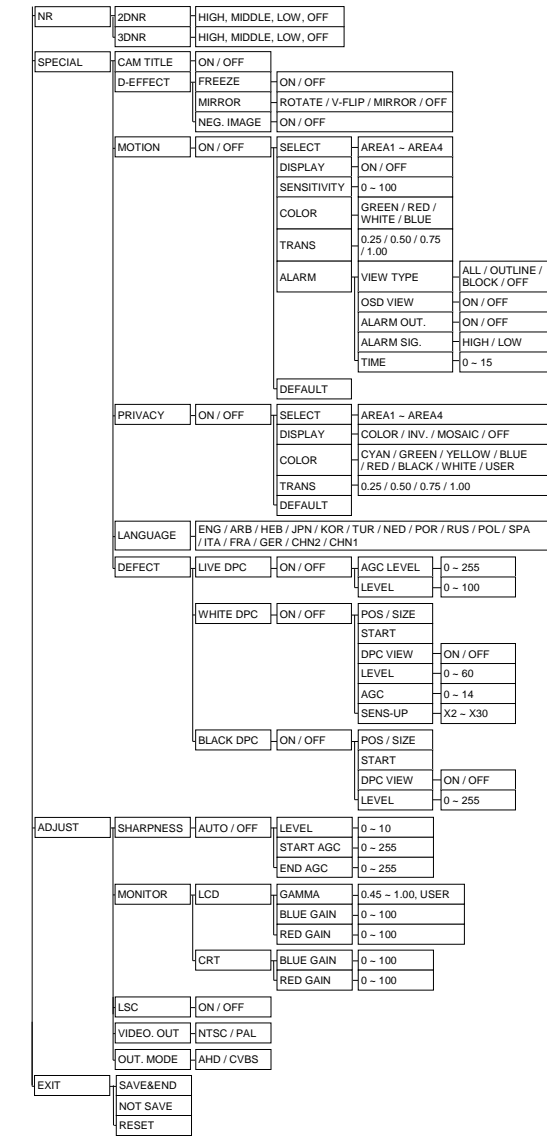
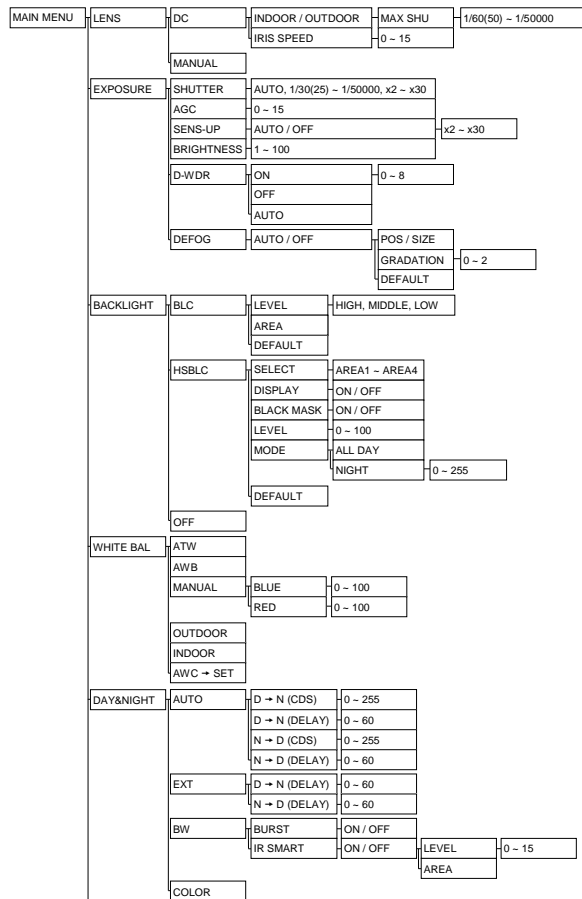


Please read this manual carefully before installation and operation of the product.

AHD OSD : Setup and Programming

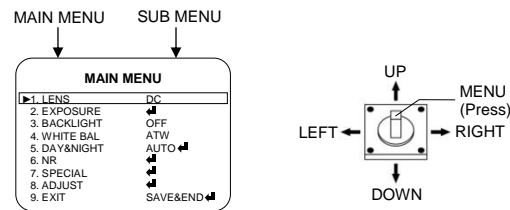
1. OSD MENU TREE



2. SETTING UP THE MENU

Settings can be made using the OSD Switch located on the back of the camera.

- Press the button to access the SETUP mode. The SETUP menu is displayed on the monitor.
- Please select any function you wish to activate by using the UP / DOWN selections. The cursor can be moved up or down by using the UP / DOWN selections. Position the cursor to point to the function you wish to operate.



※MAIN-menu : Use UP / DOWN selections. / SUB-menu : Use LEFT / RIGHT selection.

- Change the status of the selected feature using the LEFT / RIGHT selections. When the LEFT or RIGHT selection is done, available values and modes are displayed in order. Please keep the selection until you get to the mode you wish to operate.
- When completed, move the cursor indicator to 'EXIT' position and press the Button to finish the setting.

Note

If '▲' Appears at the mode you wish to operate, it means that there is a sub-menu which can be selected by OSD Switch.

3. LENS

- MANUAL**
When MANUAL lens is used.

MAIN MENU	
1. LENS	DC
2. EXPOSURE	OFF
3. BACKLIGHT	OFF
4. WHITE BAL	ATW
5. DAY&NIGHT	AUTO
6. NR	▲
7. SPECIAL	▲
8. ADJUST	▲
9. EXIT	SAVE&END

- DC**
When DC IRIS lens is used.
- MODE : INDOOR- Adjusts the MAX SHUTTER
OUTDOOR- Adjusts the MAX SHUTTER
※ You can select the MAX SHUTTER from '1/60' to '1/50,000' sec. (NTSC), '1/50' to '1/50,000' sec. (PAL)
- IRIS SPEED : Adjusts the IRIS SPEED in 0 ~ 15.
- RETURN : Returns to the MAIN MENU or SAVE&END.

DC LENS MODE	
1. MODE	INDOOR
2. IRIS SPEED	8
3. RETURN	RET

INDOOR MODE	
1. MIN SHU	1/30
2. MAX SHU	FLK
3. RETURN	RET

4. EXPOSURE

- SHUTTER**
- DC
When lens mode is on 'DC', Shutter will be deactivated.
- MANUAL
A. AUTO : The shutter speed is controlled automatically.
B. FLK : Please select FLK mode when flickering occurs on the screen, due to an imbalance between illumination and frequency.
C. FIXED : The shutter speed is controlled manually.
- You can select the speed from '1/30' to '1/50,000' sec. (NTSC), '1/25' to '1/50,000' sec. (PAL)
- You can select Digital Slow Shutter between x2 ~ x30. (DSS)

MAIN MENU	
1. LENS	DC
2. EXPOSURE	OFF
3. BACKLIGHT	BLC
4. WHITE BAL	ATW
5. DAY&NIGHT	AUTO
6. NR	▲
7. SPECIAL	▲
8. ADJUST	▲
9. EXIT	SAVE&END

EXPOSURE	
1. SHUTTER	AUTO
2. AGC	15
3. SENS-UP	AUTO
4. BRIGHTNESS	40
5. D-WDR	OFF
6. DEFOG	OFF
7. RETURN	RET

EXPOSURE	
1. SHUTTER	AUTO
2. AGC	15
3. SENS-UP	AUTO
4. BRIGHTNESS	40
5. D-WDR	OFF
6. DEFOG	OFF
7. RETURN	RET

EXPOSURE	
1. SHUTTER	AUTO
2. AGC	15
3. SENS-UP	AUTO
4. BRIGHTNESS	40
5. D-WDR	OFF
6. DEFOG	OFF
7. RETURN	RET

- AGC (Auto Gain Control)**
Adjusts the AGC in 1 ~ 15.
- SENS-UP**
- Low light sensitivity is greatly improved with the use of this function.
- Low light sensitivity level is adjustable from 2 to 30 times.
- When SENS-UP level is higher, the picture becomes brighter while noise is increased at the same rate of SENS-UP.
- AUTO : Adjustable SENS-UP level between x2 ~ x30.
OFF : SENS-UP is disabled.
※ Default setting is <x4>
- BRIGHTNESS**
Adjusts the brightness in 1 ~ 100. (Default 40)

EXPOSURE	
1. SHUTTER	AUTO
2. AGC	15
3. SENS-UP	AUTO
4. BRIGHTNESS	40
5. D-WDR	OFF
6. DEFOG	OFF
7. RETURN	RET

EXPOSURE	
1. SHUTTER	AUTO
2. AGC	15
3. SENS-UP	AUTO
4. BRIGHTNESS	40
5. D-WDR	OFF
6. DEFOG	OFF
7. RETURN	RET

- D-WDR (Digital Wide Dynamic Range)**
D-WDR Function scans both dark and bright clearly and this model realized its best set up for the most of different levels of backlight or contrast lighting situations.
- Adjusts the level in 0 ~ 8. (Default 2)



- DEFOG**
Images in extraordinary environment such as fog or rain or in a very strong luminous intensity have DR (dynamic range), lower than ordinary images. Contrast-based defog function, which is used to overcome such shortcoming.

EXPOSURE	
1. SHUTTER	AUTO
2. AGC	15
3. SENS-UP	AUTO
4. BRIGHTNESS	40
5. D-WDR	OFF
6. DEFOG	OFF
7. RETURN	RET

DEFOG	
1. POS / SIZE	0
2. GRADATION	▲
3. DEFAULT	▲
4. RETURN	RET

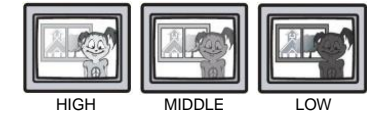
- POS / SIZE : Determines the coordinate of the vertical / Horizontal position. Determines the coordinate of the vertical / Horizontal size.
- GRADATION : Adjusts the gradation 0 ~ 2.
- DEFAULT : Initialize all setting of the defog.
- RETURN : Returns to the EXPOSURE or SAVE&END.



- RETURN**
Returns to the MAIN MENU or SAVE&END.

5. BACKLIGHT

- BLC**
Used for backlight environment. (HIGH / MIDDLE / LOW)



BLC	
1. LEVEL	MIDDLE
2. AREA	▲
3. DEFAULT	▲
4. RETURN	RET

MAIN MENU	
1. LENS	DC
2. EXPOSURE	OFF
3. BACKLIGHT	BLC
4. WHITE BAL	ATW
5. DAY&NIGHT	AUTO
6. NR	▲
7. SPECIAL	▲
8. ADJUST	▲
9. EXIT	SAVE&END

MAIN MENU	
1. LENS	DC
2. EXPOSURE	OFF
3. BACKLIGHT	BLC
4. WHITE BAL	ATW
5. DAY&NIGHT	AUTO
6. NR	▲
7. SPECIAL	▲
8. ADJUST	▲
9. EXIT	SAVE&END

- HSBLC**
Can mask the head lights to view car license number plate more clearly.

ECLIPSE MASKING AREA



MAIN MENU	
1. LENS	DC
2. EXPOSURE	OFF
3. BACKLIGHT	HSBLC
4. WHITE BAL	ATW
5. DAY&NIGHT	AUTO
6. NR	▲
7. SPECIAL	▲
8. ADJUST	▲
9. EXIT	SAVE&END

HSBLC	
1. SELECT	AREA1
2. DISPLAY	ON
3. BLACK MASK	ON
4. LEVEL	20
5. MODE	ALL DAY
6. DEFAULT	▲
7. RETURN	RET

- SELECT : You can select up to 4 areas.
- DISPLAY : Determines whether to use the HSBLC area selected in AREA SELECT.
 - ON : Determines the coordinate of the vertical / horizontal position. Determines the coordinate of the vertical / horizontal size.
- BLACK MASK : BLACK MASK ON / OFF.
- LEVEL : Adjusts the LEVEL 0 ~ 100.
- MODE : ALL DAY / NIGHT
Adjusts the AGC Level in 0 ~ 255 at selecting NIGHT.
- DEFAULT : Initialize all setting of the HSBLC.
- RETURN : Returns to the MAIN MENU or SAVE&END.

- OFF**

6. WHITE BAL

This is useful when the cameras are installed in different artificial lighting conditions where a standard 'White Balance' condition is not suitable for all.

- ATW (Auto Tracking White Balance)**
This mode can be used within the color temperature range 2,000°K ~ 20,000°K.
- AWB**
shows the auto white balance encompassing all the color temperature spaces without separately specifying a white area in line with the color temperature.

MAIN MENU	
1. LENS	DC
2. EXPOSURE	OFF
3. BACKLIGHT	OFF
4. WHITE BAL	ATW
5. DAY&NIGHT	AUTO
6. NR	▲
7. SPECIAL	▲
8. ADJUST	▲
9. EXIT	SAVE&END

MANUAL

In the manual mode, the user can choose the color and temperature. The user can adjust the color and temperature by controlling red and blue gain.

MANUAL	
1. BLUE	50
2. RED	50
3. RETURN	RET

- OUTDOOR**
A color temperature is fixed for use in the outdoor environment.
- INDOOR**
A color temperature is fixed for use in the indoor environment.

AWC → SET

This mode is used to fix the color temperature value once it is set under a certain color temperature environment. When "AWC → SET" of the OSD MENU is on, the color temperature is fixed in 1-2 seconds. If one or more value of each OPD Block are included in the ATW area, the color temperature is fixed by the corresponding OPD data. Otherwise, it becomes fixed by all the OPD data.

7. DAY&NIGHT

You can display pictures in Color or B/W.

- AUTO**
Automatically turns between Day and Night Mode

MAIN MENU	
1. LENS	DC
2. EXPOSURE	OFF
3. BACKLIGHT	OFF
4. WHITE BAL	ATW
5. DAY&NIGHT	AUTO
6. NR	▲
7. SPECIAL	▲
8. ADJUST	▲
9. EXIT	SAVE&END

according to CDS operation.

You can select the duration time about changing the Day / Night mode 0 ~ 60.

- D → N : To adjust lux level for switching Day to Night.
- N → D : To adjust lux level for switching Night to Day.

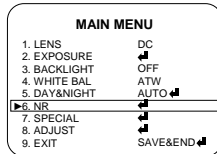
(2) EXT
Color or B / W is controlled by the signal coming from an external GPIO port.

(3) BW
The picture is always in black and white.
• BURST : ON / OFF.
• IR AMART : ON / OFF.
Adjusts the level in 0 ~ 15. (Default 3)

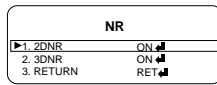
(4) COLOR
The picture is always in color.

8. NR (Noise Reduction)

Noise Reduction (NR) is used in order to obtain a high quality output image and enhance compression efficiency.
Offers Edge Preserving 2D NR and Motion Adaptive 3D NR.



(1) 2D NR
Cuts off the noise in low light condition.

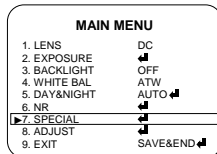


(2) 3D NR
Cuts off the noise in low light condition.

(3) RETURN
Returns to the MAIN MENU or SAVE&END.

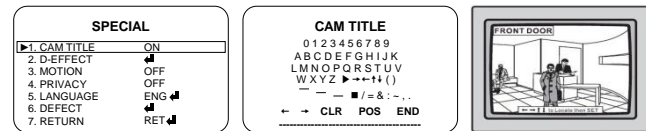
9. SPECIAL

(1) CAM TITLE
If you enter a title, the title will appear on the monitor.



1. Please position the arrow to point to 'SPECIAL' on the moving UP or DOWN direction.
2. Then, select 'ON' by using the LEFT and RIGHT selection.
When you press the button to complete 'ON', then 'CAM TITLE' will be displayed.

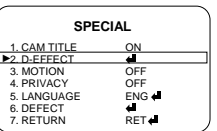
NOTE
• If 'OFF' is selected, the CAM TITLE does not appear on the monitor even if it has been input.



3. Up to 15 letters are available for the CAM TITLE.
 - ① Please move the cursor to the letter to choose by using the UP and DOWN selections.
 - ② Set an ID from 0, 1, ~ 8, 9, A, B, ~ Y, Z by using the UP, DOWN, LEFT and RIGHT selections.
 - ③ Lock in the letters by using the button.
When the letter is locked in, the cursor moves to the next space.
 - ④ Please repeat the above to input CAM TITLE.

4. When a name has been chosen, please select a position for the name to display.
 - ① Please move the cursor onto 'POS' and then press the button.
 - ② The name will appear at the top right corner.
 - ③ Please find the position you wish to display the name by using the 4 directional selections, and then press the button to finish.
5. Please select 'END' and then press the button to complete CAM TITLE input.

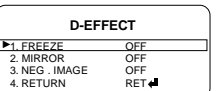
(2) D-EFFECT
- FREEZE : You can view still or moving pictures.



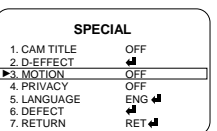
- MIRROR : ROATE / V-FLIP / MIRROR / OFF.

- NEG. IMAGE : Negative ON / OFF.

- RETURN : Returns to the SPECIAL MENU or SAVE&END.

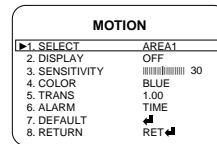


(3) MOTION
- SELECT : You can select up to 4 MD areas.



- DISPLAY : Determines whether to use the MD area selected in AREA SELECT.

- ON : Determines the coordinate of the vertical / horizontal position.
Determines the coordinate of the vertical / horizontal size.



- SENSITIVITY : Determines the coordinate of the sensitivity.

- COLOR : GREEN, RED, WHITE, BLUE.

- TRANS : Set the color transparency for displaying a detected area.

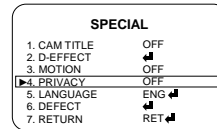
- ALARM : Set the alarm output. (VIEW TYPE, OSD VIEW, etc.)

- DEFAULT : Initialize all setting of the MOTION.

- RETURN : Returns to the SPECIAL MENU or SAVE&END.

(4) PRIVACY

- SELECT : You can select up to 4 PRIVACY areas.



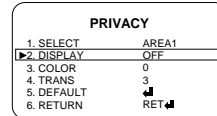
- DISPLAY : Determines whether to use the MD area selected in AREA SELECT.

- COLOR : CYAN, GREEN, YELLOW, BLUE, RED, BLACK, WHITE, USER.

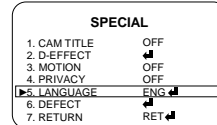
- TRANS : Set the color transparency for displaying a detected area.

- DEFAULT : Initialize all setting of the PRIVACY.

- RETURN : Returns to the SPECIAL MENU or SAVE&END.

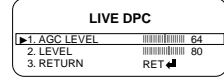
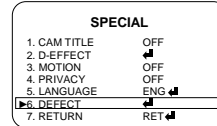


(5) LANGUAGE
ENG / ARB / HEB / JPN / KOR / TUR / NED / POR / RUS / POL / SPA / ITA / FRA / GER / CHN2 / CHN1. (Supports up to 16 Languages)

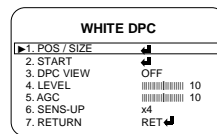
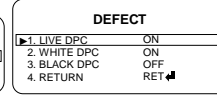


(6) DEFECT

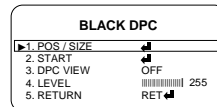
- LIVE DPC : Live Dead Pixel Correction.
 - AGC LEVEL : Adjusts the AGC LEVEL 0 ~ 255.
 - LEVEL : Adjusts the LEVEL 0 ~ 100.
 - RETURN : Returns to the DEFECT MENU or SAVE&END.



- WHITE DPC : White Dead Pixel Correction.
 - POS / SIZE : Adjusts the position and size.
 - START
 - DPC VIEW : ON / OFF.
 - LEVEL : Adjusts the LEVEL 0 ~ 60.
 - AGC : Adjusts the LEVEL 0 ~ 14.
 - SENS-UP : Adjusts the LEVEL x2 ~ x30.
 - RETURN : Returns to the DEFECT MENU or SAVE&END.



- BLACK DPC : Black Dead Pixel Correction.
 - POS / SIZE : Adjusts the position and size.
 - START
 - DPC VIEW : ON / OFF.
 - LEVEL : Adjusts the LEVEL 0 ~ 255.
 - RETURN : Returns to the DEFECT MENU or SAVE&END.



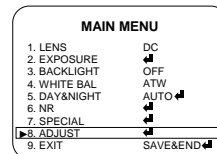
- RETURN : Returns to the SPECIAL MENU or SAVE&END.

(7) RETURN
- Returns to the MAIN MENU or SAVE&END.

10. ADJUST

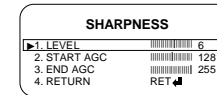
(1) SHARPNESS

- LEVEL : Adjusts the LEVEL 0 ~ 10.
- START AGC : When the level is high, the sharpness of picture at night is improved while noise is increased.



- END AGC : Set to 255 Level for optimized definition at night.

- RETURN : Returns to the ADJUST MENU or SAVE&END.



(2) MONITOR

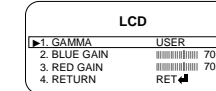
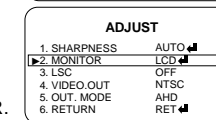
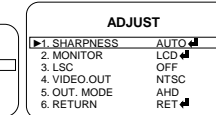
A. LCD

- GAMMA : Adjusts the LEVEL 0.45 ~ 1.00, USER.

- BLUE GAIN : Adjusts the LEVEL 0 ~ 100.

- RED GAIN : Adjusts the LEVEL 0 ~ 100.

- RETURN : Returns to the ADJUST MENU or SAVE&END.



B. CRT

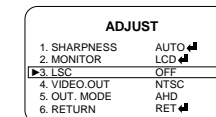
- BLUE GAIN : Adjusts the LEVEL 0 ~ 100.

- RED GAIN : Adjusts the LEVEL 0 ~ 100.

- RETURN : Returns to the ADJUST MENU or SAVE&END.

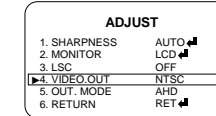
(3) LSC

Lens Shading Correction (LSC) corrects the phenomenon where the image gets darkened or blurred on the periphery.



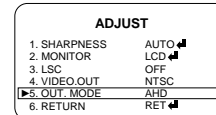
(4) VIDEO.OUT

NTSC / PAL
- Video output can be set to NTSC or PAL according to local TV standard.



(5) OUT. MODE

(6) RETURN
Returns to the MAIN MENU or SAVE&END.



* If the version of DVR is 1.0, 'DISTANCE' menu is added.
'DISTANCE' menu enables to choose (select) 'NORMAL' of 'LONG' depending on length of cable.

11. EXIT

(1) SAVE&END
Save the current settings and exit the menu.

(2) NOT SAVE
Do not save the current settings and exit the menu.

(3) RESET
Resets the camera settings to the factory defaults.

