

# SONY Super HAD II Security Camera With On-Screen Display

## Model CSP-120WDR

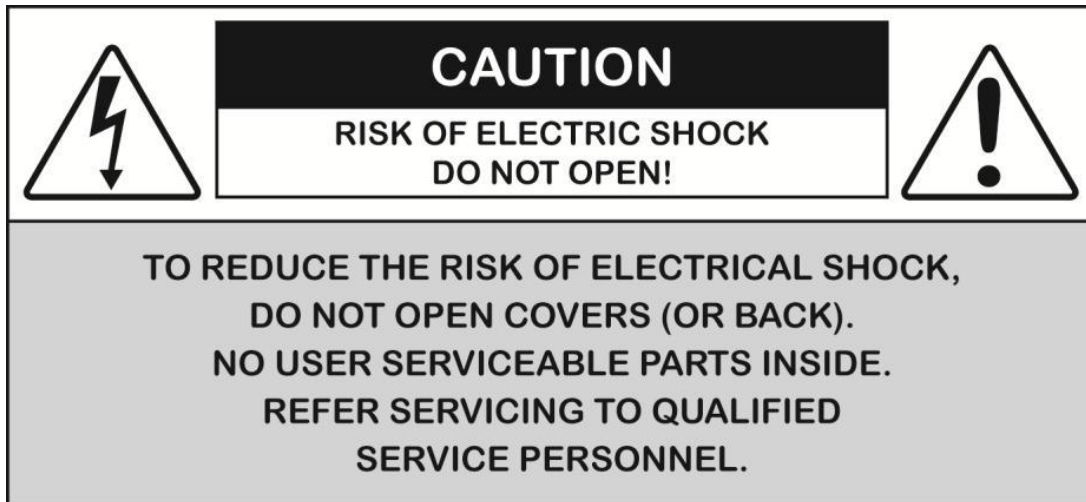
### FEATURES:

- 1/3 Sony Super HAD II CCD
- Wide Dynamic Range
- 700TVL High Resolution
- 42 Infrared LEDs'
- IR Distance up to 120ft / 40m
- 2.8~12.0mm Varifocal Lens
- On-Screen Display (OSD)
- IP66 Rating
- 3-AXIS Cable Management Bracket
- 1AMP
- 12V DC



The CSP-120WDR is a “New Generation” camera with high sensitivity SONY CCD & DSP. It was designed to provide the user with stunningly clear images in both day and night. The camera has a Day/Night auto-switch which automatically produces a black and white/infrared image in low light. With built-in Wide Dynamic Range (WDR) technology, this camera is capable of providing clear images even under backlight circumstances where intensity of illumination can vary excessively. This camera is an excellent choice for low light, complete darkness or areas with intense lighting. The camera is also equipped with many advanced features including a digital on-screen display (OSD) menu which enables the user to adjust camera settings in order to achieve the highest quality image.

**CAUTION:**



Do not attempt to service this video product by yourself as taking apart camera may expose you to dangerous voltage or other hazards.

Please comply with all electrical safety standards during installation and operation.

In order to prevent damage caused by fire or electric shock, please do not submerge camera in water or expose any open parts to liquid.

Make sure to use the appropriate power supply and that the power is plugged into the camera correctly and securely. Do not switch on power until after camera connection is complete. This camera requires 12volt DC power.

Do not expose the lens directly to the sun or to strong light as this may damage the pick-up device.

There are some sophisticated parts inside this camera, therefore, always handle with care in order to avoid any internal damage to the camera.



## **Frequently Asked Questions:**

### No Image

Check the power cable to the power box or wall outlet. Make sure video and power connections are secure. Do not switch on power until camera connection is complete.

If using a multiple output power box, make sure the power switch is in the "ON" position & all of the fuses are illuminated.

If using a multiple output power box, make sure the POSITIVE (+) and NEGATIVE (-) wires are connected correctly.

If using a spool of cable (not premade), make sure outer copper wire is not touching the center pin.

Make sure the BNC video from connection from the camera is plugged into the video input on the DVR or display.

## 1. EXPOSURE

The EXPOSURE menus SHUTTER/IRIS controls, BLC, HLI, D-WDR, AGC and 3D DNR, will set SENSE-UP etc. and it will be able to change a condition.



1/80

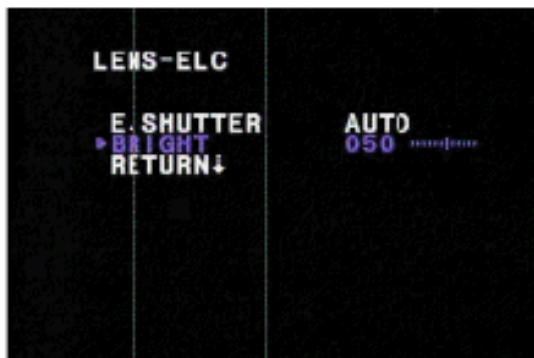
### EXPOSURE –LENS

- Selection of LENS modes.
- The ELC means fixed LENS mode.
- The ELC modes with electronic shutter AE controls.
- When use DC-IRIS lens, DC-IRIS full open conditions.
- DC modes use DC-IRIS lenses and they control AE. This time, Electronic shutter default shutter speed



### EXPOSURE – LENS – ELC –E.SHUTTER

- E.SHUTTER –setting value of electronic shutter
- Select mode :Auto,1/80(1/50), 1/100, 1/120FLK, 1/250, 1/500,1/1000, 1/2000, 1/4000, 1/10000, 1/100000 sec. (default : AUTO)
- When selecting in Auto mode (default) :The shutter mode from 1/80 to 1/100000 is controlled with automatic.



### EXPOSURE – LENS – ELC - BRIGHT

- BRIGHT : For target brightness control
- AE controls this in compliance with a set bright control. Bright control from 1 to 100, the default is 50.



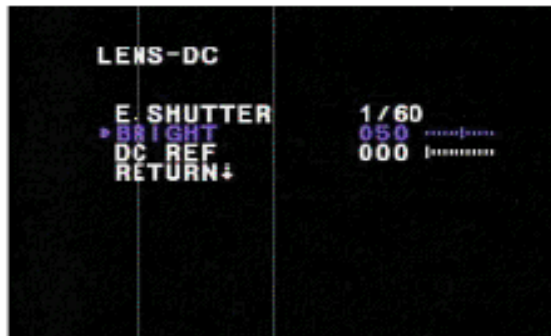
#### EXPOSURE – LENS –DC

- DC modes use DC-IRIS lenses and they control AE. Then, electronic shutter speed default 1/60.

#### EXPOSURE – LENS – DC –E.SHUTTER

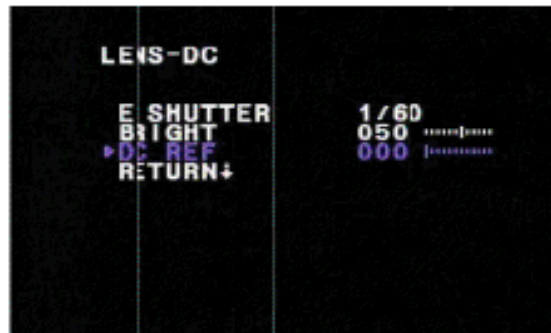
- LENS – DC mode setting.
- E.SHUTTER :Electronic shutter value setting mode in DC IRIS
- 1/60(1/50), 1/100, 1/120FLK, 1/250, 1/500,1/1000,

1/2000, 1/4000, 1/10000, 1/100000 sec. (default : 1/50 (1/60))



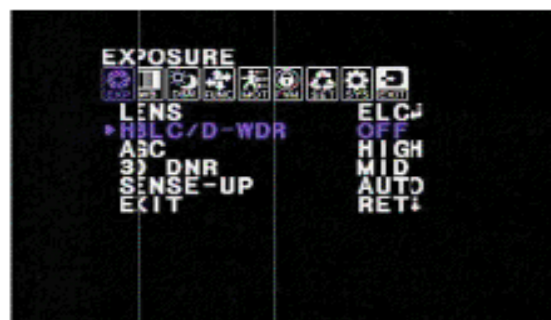
#### EXPOSURE – LENS – DC - BRIGHTNESS

- BRIGHT : Setting for target brightness.
- Controls DC IRIS at the bright value which is set. Bright control from 1 to 100, the default is 50.



#### EXPOSURE – LENS –DC REF

- Completing setting from DC, after lens modes, more will open the lens or there is a possibility of closing
- Control value from 0 to 20, the default is 10.



#### EXPOSURE –H/LC/D-WDR

- Select menu for BLC / HLI / D-WDR
- BLC mode : Back Light Compensation
- HLI mode :High Light Inverse
- D-WDR mode :Digiter Wide Dynamic Range



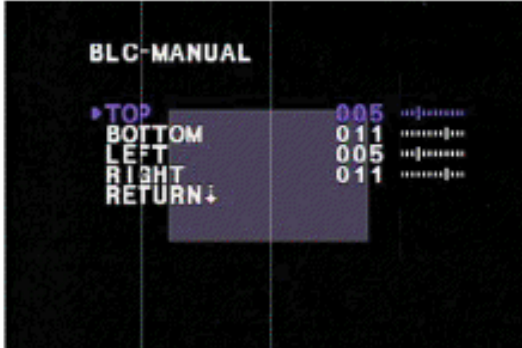
**EXPOSURE - HBLC/D-WDR - BLC**

- Selected BLE mode



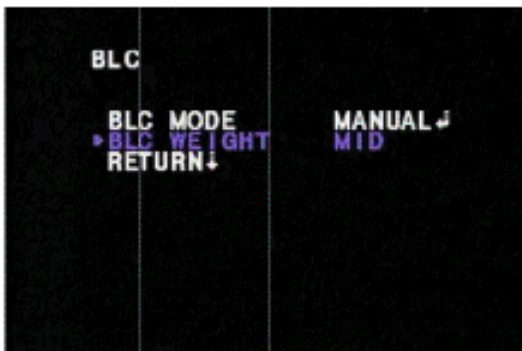
**EXPOSURE - HBLC/D-WDR - BLC - BLC MODE**

- Select AUTO or MANUAL
- Sets the total AE level at AE value of select window area.
- AUTO, the case which modes will select seeks the darkest area with automatic and photometry weight, AE controls does.



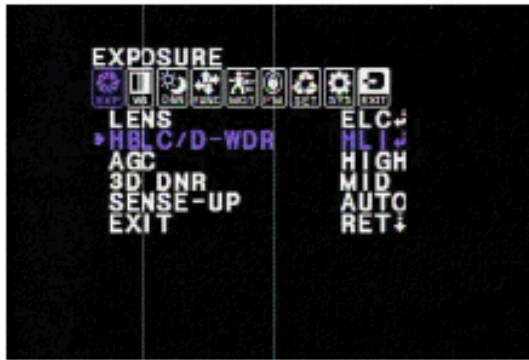
**EXPOSURE - HBLC/D-WDR - BLC - BLC MODE - MANUAL**

- BLC window setting at manual mode
- TOP / BOTTOM / LEFT / RIGHT zone setting.
- TOP : 0 ~ (BOTTOM - 1), 1 step.
- BOTTOM : (TOP + 1) ~ 16, 1 step.
- LEFT : 0 ~ (RIGHT - 1), 1 step.
- RIGHT : (LEFT + 1) ~ 16, 1 step.



**EXPOSURE - HBLC/D-WDR - BLC - BLC WEIGHT**

- BLC weight select mode
- Select OFF / LOW / MID / HIGH



#### EXPOSURE - HBLC/D-WDR -HLI

- HLI mode :High Light Inverse
- It is a function which reverses the area about strong light.
- The HLI BLC mode control by BLC window area. (HBLC)



#### EXPOSURE - HBLC/D-WDR -HLI - HBLC

- Sets HBLC area of separate way from HLI mode



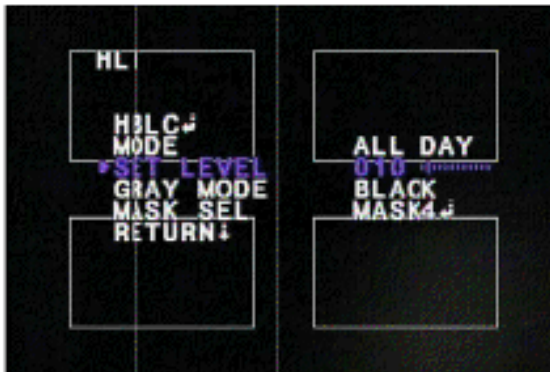
#### EXPOSURE - HBLC/D-WDR -HLI - HBLC

- HBLC LEVEL : OFF/LOW/MID/HIGH
- HBLC zone sets regulate HBLC zone with square window of the screen.
- TOP / BOTTOM / LEFT / RIGHT control mode
  - TOP : 0 ~ (BOTTOM - 1), 1 step.
  - BOTTOM : (TOP + 1) ~ 16, 1 step.
  - LEFT : 0 ~ (RIGHT - 1), 1 step.
  - RIGHT : (LEFT + 1) ~ 16, 1 step.



#### EXPOSURE - HBLC/D-WDR -HLI - MODE

- Use mode set of HLI (ALL DAY / NIGHT).
- ALL DAY :Always operating HLI
- NIGHT :Only NIGHT environment operating.  
But if DAY condition, not operating HLI



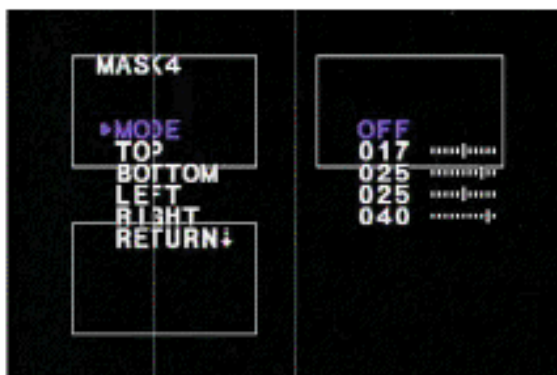
**EXPOSURE - HBLC/D-WDR - HLI - SET LEVEL**

- Setting of HLI level (1 ~ 100, 1 step, default : 10)  
Inverse zone will increase in low level



**EXPOSURE - HBLC/D-WDR - HLI - GRAY MODE.**

- When HLI is operate the zone color sets.  
Selection of GRAY / D.GRAY / BLACK



**EXPOSURE - HBLC/D-WDR - HLI - MASK SEL**

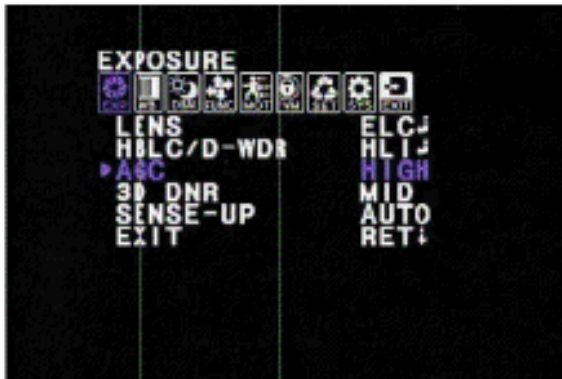
- Window has 4 zones : MASK1 ~ 4  
User sets each mask window.

**EXPOSURE - HBLC/D-WDR - HLI - MASK SEL - MASK i**

- MODE : Window operates by ON/OFF.
- TOP / BOTTOM / LEFT / RIGHT

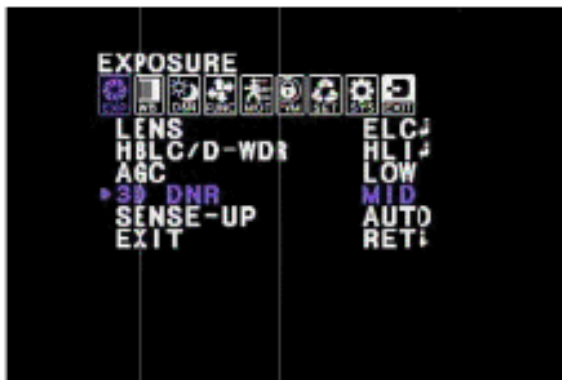
- The white rectangle exists in only the window set mode.
- TOP : 0 ~ (BOTTOM - 1), 1 step.
- BOTTOM : (TOP + 1) ~ 34, 1 step.
- LEFT : 0 ~ (RIGHT - 1), 1 step.
- RIGHT : (LEFT + 1) ~ 45, 1 step.





#### EXPOSURE –AGC

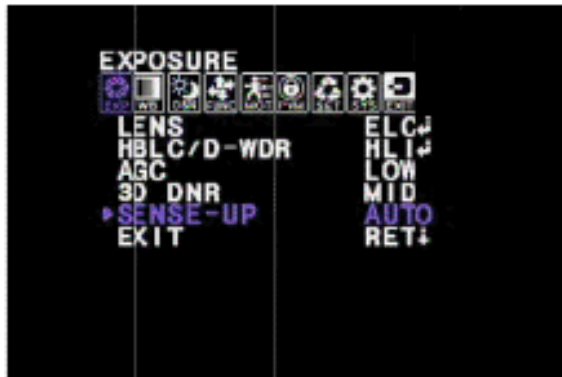
- AGC :Auto Gain Control level set  
OFF / LOW / MIDDLE / HIGH.



#### EXPOSURE –3D DNR

- 3 Dimension Digital Noise Reduction
- Level sets for 3D DNR.
- OFF / LOW / MID / HIGH

The noise level reduces in high level but ghost image increase more.

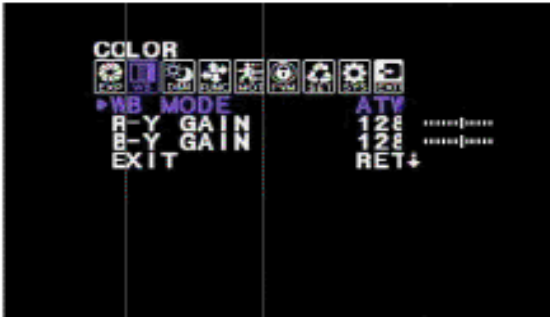


#### EXPOSURE –SENSE-UP

- When it is low dark condition, SENSE-UP uses
- AUTO / OFF / X2 / X4 / X8 / X16 / X32 / X64 / X128 / X256 / X512
- AUTO mode basically sets X8 by manufacture.
- In case of SENSE-UP operating, the 3D-DNR is operated LOW level.

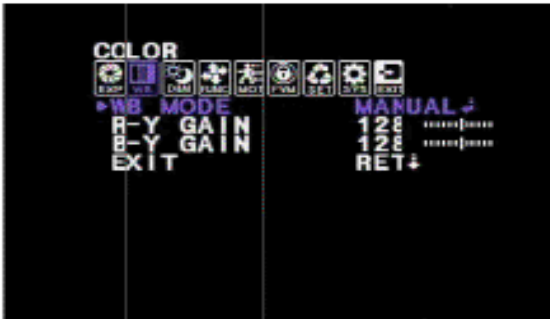
## 2. COLOR

The white balance mode and color gainsetting menu.



### COLOR –WB MODE

- White Balance control mode selects  
ATW / MANUAL / AWC>PUSH / AWC
- Selection of COLOR – WB MODE - ATW
- ATW :Auto Tracking White Balance mode

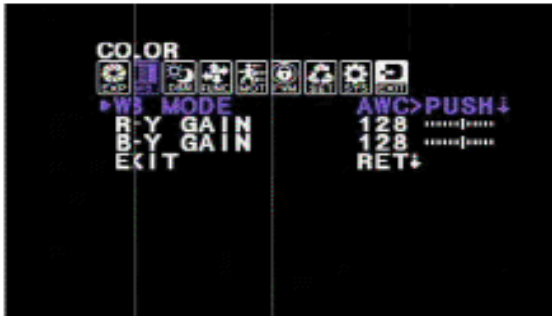


### COLOR – WB MODE –MANUAL

- User can change color
- M. WB R :If it is higher than default (64), the white point moves toward RED. And it is lower than it moves toward GREEN.
- Control range : 0 ~ 128, 1 step, default : 64
- M. WB B :If it is higher than default (64), the white point moves toward BLUE. And it is lower than it moves

toward YELLOW.

- Control range : 0 ~ 128, 1 step, default : 64



### COLOR – WB MODE –AWC>PUSH

- When pushing ENTER, the white balance operate automatically in fixed color temperature area.



#### COLOR – WB MODE –AWC

- AWC :Auto White Balance Control mode
- Auto White Balance controls in all color temperature ranges.



#### COLOR –R-Y GAIN

- The color gain controls R-Y
- If it increases more than default (128) value,R-Y gain extends to vertical shaft in color vector. And if it decrease, it shortens ( 0 ~ 256, 1 step, default : 128)

#### COLOR –B-Y GAIN

- The color gain controls B-Y
- If it increases more than default (128) value, B-Y gain extends to horizontal shaft in color vector. And if it decrease, it shortens ( 0 ~ 256, 1 step, default : 128)

### 3. DAY&NIGHT

- Color & B/W change, D&N filter change, Color/Aperture level control.



#### DAY&NIGHT –D&N MODE

- D&N change mode sets
- Select of AUTO / COLOR / B&W / EXT.
- AUTO mode: D&N is decided by AGC gain level.
- COLOR mode: Only Color mode operates.
- B&W mode: Only B&W mode operates.
- EXT mode: D&N decision by external CDS signal.



#### DAY&NIGHT – D&N - AUTO

- D&N is decided by AGC gain level.
- BURST: When it is Night mode, color burst ON/OFF controls.
  - DAY>NIGHT: It controls gain level for changing Night mode ((DAY>NIGHT + 1) ~ 30, 1 step) unitdB.
  - NIGHT>DAY :It controls gain level for changing DAY mode. (0 ~ (NIGHT>DAY – 1), 1 step) unitdB.

- DWELL TIME: D&N change on continual time condition set DAY>NIGHT or NIGHT>DAY.For protecting hunting.(0 ~ 15, 1 step) unit : sec



#### DAY&NIGHT – D&N –EXT.

- EXT mode: D&N decision by external CDS signal.
- BURST :When it is Night mode,color burst signal selects ON/OFF.
  - DAY>NIGHT: ADC level for changing Night mode. (0 ~ 255, 1 step)
  - NIGHT>DAY : ADC level for changing Day mode. (0 ~ 255, 1 step)
- SMART IR : SMART IR changing ON/OFF mode



#### DAY&NIGHT –C\_SUP

- The color noise suppress in Night mode.
- 0 ~100, 1 step. Unit %.



#### DAY&NIGHT –A\_SUP

- The Aperture level suppress in Night mode.
- 0 ~100, 1 step. Unit %.

#### 4. FUNCTIPON

- Sets for MIRROR, Sharpness, LSC mode



#### FUNCTION

- MIRROR : Image change mirror ON/OFF mode
- SHAPRNESS: Sharpness level control( 0 ~ 30, 1 step)
- LSC: Lens Shading Compensation ON/OFF mode



#### FUNCTION –LSC

- LSC(Lens Shading Compensation)
- In order to complement the quality of the lens is a function which increases gain of screen angle.
- LSC operates ON/OFF
- 0 ~ 30, 1 step.
- In increasing level, side image is bright.

## 5. MOTION



- The function informs alarm on camera when being moving by the screen. The setting zones are 4 area.

- MOTION : Select operates ON/OFF
- AREA SEL : Select each area
- SENSITI. : Control MOTION sensitivity. (0 ~ 30, 1 step)
- DISPLAY: Control alarm mode when MOTION indicates. ( Select of OFF / ICON / TRACE)

i) ICON mode: MOTION ICON display when MOTION

indicates.

ii) TRACE mode: Display selected window in AREA

- HOLD TIME: The time of alarm control when MOTION indicat. (0 ~ 15, 1 step ) Unit : sec



### MOTION – AREA SEL – AREA i

- MASK MODE: Selected area operates MASK area.
- TOP / BOTTOM / LEFT / RIGHT
- TOP : 0 ~ (BOTTOM - 1), 1 step.
- BOTTOM : (TOP + 1) ~ 145, 1 step.
- LEFT : 0 ~ (RIGHT - 1), 1 step.
- RIGHT : (LEFT + 1) ~ 192, 1 step.
-

## 6. PRIVACY

- The mask controls about the zone where the privacy is necessary.

The total mask is 8 zones.

The each mask color can control GRAY, BLACK, WHITE, RED, GREEN, BLUE, MAGENTA, CYAN.



### PRIVACY –MASK1 ~ MASK 8

- The each mask selects ON/OFF



### PRIVACY –MASK1

- After selecting each mask, it can select color, location, area of mask.

- DOT SEL :The each mask can change area. (L\_TOP / L\_BOT / R\_BOT / R\_TOP)
- DOT XY :The selected point in mask controls size.
- MOVE XY :The selected mask can move.
- COLOR SET :The selected mask can change color.

(GRAY/BLACK/WHITE/RED/GREEN/BLUE/MAGENTA/CYAN )

## 7. SETUP

- The SETUP mode set USER TITLE, DPC (Dead Pixel Compensation), OLPF, MONITOR MODE.

### SETUP –TITLE

- User writes TITLE
- User sets TITLE ON/OFF.
- After selecting TITLE ON, it can write TEXT to display on screen.



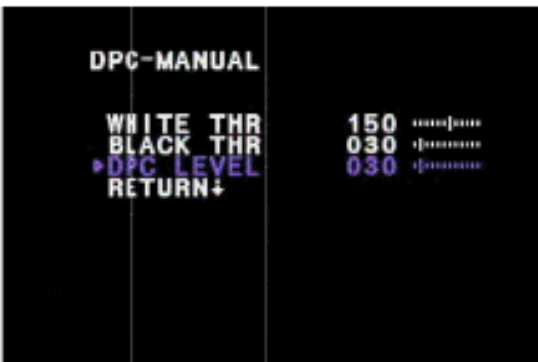
#### USER TITLE –Text setting mode.

- User can write text 64 characters.
- ← , → :When it modify, user can move revision text..
- CLR: User can remove all text.
- POS: The text move to the position.
- RET :After finishing USER TITLE to the upper menu.



#### SETUP –DPC (Dead Pixel Compensation)

- It is the function to compensate for CCD defect.
- User can select OFF / MANUAL.



#### SETUP – DPC –MANUAL

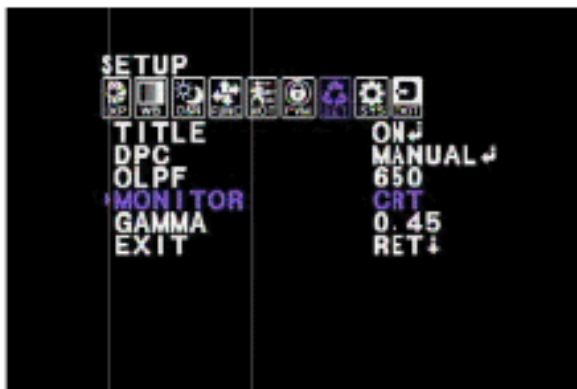
- After selecting MANUAL mode, menu move to the DPC control mode
- WHITE THR : White defect threshold. (0 ~ 255, 1 step)
- BLACK THR : Black defect threshold. (0 ~ 255, 1 step)
- DPC LEVEL: Control the DPC compensation level (0 ~ 255, 1 step)





#### SETUP –OLPF

- User can control ATW value according to kind of OLPF
- It supports two kinds of OLPF. (850 filter (IR-CUT), 850 filter(IR-PASS))



#### SETUP –MONITOR

- The DISPLAY MONITOR mode can support two kinds of display( CRT/LCD)



#### SETUP –GAMMA

- User can adjust GAMMA level.
- Selecting of 0.45 / 0.60 / 1.0 / USER.
- After selecting USER mode, the gamma value adjust 0.20 ~ 1.00. (0.05 step)



#### SYSTEM –CAMERAID

- When user set a couple of camera, it can set camera ID of each camera. 0 ~ 255

#### SYSTEM –COMMUNI. (communication setting)

- User can set RS485 comm. ON /OFF.

#### SYSTEM –LANGUAGE

- User can set language of OSD menu.



#### SYSTEM –COMMUNICATION sub menu.

- Setting RS485 communication.
- PROTOCOL: Supporting for PELCO-D.
- BAUDRATE: 2400 / 4800 / 9600 / 19200. Unit : bps

## 9. EXIT

- You can choice each option for the EXIT after config the camera setting.



#### EXIT –FACTORY SET.

- Factory initial data mode set.
- Camera setting data factory original data.
- After factory set mode, user has to enter

SAVE&EXIT.

#### EXIT –SAVE&EXIT.

- After adjusted data, exit OSD menu.

#### EXIT –EXIT

- Exit not saving changed data.

# Technical Specifications

Imaging Sensor	1/3" SONY Super Had II CCD + Korean DSP
Pixel	PAL: 976 (H) ×582 (V) ; NTSC: 976 (H) ×494 (V)
Signal System	PAL/ NTSC
Syn. System	Internal Synchronization
Shutter speed	PAL: 1/50~1/100000s; NTSC: 1/60~1/100000s
S/N Ratio	More than 50dB (AGC OFF)
Video Output	1.0Vp-p, 75 ohms
Horizontal resolution	Color: 700TVL, B/W: 730TVL
Minimum Illumination	Color 0.1Lux(F1.2,50IRE,AGC ON) B/W:0.001Lux(F1.2,50IRE,AGC ON) 0 Lux when IR on
D/N Switch	Auto/Color/B/W/External Control
Brightness Switch	Color to B/W & B/W to Color for option
D/N Switching Time	0~255
IR Leds'	42 IR Leds'
IR Distance	40M = 120 FEET
Image Brightness	0~255 adjustable
OSD	CHINESE/ENGLISH/JAPANESE/PYCKNN/PORTUGUESE/ESPANOL/DEUTSCH/ FRANCAIS
PRIVACY	1~4 Zones
Privacy Zone Color	Color 1~Color 8 optional
Motion Detection	On / Off (multi-sensitivity settings, alarm time optional)
Alarm Display	Icon
AWB	ATW, PUSH, USER1, USER2, ANTI CR, MANUAL or PUSH LOCK
Sharpness	0~255 adjustable
DNR	3D DNR
Power Supply	DC12V±10%
Power consumption	1AMP Power Supply < 100FT Cable. 2AMP Power Supply > 100FT Cable.
Operation Temperature	-10°C~+50°C Camera Housing has a Rating of IP66
Operation Humidity	20~80%
Storage Temperature	-40°C -60°C
Storage Humidity	20~95%