USER'S MANUAL

OSD (On Screen Display) Manual Operating Instructions

Thank you for choosing our high quality camera. Before attempting to connect or operate, please read and follow these instructions.

About this Instructions
Before installing and using the Camera, please read this manual Carefully. Be sure to keep it handy for later reference.

Made in Korea

Contents

1. Function Features

Advanced DNR Function
3D Filtering of the Video Signal Optimizes the Signal to Noise ratio, giving vas improved low light visibility and powerful Sens-Up function (up to 258 times magnification)

3D-DNR **OFF**   3D-DNR **ON**

High Resolution 550TV Lines
550TV Lines horizontal resolution in color mode and 600TV Lines horizontal resolution in BW mode

Standard Camera   550TV Lines Camera

WDR (Wide Dynamic Range)
Capturers cleaner and superior high resolution pictures even where images appear dark because there is a strong back light present.

WDR **OFF**   WDR **ON**

HSBLC (Backlight Compensation)
High spotlight BLC is especially effective to read the number plate of the vehicles in the street or parking lot at night time. Especially users can adjust and select the special requirement area to observe the target object under the strong spots of light exist.

BLC **OFF**   BLC **ON**

Illumination (0.00001 Lux)
With an incredibly minimum illumination of amazing 0.00001Lux can capture good images even in extremely low light conditions

Standard Image   Min. Illumination Image

2. Key Buttons

Pressing the "SETUP" button prompts the main setup menu.

"PUSH" button   : To access the main setup menu
"U" button   : Manu item UP selection
"D" button   : Manu item DOWN selection
"L" button   : To change data to down
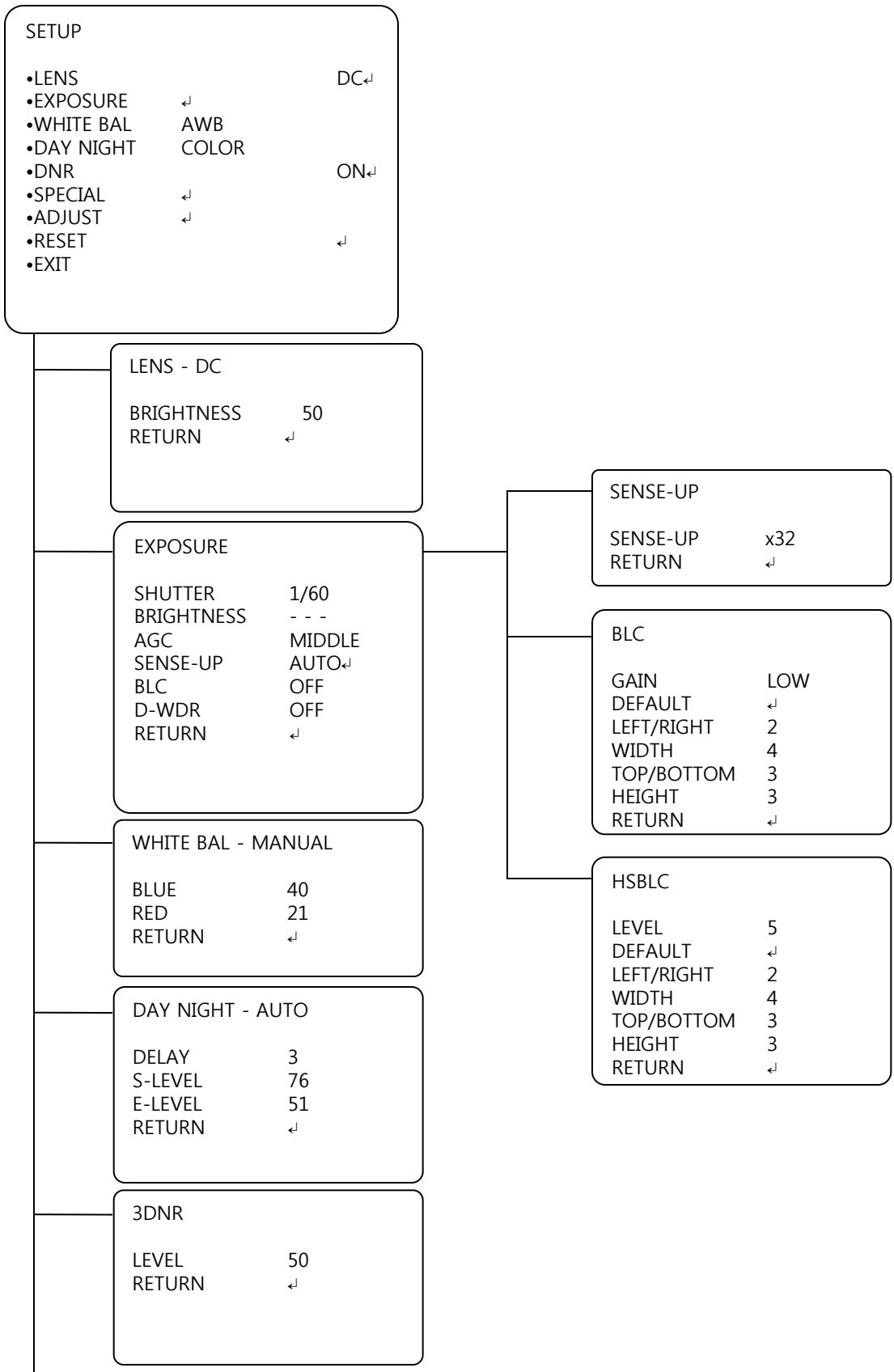"R" button   : To change data to up
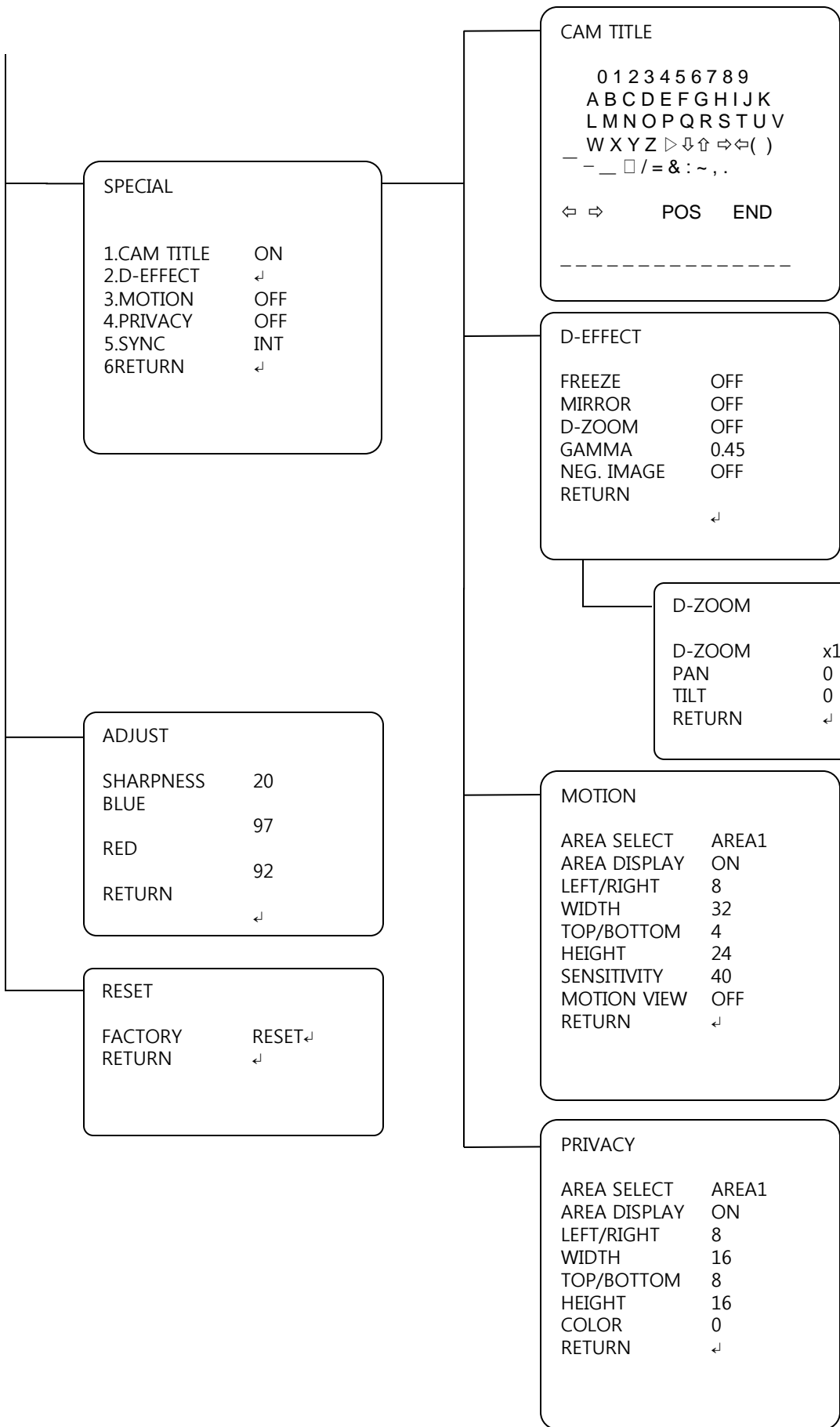
3. OSD SETUP Menu for Quick Reference

SETUP Menu		Default Value	Description
1. LENS		DC : Brightness 50	Manual, DC : Brightness Range : 0~100
2. EXPOSURE			EXPOSURE Sub-Menu
SHUTTER		NTSC : 1/60 (PAL : 1/50)	1/60 (PAL : 1/50),FLK. 1/250,1/500,1/500,1/2000,1/5000 1/10000, 1/100000
BRIGHTNESS		------------	No Operation
AGC		MIDDLE	Adjusts the Maximum Gain Mode OFF,LOW,MIDDLE,HIGH
SENSE-UP		AUTO(X32)	OFF,AUTO (Range : x2~x258)
BLC		OFF	OFF,BLC (BLC Sub-menu) HSBLC (HSBLC Sub-menu)
BLC	GAIN	LOW	LOW,MIDDLE,HIGH
	DEFAULT		Initializes the changed category in BLC menu
	LEFT/RIGHT	2	Range : 0~7
	WIDTH	4	Range : 0~8
	TOP/BOTTOM	3	Range : 0~7
	HEIGHT	3	Range : 0~8
	RETURN		Return to EXPOSURE Sub-menu
HSBLC	LEVEL	5	Range : 0~8
	DEFAULT		Initializes the changed category in HSBLC menu
	LEFT/RIGHT	2	Range : 0~7
	WIDTH	4	Range : 0~8
	TOP/BOTTOM	3	Range : 0~7
	HEIGHT	3	Range : 0~8
	RETURN		

SETUP Menu		Default Value	Description
D-WDR		OFF	OFF : Disable the Wide Dynamic Range Function. Indoor ,Outdoor
RETURN			Return to SETUP menu
3. WHITE BAL		ATW	ATW : Auto Trace WB mode. AWB : Wide Range Trace Mode. AWC→ SETUP Manual (Blue Gain & Red Gain Range : 0~100)
4. DAY NIGHT		COLOR	COLOR/BW, AUTO : Delay (0~63) / S-LEVEL (0~100)/ E-LEVEL(0~100), RESET
5. 3DNR		ON : Level 50	OFF, ON (Level Range : 0~100)
6. SPECIAL			SPECIAL Sub-menu
	1) CAM TITLE	OFF	Title(Max.15 Character),This position is adjustable
	2) D-EFFECT		D-EFFECT Sub – menu.
	FREEZE	OFF	OFF,ON
	MIRROR	OFF	OFF.MIRROR,V-FLIP,ROTATE
	D-ZOOM	OFF	D-ZOOM Range : x1.0~x32.0 PAN Range : -100 ~ 100 TILT Range : -100 ~ 100 RETURN : Return to E-EFFECT Sub-menu
	GAMMA	0.45	Range : 0.05 ~1.00
	NEG.IMAGE	OFF	OFF,ON
	RETURN		RETURN : Return to SPECIAL Sub-menu
	3) MOTION	OFF	Area Select : AREA1~AREA4 Area Display : OFF, ON LEFT/RIGHT Range : 0~100 WIDTH Range : 0~100 TOP/BOTTOM Range : 0~100 HIGH Range : 0~100 SENSITIVITY Range : 0~40 RETURN : Return to SPECIAL Sub-menu
	4) PRIVACY	OFF	Area Select : AREA1~AREA8 Area Display : OFF, ON LEFT/RIGHT Range : 0~100 WIDTH Range : 0~100 TOP/BOTTOM Range : 0~100 HIGH Range : 0~100 SENSITIVITY Range : 0~40 RETURN : Return to SPECIAL Sub-menu
	5) SYNC	INT	Initializes the changed category in SPECIAL menu
	6) RETURN		Return to SETUP menu

SETUP Menu		Default Value	Description
7. ADJUST			ADJUST Sub-menu
	MOTION	OFF	Area Select : AREA1~AREA4 Area Display : OFF, ON LEFT/RIGHT Range : 0~100 WIDTH Range : 0~100 TOP/BOTTOM Range : 0~100 HIGH Range : 0~100 SENSITIVITY Range : 0~40 RETURN : Return to SPECIAL Sub-menu
	PRIVACY	OFF	Area Select : AREA1~AREA8 Area Display : OFF, ON LEFT/RIGHT Range : 0~100 WIDTH Range : 0~100 TOP/BOTTOM Range : 0~100 HIGH Range : 0~100 SENSITIVITY Range : 0~40 RETURN : Return to SPECIAL Sub-menu
	SYNC	INT	Initializes the changed category in SPECIAL menu
	RETURN		Return to SETUP menu
8. RESET			Initializes the changed category in SPECIAL menu
9.EXIT			Save the SETUP menu and exit

4. OSD Menu Flow Chart

```
SETUP

•LENS                    DC↵
•EXPOSURE        ↵
•WHITE BAL       AWB
•DAY NIGHT       COLOR
•DNR                     ON↵
•SPECIAL         ↵
•ADJUST          ↵
•RESET                           ↵
•EXIT
```

```
LENS - DC

BRIGHTNESS      50
RETURN          ↵
```

```
EXPOSURE

SHUTTER         1/60
BRIGHTNESS      - - -
AGC             MIDDLE
SENSE-UP        AUTO↵
BLC             OFF
D-WDR           OFF
RETURN          ↵
```

```
SENSE-UP

SENSE-UP        x32
RETURN          ↵
```

```
BLC

GAIN            LOW
DEFAULT         ↵
LEFT/RIGHT      2
WIDTH           4
TOP/BOTTOM      3
HEIGHT          3
RETURN          ↵
```

```
HSBLC

LEVEL           5
DEFAULT         ↵
LEFT/RIGHT      2
WIDTH           4
TOP/BOTTOM      3
HEIGHT          3
RETURN          ↵
```

```
WHITE BAL - MANUAL

BLUE            40
RED             21
RETURN          ↵
```

```
DAY NIGHT - AUTO

DELAY           3
S-LEVEL         76
E-LEVEL         51
RETURN          ↵
```

```
3DNR

LEVEL           50
RETURN          ↵
```

SPECIAL

1.CAM TITLE	ON
2.D-EFFECT	↵
3.MOTION	OFF
4.PRIVACY	OFF
5.SYNC	INT
6RETURN	↵

CAM TITLE

```
 0 1 2 3 4 5 6 7 8 9
A B C D E F G H I J K
L M N O P Q R S T U V
_ W X Y Z ▷ ⇩ ⇧ ⇨ ⇦ ( )
 − _ □ / = & : ~ , .
```

⇦ ⇨   POS   END

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _

D-EFFECT

FREEZE	OFF
MIRROR	OFF
D-ZOOM	OFF
GAMMA	0.45
NEG. IMAGE	OFF
RETURN	↵

D-ZOOM

D-ZOOM	x1.0
PAN	0
TILT	0
RETURN	↵

ADJUST

SHARPNESS	20
BLUE	
	97
RED	
	92
RETURN	↵

MOTION

AREA SELECT	AREA1
AREA DISPLAY	ON
LEFT/RIGHT	8
WIDTH	32
TOP/BOTTOM	4
HEIGHT	24
SENSITIVITY	40
MOTION VIEW	OFF
RETURN	↵

RESET

FACTORY	RESET↵
RETURN	↵

PRIVACY

AREA SELECT	AREA1
AREA DISPLAY	ON
LEFT/RIGHT	8
WIDTH	16
TOP/BOTTOM	8
HEIGHT	16
COLOR	0
RETURN	↵

5. Explanation of SETUP Menu

```
SETUP

•LENS                    DC↵
•EXPOSURE      ↵
•WHITE BAL     AWB
•DAY NIGHT     COLOR
•3DNR                    ON↵
•SPECIAL       ↵
•ADJUST        ↵
•RESET                   ↵
•EXIT
```
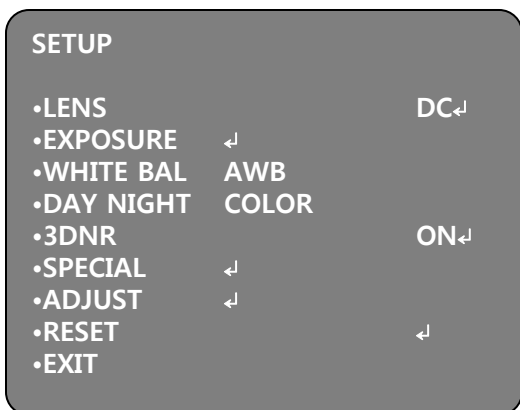
1. LENS
DC(Default) : DC sub-menu

```
LENS – DC




BRIGHTNESS   50
RETURN       ↵
```
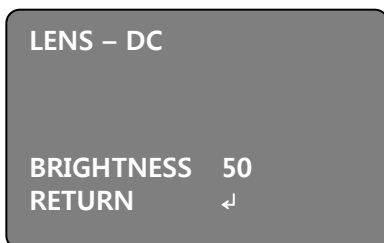
(1)BRIGHTNESS
  Changes brightness level (Range : 0~100)
  Darker (0) ~ Brighter (100)

(2)RETURN
  Return to the Main Menu

  *TIP
  If set up Brightness with Manual
  lens,it operated by EXPOSURE sub-menu.

2. EXPOSURE
EXPOSURE sub-menu

```
EXPOSURE



SHUTTER       1/60
BRIGHTNESS    - - -
AGC           MIDDLE
SENSE-UP      AUTO↵
BLC           OFF
D-WDR         OFF
RETURN        ↵
```

(1)SHUTTER
  Current shutter speed
  1/60(Default) – NTSC 1/60 (Default)-PAL
  1/50(Default) FLK, 1/250, 1/500, 1/2000,1/5000
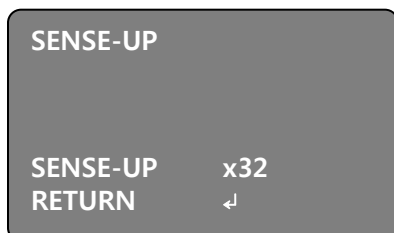 1/10000, 1/100000

(2)BRIGHTNESS
  No operation (When lens is manual mode, it is operates)

(3)AGC(Auto Gain Control)
   AGC Level
   OFF,LOW,MIDDLE(Default), HIGH

(4)SENSE-UP
  OFF : Disable SENSE-UP mode
  AUTO : AUTO sub-menu

```
SENSE-UP




SENSE-UP      x32
RETURN        ↵
```

• **SENSE-UP**
  Select sense-up level
  x2,x4,x8,x16,x32(Default), x64,x128,x256

• **RETURN**
  Return to the EXPOSURE sub-menu

9

(5) BLC(Backlight Compensation)

Value of each BLC on mode
· OFF(Default) : Disable BLC mode
· BLC : Go to BLC mode

```
BLC

GAIN            LOW
DEFAULT         ↵
LEFT/RIGHT      2
WIDTH           4
TOP/BOTTOM      3
HEIGHT          3
RETURN          ↵
```

GAIN
BLC Level :
Low(Default),MIDDLE,HIGH
DEFAULT
Initializes the changed category in
BLC menu
LEFT / RIGHT / TOP / BOTTOM / HIGHT
Backlight Compensation weighting Zone

RETURN
Return to the EXPOSURE sub-menu

· HSBLC : HSBLC mode

```
HSBLC

LEVEL           5
DEFAULT         ↵
LEFT/RIGHT      2
WIDTH           4
TOP/BOTTOM      3
HEIGHT          3
RETURN          ↵
```

LEVEL
BLC level (Range : 0~8 / Default : 5)
Backlight Compensation Weighting
value of each BLC mode
DEFAULT
Initializes the changed category in HSBLC menu

LEFT / RIGHT / TOP / BOTTOM / HIGHT
Backlight Compensation weighting Zone
RETURN
Return to the EXPOSURE sub menu

(6) D-WDR (Digital Wide Dynamic Range)

OFF (Default) : Disable D-WDR mode
INDOOR : Indoor D-WDR mode
OUTDOOR : Outdoor D-WDR mode

(7) RETURN
Return to the main menu

3. WHITE BALANCE
 • ATW : Auto Trace White balance mode
 • AWB (Default) : Wide Range auto white balance
 • AWC → SET
 • Manual : Go to Manual Sub-menu
 • Adjust R/B Gain Manually

WHITE BAL - MANUAL	
BLUE	40
RED	21
RETURN	↵

BLUE
Change BLUE Gain(Range : 0~100)

RED
Change RED Gain(Range : 0~100)

RETURN
Return to the main menu

4. DAY NIGHT
 • COLOR(Default) : Day fix mode
 • B/W : Night fix mode
 • AUTO : Automatically COLOR / BW(Day & Night) According to Illumination change

DAY NIGHT - AUTO	
DELAY	3
S-LEVEL	76
E-LEVEL	51
RETURN	↵

DELAY
Time to protect susceptible conversion
 of Color and BW
Range : 0~63(Default : 3)

S-LEVEL
Starting Level-Adjust start level to set Color and BW

E-LEVEL
Ending Level-Adjust start level to set Color and BW

RETURN
Return to the Main menu

5. 3DNR
 • ON(Default) : Changes Level (Range : 0~100)
 • OFF : Disable the DNR

3DNR	
LEVEL	50
RETURN	↵

LEVEL
DNR level(Default:50) : Range 0~100

RETURN
Return to the Main menu

6. SPECIAL

```
SPECIAL

1. CAM TITLE  OFF
2. D-EFFECT   ↵
3. MOTION     OFF
4. PRIVACY    OFF
5. SYNC       INT
6. RETURN     ↵
```

```
CAM TITLE

  0 1 2 3 4 5 6 7 8 9
  A B C D E F G H I J K
  L M N O P Q R S T U V
_ W X Y Z ▷ ⇩ ⇧ ⇨ ⇦ ( )
‾ ‒ _ □ / = & : ~ , .

⇦ ⇨      POS    END

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
```

(1) CAM TITLE
    OFF : Disable CAM TITLE
    ON : Refer to the CAM TITLE editing menu

  • Select position of CAM TITLE menu
  • When the cursor is blinking. You can select the
    character by PUSH button
      - ⇦ : Previous Character
      - ⇨ : Next Character
      - POS : Change the position of the CAM TITLE. After
              changing the position, you push the setup
              button one more time.
      - END : After set click this letter to end up.

```
D-EFFECT



FREEZE        OFF
MIRROR        OFF
D-ZOOM        OFF
GAMMA         0.45
NEG. IMAGE    OFF
RETURN        ↵
```

(2) D-EFFECT
     D-EFFECT sub menu
     FREEZE
     OFF(Default) : Real picture
     ON : Still picture

     MIRROR
     OFF: Normal picture
     MIRROR : Horizontal reverse picture
     ROTATE : Horizontal and vertical reverse picture

```
D-ZOOM




D-ZOOM        x1.0
PAN           0
TILT          0
RETURN        ↵
```

D-ZOOM(Digital ZOOM)

D-ZOOM -Digital ZOOM Range :
x1.0~x32.0
PAN - Pan Range : -100~100
TILT – Tilt Range : -100~100
RETURN – Return to the previous
menu

GAMMA
 Default – 0.45(Range : 0.05~1.00)

 NEG.IMAGE
  OFF(Default) :Positive picture
  ON : Negative inverted picture

 RETURN
  Return to the previous menu

```
MOTION


AREA SELECT   AREA1
AREA DISPLAY ON
LEFT/RIGHT    8
WIDTH         32
TOP/BOTTOM    4
HEIGHT        24
SENSITIVITY   40
MOTION VIEW OFF
RETURN        ↵
```

(3) MOTION
   OFF : Disable CAM TITLE
   ON : Refer to the CAM TITLE editing menu

   AREA SELECT
   • Area 1~area4
   • The zone of motion detection
   AREA DISPLAY
   • ON(Default) : Enable the motion detection
   • OFF : Disable the motion detection
   LEFT/RIGHT
   • Horizontal starting point for motion detection zone
     (Range : 0~100)
   WIDTH
   • Horizontal terminating point for motion detection
     zone(Range : 0~100)
   TOP/BOTTOM
   • Vertical starting point for motion detection zone
     (Range : 0~100)
   Height
   • Vertical terminating point for motion detection zone
     (Range : 0~100)
   SENSITIVITY
   • Range : 0~40
   MOTION VIEW
   • OFF(Default)
   • ON : Display motion block
   RETURN
   • Return to the previous menu

```
PRIVACY



AREA SELECT   AREA1
AREA DISPLAY ON
LEFT/RIGHT    8
WIDTH         16
TOP/BOTTOM    8
HEIGHT        16
COLOR         0
RETURN        ↵
```

(4) PRIVACY
   OFF : Disable privacy control
   ON : Refer to the privacy control menu

   AREA SELECT
   • Area 1~Area8
   • Privacy mask zone number
   AREA DISPLAY
   • ON(Default) : Enable the privacy zone
   • OFF : Disable the privacy zone
   LEFT/RIGHT
   • Horizontal starting point for privacy zone
     (Range : 0~100)
   WIDTH
   • Horizontal terminating point of privacy zone
     (Range : 0~100)
   TOP/BOTTOM
   • Vertical starting point of privacy zone
     (Range : 0~100)
   Height
   • Vertical terminating point of privacy zone
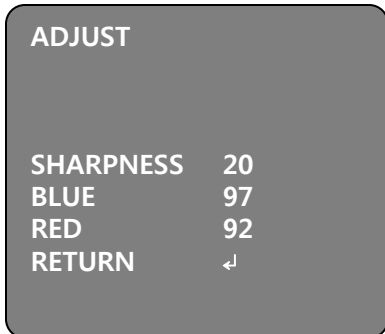   (Range : 0~100)
   COLOR
   • Display Color(Range : 0~15)
   RETURN
   • Return to the previous menu

7. ADJUST
Adjust sub menu

```
ADJUST



SHARPNESS    20
BLUE         97
RED          92
RETURN       ↵
```

SHARPNESS
• Range : 0(blunt image)~31(sharp image)
BLUE
• Range : 0~100
• Blue gain
RED
• Range : 0~100
• Res gain
RETURN
• Return to the previous menu

8. RESET
RESET sub-menu

```
RESET



FACTORY      RESET↵
RETURN       ↵
```

FACTORY
• Restore to factory default condition
RETURN
• Return to the main menu

9. EXIT
Save the SETUP menu and exit

MEMO