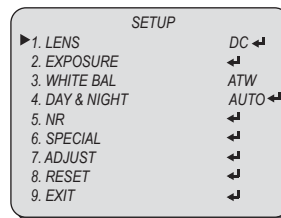
Select LENS using the UP or DOWN button.

You can change between MANUAL, VIDEO and DC using the LEFT or RIGHT button.

- **MANUAL:** Manual Lens (Fixed focal or fixed IRIS lens)
- **VIDEO:** Auto Iris Varifocal Lens.
- **DC:** DC Auto Iris Varifocal Lens.

You can change the DC mode between INDOOR mode and OUTDOOR mode using the LEFT or RIGHT button.

- **INDOOR:** Select for indoor installation.
- **OURDOOR:** Select for outdoor installation.



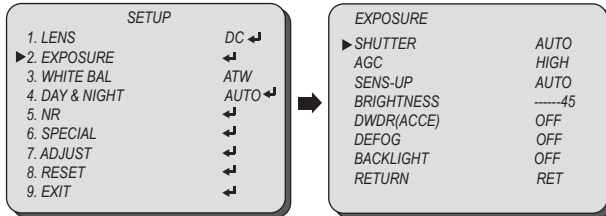
Select EXPOSEURE using the UP or DOWN button.

You can select SHUTTER, AGC, SENS-UP, BRIGHTNESS, DWDR (ACCE), DEFOG, and BACKLIGHT menu using the UP or DOWN button.

■ **SHUTTER:** You can adjust the shutter speed of the lens.

You can adjust the shutter speed manually or select shutter speed mode from FLK or AUTO mode using the LEFT or RIGHT button.

- **FLK:** Select this when you experience picture flicker, this happen when there is a clash with the installed lighting frequency.
- **AUTO:** Enable AUTO to control the shutter speed automatically. If AUTO is selected, the shutter speed is automatically controlled depending on the ambient illumination of the subject.
- **1/30sec ~ 1/50,000sec, x2~x30:** You can control shutter speed manually using the LEFT or RIGHT button.



- If the shutter mode is set to AUTO, carefully position the camera during installation since the produced image might be poorly framed due to a bright light source.
- When the SHUTTER is set to MANUAL or FLK mode, SENS-UP will be disabled.

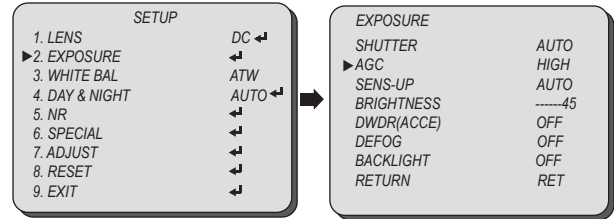
Select EXPOSEURE using the UP or DOWN button.

You can select SHUTTER, AGC, SENS-UP, BRIGHTNESS, DWDR (ACCE), DEFOG, and BACKLIGHT menu using the UP or DOWN button.

■ **AGC(AUTO GAIN CONTROL):** A function which controls the amplification/ gain process automatically if the illumination falls under the usable level.

You can adjust the AC level from LOW, MIDDLE, or HIGH using the LEFT and RIGHT button.

- **LOW:** Allows automatic gain control from 5.3dB to 20dB.
- **MIDDLE:** Allows automatic gain control from 5.3dB to 26dB.
- **HIGH:** Allows automatic gain control from 5.3dB to 32dB.



- If the gain control (AGC) of EXPOSURE mode is set to OFF, SENS-UP mode is accordingly set to '- -'.

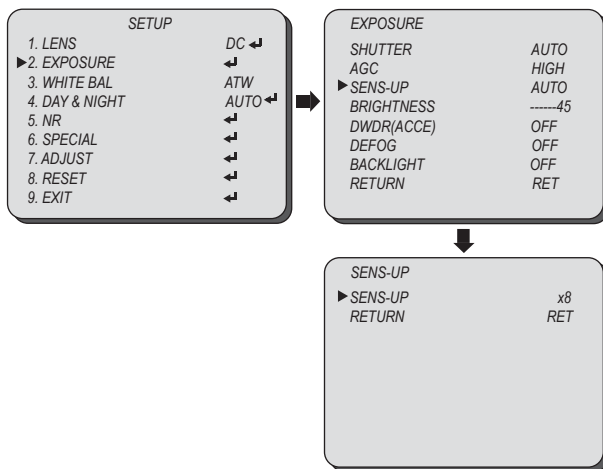
Select EXPOSEURE using the UP or DOWN button.

You can select SHUTTER, AGC, SENS-UP, BRIGHTNESS, DWDR (ACCE), DEFOG, and BACKLIGHT menu using the UP or DOWN button.

- **SENS-UP:** When it is in low luminance condition, the camera automatically detects the light level and maintains a clear picture quality if this mode is activated.

You can select the sense-up mode from OFF or AUTO mode using the LEFT or RIGHT button.

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



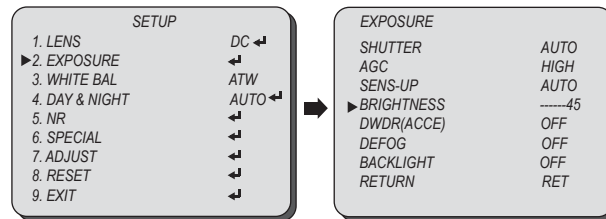
- Ghosting in object movements may occur if the sens-up is set to higher level.

Select EXPOSEURE using the UP or DOWN button.

You can select SHUTTER, AGC, SENS-UP, BRIGHTNESS, DWDR (ACCE), DEFOG, and BACKLIGHT menu using the UP or DOWN button.

- **BRIGHTNESS:** Adjust the screen brightness.

You can adjust the brightness level from 1 ~ 100 using the LEFT or RIGHT button.



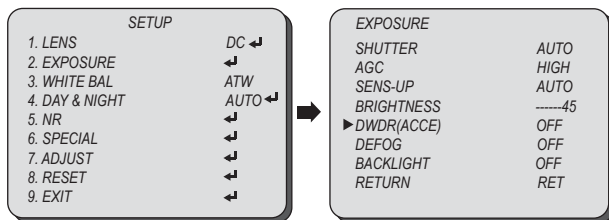
- Higher BRIGHTNESS setting may cause noise, spots, or white image.

Select EXPOSEURE using the UP or DOWN button.

You can select SHUTTER, AGC, SENS-UP, BRIGHTNESS, DWDR (ACCE), DEFOG, and BACKLIGHT menu using the UP or DOWN button.

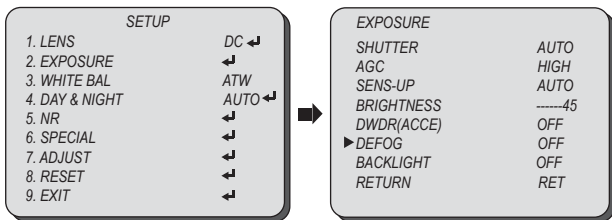
- **DWDR(ACCE)** : DWDR(ACCE) illuminates darker areas of an image while retaining the same light level for brighter areas to even out the overall brightness of images with high contrast between bright and dark areas.

You can select the DWDR level from OFF, LOW ,MIDDLE, or HIGH using the LEFT or RIGHT button.



- **DEFOG**: DEFOG feature will help increase visibility in extreme weather conditions, such as fog, rain or in a very strong luminous intensity.

You can select the DEFOG level from OFF, LOW MIDDLE, or HIGH using the LEFT or RIGHT button.



Select EXPOSEURE using the UP or DOWN button.

You can select SHUTTER, AGC, SENS-UP, BRIGHTNESS, DWDR (ACCE), DEFOG, and BACKLIGHT menu using the UP or DOWN button.

- **BACKLIGHT**: BACKLIGHT will help distinguish an object in front of the strong background lighting.

You can select the BACKLIGHT mode from OFF, BLC, or HSBLC using the LEFT or RIGHT button.

- **OFF**: Disable BACKLIGHT mode.
- **BLC**: Enables a user to select a desired area on a picture and view that area more clearly.

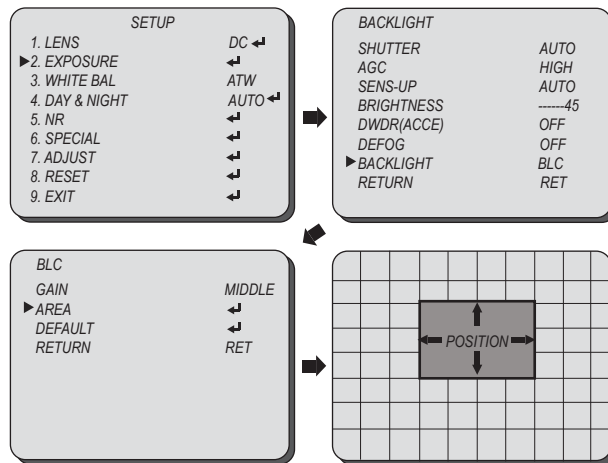
■ **GAIN**: Adjust level of the BLC function.

You can select the GAIN level from LOW, MIDDLE, and HIGH using the LEFT or RIGHT button.

■ **AREA**: Select the area to be enhanced.

You can select the BLC area using the UP, DOWN, LEFT or RIGHT button.

■ **DEFAULT**: Set the BLC setting value as default.



Select EXPOSURE using the UP or DOWN button.

You can select SHUTTER, AGC, SENS-UP, BRIGHTNESS, DWDR (ACCE), DEFOG, and BACKLIGHT menu using the UP or DOWN button.

- **HSBLC:** If the scene contains extremely bright light areas such as; from car headlight, the light can mask out much of the on-screen detail.

■ **SELECT:** Select the area to be enhanced (AREA1, AREA2, AREA3, AREA4)

You can select the BLC area using UP, DOWN, LEFT or RIGHT button.

■ **DISPLAY:** Display the zone or not and adjust the size and position.

Select ON using LEFT and RIGHT button and press SET button to display the HSBLC area zone.

— **POSITOIN:** Adjust the position.

You can adjust HSBLC area position UP, DOWN, LEFT or RIGHT button.

— **SIZE :** Adjust the size.

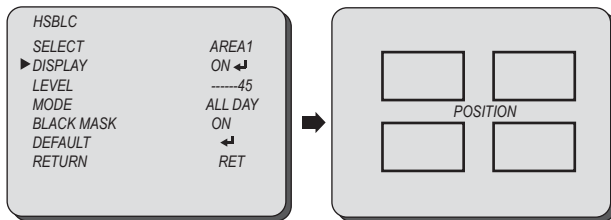
You can adjust HSBLC area size using UP, DOWN, LEFT or RIGHT button.

■ **LEVEL:** Adjust level of the HLC function.

■ **MODE:** Select the HSBLC mode from NIGHT and ALL DAY.

■ **BLACK MASK:** Enable/Disable BLACK MASK function.

■ **DEFAULT:** Set the HSBLC setting value as default.



■ Because there can be a difference in the effectiveness of HSBLC according to the amount of light area in the screen, optimize the installation angle for the best HSBLC performance.

■ HSBLC is only activated in low luminance condition if a bright area exceeds a designated size.

■ HSBLC is not activated in day light or when bright light is not present at night.

Select WHITE BALANCE using the UP or DOWN button.

You can change the white balance mode between ATW, AWC-SET, INDOOR, or OUTDOOR using the LEFT or RIGHT button.

■ **ATW:** Select this when the color temperature is between 2,400°K and 11,000°K. (Ex. A fluorescent lamp)

■ **AWC →SET:** The white balance is automatically adjusted in a specific luminance environment. To find the optimal luminance level for the current environment, point the camera towards a shoot of white paper and press the SET button.

■ **INDOOR:** Select this when the color temperature is between 4,500°K and 8,500°K.

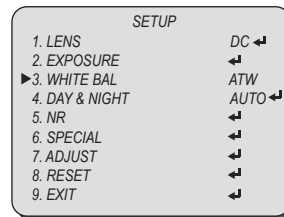
OUTDOOR: Select this when the color temperature is between 1,700°K and 11,000°K. (Ex. sodium light inclusion)

■ **MANUAL:** Select this to fine-tune White Balance manually.

You can adjust the blue and red tone level manually.

■ **BLUE:** Adjust the blue tone of the image. (0~100)

■ **RED:** Adjust the red tone of the image. (0~100)



■ Set White Balance first by using the ATW or AWC mode. After that switch to MANUAL mode,

■ White Balance may not work properly under the following conditions. In this case select the AWC mode.

- When the ambient illumination of the subject is dim.

- If the camera is directed towards a fluorescent light or is installed in place where illumination changes dramatically, the White Balance operation may become unstable.

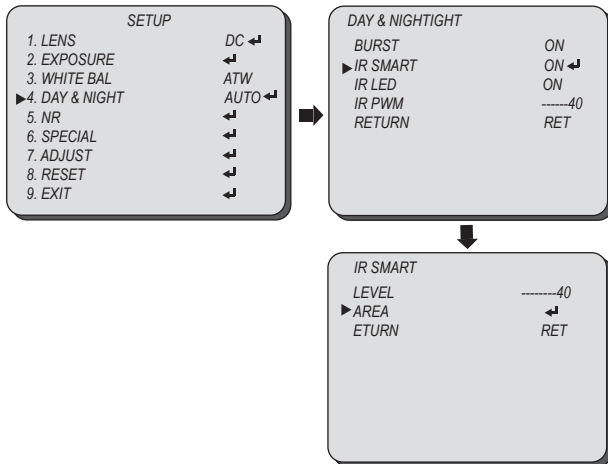
Select DAY & NIGHT using the UP or DOWN button.

You can change the day & night mode between COLOR, B/W, AUTO, or EXT using the LEFT or RIGHT button.

- **COLOR:** The picture is always displayed in color.
- **B/W:** The picture is always displayed in black and white.

You can select and adjust BURST, IR SMART, IR LED, and IR PWM.

- **BURST:** Determines whether to transmit the burst signal or not .
- **IR SMART:** Decrease screen saturation of objects within a short range.
 - **LEVEL:** Adjust level of the IR SMART function.
 - **AREA:** Select the area to activate the IR SMART.
You can select IR SMART area using the UP, DOWN, LEFT or RIGHT button.
 - **IR LED:** Enable/Disable IR LEDs.
 - **IR PWM:** Adjust the IR LEDs output level.



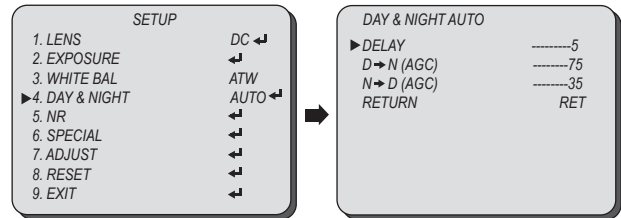
Select DAY & NIGHT using the UP or DOWN button.

You can change the day & night mode between COLOR, B/W, AUTO, or EXT using the LEFT or RIGHT button.

- **AUTO:** The mode is switched to COLOR in a normal environment, but switched to B/W mode when ambient illumination is low.

You can select and adjust DELAY, D→N, and N→D using the LEFT or RIGHT button.

- **DELAY:** You can select day/night switching delay time from. (0s ~ 60s)
- **D→N (AGC):** Adjust the brightness of the lighting where the mode switch occurs from day to night.
- **N→D (AGC):** Adjust the brightness of the lighting where the mode switch occurs from night to day.

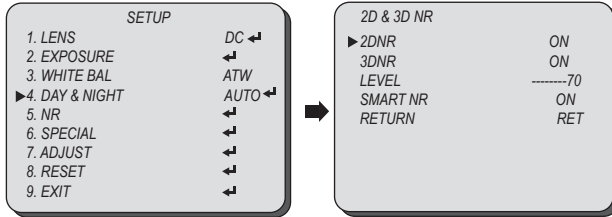


- EXT function is disabled.

Select NR (NOISE REDUCTION) using the UP or DOWN button

You can move the menu from 2DNR, 3DNR, LEVEL, and SMART IR and set each menu using the LEFT or RIGHT button.

- **2DNR:** Reducing noise in the brightness of the image.
- **3DNR:** Reducing noise causing by movement.
 - **S-LEVEL:** Set the start level of 3DNR function.
 - **E -LEVEL:** Set the end level of 3DNR function.
- **LEVEL:** Adjust noise reduction level.
- **SMART NR:** Activates & Deactivates 2DNR & 3DNR Automatically depends with environment.

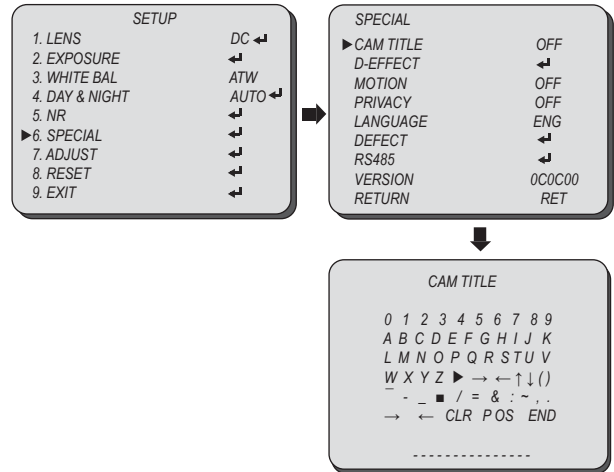


■ When adjusting the noise reduction level in the NR mode, remember that the higher the level set, the more the noise level will be reduced, as will the brightness of the image.

Select SPECIAL using the UP or DOWN button.

You can select the sub-menu from CAM TITLE, D-EFFECT, MOTION, PRIVACY, LANGUAGE, DEFECT, RS485, and VERSION using the UP or DOWN button.

- **CAM TITLE:** If you enter a title, the title will appear on the monitor.
You can input the camera title from the virtual keyboard using the LEFT, RIGHT, UP, DOWN, and SET button.



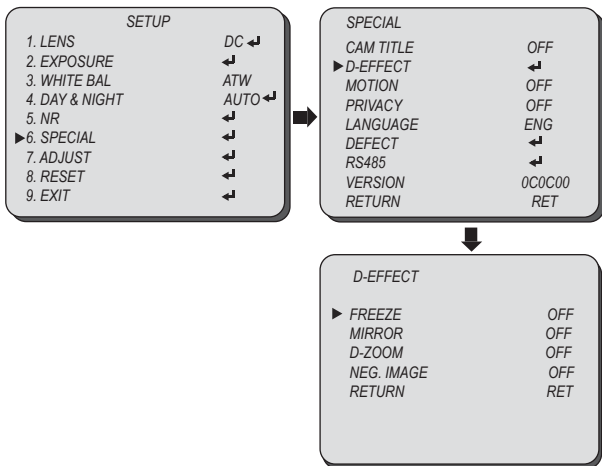
Select **SPECIAL** using the UP or DOWN button.

You can select the sub-menu from **CAM TITLE, D-EFFECT, MOTION, PRIVACY, LANGUAGE, DEFECT, RS485, and VERSION** using the UP or DOWN button.

■ D-EFFECT

You can select the digital effect mode from **FREEZE, MIRROR, D-ZOOM, and NEG.IMAGE** using the UP or DOWN button.

- **FREEZE:** You can stop the image or reactivate it.
Select ON to freeze the image using the LEFT or RIGHT button.
- **MIRROR:** You can adjust or rotate the picture vertically and or horizontally.
You can select the mirroring effect mode from **MIRROR, V-FLIP, and ROTATE** using the LEFT or RIGHT button.
- **D-ZOOM:** You can use a digital zoom of x1 ~ x64.
Select ON using LEFT and RIGHT button and press SET button to display the DIGITAL ZOOM menu.
- **NEG. IMAGE:** You can flip the color on screen.



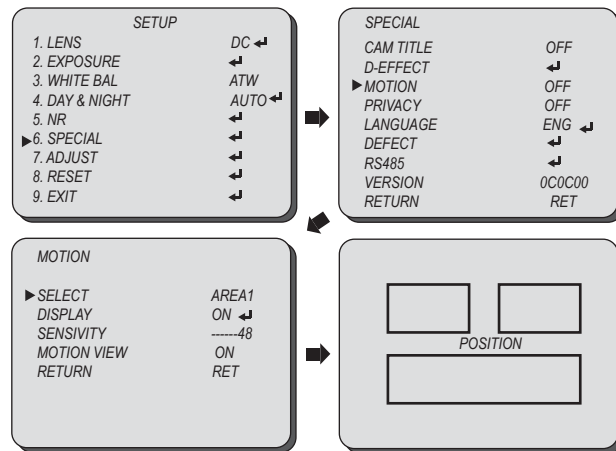
Select **SPECIAL** using the UP or DOWN button.

You can select the sub-menu from **CAM TITLE, D-EFFECT, MOTION, PRIVACY, LANGUAGE, DEFECT, RS485, and VERSION** using the UP or DOWN button.

- **MOTION:** This product has a feature that allows you to observe the object movement, and display <MOTION> indicator on the screen.

You can select the digital effect mode from **SELECT AREA, DISPLAY, SENSIVITY, MOTION VIEW, \ and DEFAULT** using the UP or DOWN button.

- **SELECT AREA:** You can select up to 3 motion detection areas.
You can select the motion detection area using the LEFT or RIGHT button.
- **DISPLAY:** Adjust the size and position of the selected area.
Select ON using LEFT and RIGHT button and press SET button to display the motion zone.
 - **POSITOIN:** Adjust the position.
You can adjust the motion detection zone using the UP, DOWN, LEFT or RIGHT button.
 - **SIZE:** Adjust the size.
You can adjust the motion detection size using the UP, DOWN, LEFT or RIGHT button.
- **SENSITIVITY:** Adjust the sensitivity of the motion detection.
You can select the motion detection zone color using the LEFT or RIGHT button.
- **MOTION VIEW**
You can select ON to display the motion detection.
- **DEFAULT:** Set the etting value as default.



Select **SPECIAL** using the UP or DOWN button.

You can select the sub-menu from CAM TITLE, D-EFFECT, MOTION, PRIVACY, LANGUAGE, DEFECT, RS485, and VERSION using the UP or DOWN button.

■ **PRIVACY:** Task an area you want to hide on the screen.

You can select the digital effect mode from SELECT AREA, DISPLAY, COLOR, and DEFAULT using the UP or DOWN button.

● **SELECT AREA:** You can select up to 8 PRIVACY areas.

You can select the privacy area using the LEFT or RIGHT button.

DISPLAY: Adjust the size and position of the selected area.

Select ON using LEFT and RIGHT button and press SET button to display the privacy zone.

- **POSITOIN:** Adjust the position.

You can adjust the privacy zone using the UP, DOWN, LEFT or RIGHT button.

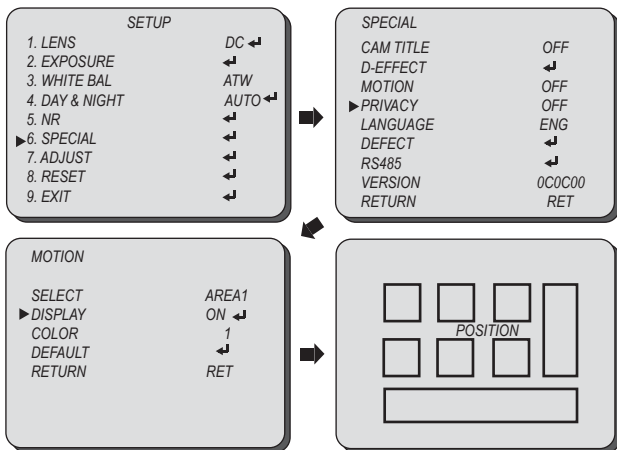
- **SIZE:** Adjust the size.

You can adjust the privacy size using the UP, DOWN, LEFT or RIGHT button.

● **COLOR:** Determine area color. You can select 16 different colors.

You can select privacy area color using the LEFT or RIGHT button.

● **DEFAULT:** Set the PRIVACY setting value as default.



Select **SPECIAL** using the UP or DOWN button.

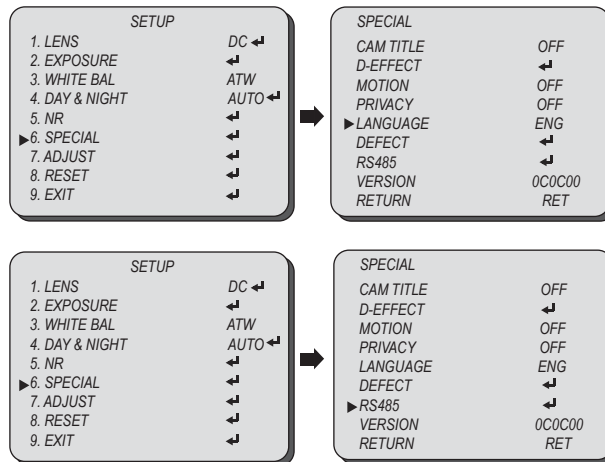
You can select the sub-menu from CAM TITLE, D-EFFECT, MOTION, PRIVACY, LANGUAGE, DEFECT, RS485, and VERSION using the UP or DOWN button

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

You can select the language from ENGLISH, JAPANESE, CHINESE1, and CHINESE2 using the LEFT or RIGHT button.

■ **RS-485:** Using RS-485 communication, the camera menu can be accessed using System Controller or the DVR (Other Equipment).

You can select the language from ENGLISH, JAPANESE, CHINESE1, and CHINESE2 using the LEFT or RIGHT button.



■ RS-485 function is disabled.

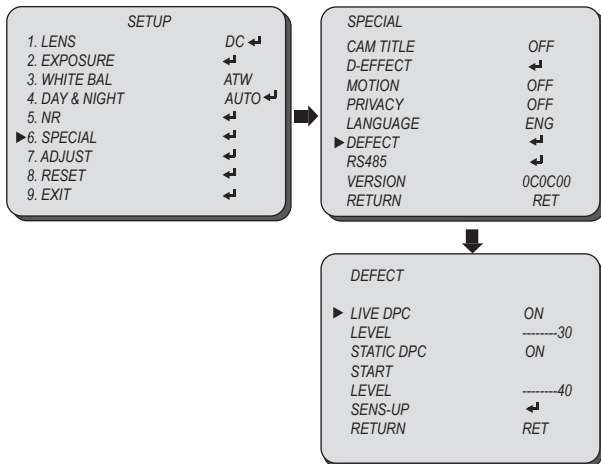
Select **SPECIAL** using the UP or DOWN button.

You can select the sub-menu from CAM TITLE, D-EFFECT, MOTION, PRIVACY, LANGUAGE, DEFECT, RS485, and VERSION using the UP or DOWN button.

■ **DEFECT:** Sensors could have defects for something wrong in the process of their storage or manufacturing process. Such defects are called dead pixels, which consist of two types: static dead pixel and dynamic dead pixel. The first can be found from the beginning while the second is found over time after using sensors for a certain period of time. Dynamic dead pixels may not be visible on the screen of ordinary illumination. However, they can be made visible by amplifying the analog/digital gain. Dead pixel correction (DPC) corrects such defects.

You can select the defect correction mode from LIVE DPC and STATIC DPC using the UP or DOWN button.

- **LIVE DPC:** Auto Dead pixel correction
- **LEVEL:** Level of Auto Dead pixel correction
- **STATIC DPC:** Manual Dead pixel correction
- **START:** Start Dead pixel correction
- **LEVEL:** Level of Manual Dead pixel correction
- **SENS-UP:** Display Sens-Up Value



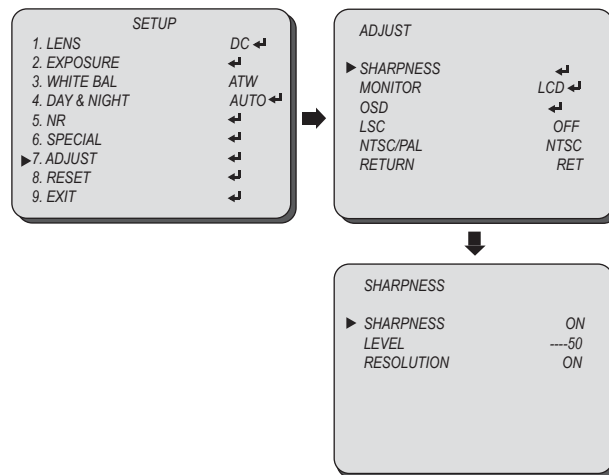
Select **ADJUST** using the UP or DOWN button.

You can select the sub-menu from SHARPNESS, MONITOR, OSD, LSD, and NTSC/PAL using the UP or DOWN button.

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

You can select the sharpness mode from SHARPNESS, LEVEL, and resolution using the UP or DOWN button.

- **SHARPNESS:** Select ON to activate the SHARPNESS function.
- **LEVEL:** Adjust the level of the sharpness.
- **RESOLUTION:** Select ON to increase the image quality.



Select **ADJUST** using the UP or DOWN button.

You can select the sub-menu from **SHARPNESS**, **MONITOR**, **OSD**, **LSD**, and **NTSC/PAL** using the UP or DOWN button.

■ **MONITOR:** Choose the appropriate setting for your monitor.

You can select the monitor mode from **LCD** or **CRT** using the LEFT or RIGHT button.

● **LCD:** Select this menu item when using an LCD monitor.

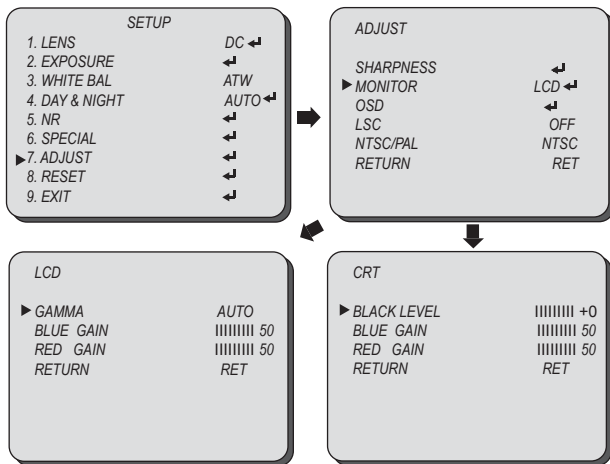
You can select the sub-menu using the UP or DOWN button.

- **GAMMA:** Select and adjust the gamma level.
- **BLUE:** Adjust blue the gain level.
- **RED:** Adjust red the gain level.

● **CRT:** Select this menu item when using a CRT monitor.

You can select the sub-menu using the UP or DOWN button.

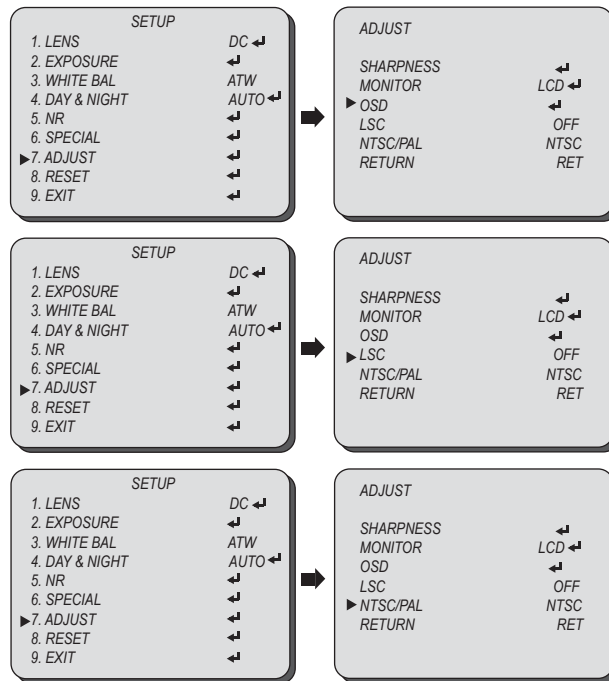
- **BLACK:** Adjust the contrast level.
- **BLUE:** Adjust blue the gain level.
- **RED:** Adjust red the gain level.



Select **ADJUST** using the UP or DOWN button.

You can select the sub-menu from **SHARPNESS**, **MONITOR**, **OSD**, **LSD**, and **NTSC/PAL** using the UP or DOWN button.

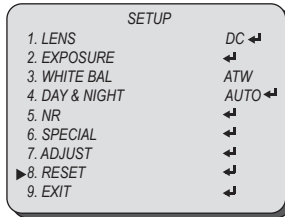
- **OSD:** You can adjust style of font.
- **LSC:** Lens shading compensation. Select ON to activate the brightness compensation on the corner of lens.
- **NTSC/PAL:** Select video type from NTSC or PAL.



RESET

Select **RESET** using the **UP** or **DOWN** button.

- **RESET:** Reset the camera settings to the factory defaults.
You can reset the camera setting using the **SET** button.



TROUBLE SHOOTING

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 properly connected.● Check that video cable is connected with the Analog BNC (Yellow).● When the camera's HD-SDI BNC output is directly connected to the monitor's BNC terminal: Make sure the monitor supports HD-SDI signal input.● When the camera's HD-SDI BNC output is connected to the DVR: Make sure the DVR supports HD-SDI signal input.● HD-SDI output is converted into other format such as DVI and VGA by using video converter: Make sure the converter's HD-SDI input format
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 the proper condition.● If the camera is exposed to very strong light, change the camera position.● Re-adjust the back-
The image on the screen is dim, when the LED is on.	<ul style="list-style-type: none">● Check if the LEDs are shaded and reflected by the camera ring, camera base, or other objects near the camera.
The LEDs are reflected over the dome or cover.	<ul style="list-style-type: none">● Check if the LEDs are shaded and reflected by the camera ring, camera base, or other objects near the camera.
The image on the screen is dark.	<ul style="list-style-type: none">● Adjust the contrast feature of the monitor.● If there is an intermediate device, set 75Ω properly. Check the termination.
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 camera to an appropriate power source.
The SENS-UP function does not work.	<ul style="list-style-type: none">● Check that AGC of EXPOSURE SETUP menu is 'OFF'.
The Motion Detection function does not work.	<ul style="list-style-type: none">● Check that MOTION DET of SPECIAL SETUP menu is 'OFF'.
Color is not correct.	<ul style="list-style-type: none">● Check the setting of WHITE BAL SETUP menu .
The screen flickers continually.	<ul style="list-style-type: none">● Ensure the camera is not pointing towards the sun.● Is the camera framing the sun or other bright light source?● If there is an intermediate device, set 750Ω properly. Check the termination.● HD-SDI video may not appear to be normal if distance exceeds the maximum transferable distance.● When a BNC cable adaptor is used to combine two or more BNC cables for distributed HD-SDI video transfer, make sure the impedance of the adaptor is 75Ω. Otherwise, it may cause shorter transfer distance or broken video transfer.