HDSDI

HIGH DEFINITION SERIAL DIGITAL INTERFACE
OSD CONTROL – USER'S GUIDE

MENU

SETUP MENU

EXPOSURE
MODE   SENS_UP   BRIGHTNESS   LENS   SHUTTER   AGC   FREQ   RETURN

WHITE BAL
AWB   CHROMA   RETURN

IMAGE
SHARPNESS   MIRROR   FLIP   FREEZE   DZOOM   PRIVACY   SHADING   HLM
ACE   RETURN

WDR / BLC
OFF   WDR   BLC

DNR
OFF   LOW   MIDDLE   HIGH

DAY&NIGHT
AUTO   COLOR   B&W   EXTERN   MDIR

MOTION
OFF   SET

SERIAL
CAM ID   ID DISPLAY   BAUDRATE   RETURN

SYSTEM
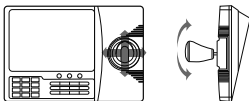DOUT SCALE   GAMMA SET   DOUT FORMAT   DEFECT DET   FCM MODE
FACTORY SET   RETURN
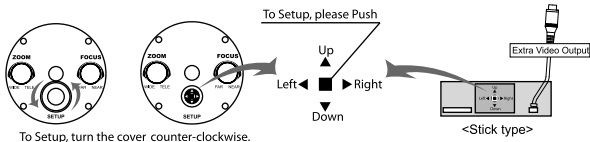
EXIT

Above specifications may be changed without any notice.

SETTINGS

Settings can be made using the 5 buttons located on the back of the camera.

• Call OSD MENU : 1. Call #95
　　　　　　　　　　 2. Open button
• Zoom in   : Tele button or Joystick
• Zoom out : Wide button or Joystick

To Setup, please Push

Up
Left◀ ▶Right
Down

Extra Video Output

<Stick type>

To Setup, turn the cover counter-clockwise.

Note

• 'MANUAL' menu for fixed lens models, 'DC' menu for auto iris models.
• Box type camera have both Lens menu.

1. Please press the SET button

   • Settings can now be made. The SET menu is displayed on the monitor.
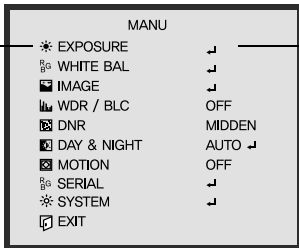
2. Please select any function you wish to activate by pushing the button Up or Down

   • The cursor position will appear green on your screen.
     You can push the button Up or Down to change function you wish to change.

MANU

Select any function you wish to operate by pushing the joystick Up or Down.

Modes can be changed pushing the joystick Right or Left.

```
                    MANU
    ☀ EXPOSURE          ↵
    WHITE BAL           ↵
    IMAGE               ↵
    WDR / BLC           OFF
    DNR                 MIDDEN
    DAY & NIGHT         AUTO ↵
    MOTION              OFF
    SERIAL              ↵
    ☀ SYSTEM            ↵
    EXIT
```

3. Please press the button Right or Left if you wish to change mode.
   • When the button is pressed Right or Left, available values and mode are displayed in order. Please keep press the button until you get the mode you wish.

4. Please select "EXIT" and then press the button to finish the setting.
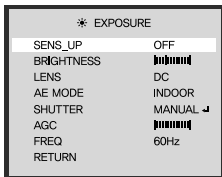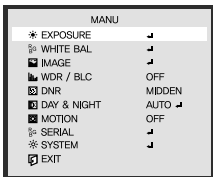
SETUP

EXPOSURE, WHITE BAL, IMAGE, WDR / BLC, DNR, DAY&NIGHT, MOTTION, SERIAL, SYSTEM, EXIT control can be selected.

- When the MAIN MENU is on the screen, please position the cursor to SETUP by using the button. And then press the button.

☼ EXPOSURE

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

MANU	
☼ EXPOSURE	↵
▒ WHITE BAL	↵
▣ IMAGE	↵
▣ WDR / BLC	OFF
▣ DNR	MIDDEN
▣ DAY & NIGHT	AUTO ↵
▣ MOTION	OFF
▒ SERIAL	↵
☼ SYSTEM	↵
▣ EXIT	

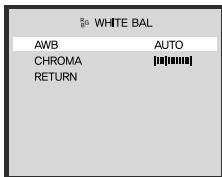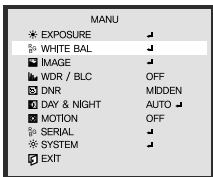| ☼ EXPOSURE	
SENS_UP	OFF
BRIGHTNESS	▐▌▌▌▌▌▌
LENS	DC
AE MODE	INDOOR
SHUTTER	MANUAL ↵
AGC	▐▌▌▌▌▌▌▌
FREQ	60Hz
RETURN	

- SENS_UP : OFF / x2 / x3 / x4
  - Sens-up is realized in the most low illumination quality and it provides the image without a noise at the low illumination quality.
  - When it is night or dark, the camera automatically detects the light level and maintains a clear picture if this mode is activated.
  - When "SENS_UP" is on, shutter cannot be adjusted.
- BRIGHTNESS : Left Key (Level DECREMENT), Right Key (Level INCREMENT)
- LENS : When using BUILT - IN LENS, the type of the lens is able to fix. (DC / MANUAL)
- AE MODE : You can select INDOOR / OUTDOOR / DEBLUR
- SHUTTER :
  - You can select either auto or manual shutter.
  (1/30, 1/60, 1/120, 1/240, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/16000, 1/30000, 1/60000)
  - Shutter is set to "Manual" when DC Lens is selected
  - Shutter is set to "Auto" when Manual Lens is selected
- AGC (Auto Gain Control)
  - The higher the gain level, the brighter the screen - but the higher the noise.
- FREQ (AC Power Frequency Set)
  - You can select either 50Hz or 60Hz
  - Do the setting the frequency of the commercial power in a camera and prevent Flicker state.
- RETURN

⚙ WHITE BAL

• Use the White Balance function to adjust the screen color.

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

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

MANU	
☀ EXPOSURE	↵
⚙ WHITE BAL	↵
▣ IMAGE	↵
▤ WDR / BLC	OFF
▨ DNR	MIDDEN
◑ DAY & NIGHT	AUTO ↵
▨ MOTION	OFF
⚙ SERIAL	↵
☀ SYSTEM	↵
▣ EXIT	

⚙ WHITE BAL	
AWB	AUTO
CHROMA	[❚❙❚❙❚❚❙❙]
RETURN	

Select one of the following 2 modes, as appropriate for your purpose.

─ AWB
  • AUTO   : Default ‐ This function continuously adjusts the white balance automatically
            to adapt to changes in lighting conditions.
  • AUTOEXT : It is a mode to do a halogen and the special lighting to White detection.
  • PUSHING : This function adjusts the white balance regardless of the subject conditions.
  • MANUAL : User perset
     KELVIN : LOW / MIDDLE / HIGH
     R─GAIN : Left Key (Level DECREMENT), Right Key (Level INCREMENT)
     B─GAIN : Left Key (Level DECREMENT), Right Key (Level INCREMENT)
     RETURN
─ CHROMA   : Left Key (Level DECREMENT), Right Key (Level INCREMENT)
─ RETURN

NOTE

• Under the following conditions the WHITE BALANCE function may not operate properly. In such cases, please select the AWB mode.

❶ When the object's surroundings have a very high color temperature (eg, a clear sky and sunset)

❷ When the object's surroundings are dark

❸ If the camera directly faces a fluorescent light or is installed in a place where there are considerable changes in illumination, the WHITE BALANCE function may become unstable.

▣ IMAGE

```
         MANU
☀ EXPOSURE          ↵
▧ WHITE BAL         ↵
▣ IMAGE             ↵
▣ WDR / BLC         OFF
▨ DNR               MIDDEN
▨ DAY & NIGHT       AUTO ↵
▣ MOTION            OFF
▣ SERIAL            ↵
☀ SYSTEM            ↵
▣ EXIT
```

```
            ▣ IMAGE
SHARPNESS            8
MIRROR              OFF
FLIP                OFF
FREEZE              OFF
DZOOM               0
PRIVACY             OFF
SHADING             OFF
HLM                 OFF
ACE                 OFF
RETURN
```

– SHARPNESS : Control 0 to 10 by right and left button.

– MIRROR / FLIP : You can select function by using LEFT or RIGHT button.

OFF   MIRROR (ON)   FLIP (ON)

– FREEZE : The video can be stopped.

– DZOOM : You can use a digital zoom of 0 ~ x 112

– PRIVACY : This modes conceals the areas you do not wish to appear
on the screen.

```
            ▣ IMAGE
SHARPNESS            8
MIRROR              OFF
FLIP                OFF
FREEZE              OFF
DZOOM               0
PRIVACY             SET ↵
SHADING             OFF
HLM                 OFF
ACE                 OFF
RETURN
```

• OFF : Cancels the PRIVACY mode

• SET : Operates the PRIVACY mode

• ZONE NO : Adjust the size of masking area from 0 to 31

• ZONE OP : On or off masking

• X − POS : Adjust the horizontal position of masking area from 0 to 60

• Y − POS : Adjust the vertical position of masking area from 0 to 40

• X − SIZ   : Adjust the width of masking area from 0 to 40

• Y − SIZ   : Adjust the height of masking area from 0 to 40

• COLOR   : WHT / YEL / CYN / GRN / MAG / RED / BLU / BLK

• TRANS   : Adjust the transparency of masking area from 0 to 40

• RETURN

```
           PRIVACY
ZONE NO             0
ZONE OP             ON
X − POS             12
Y − POS             2
X − SIZ             3
Y − SIZ             3
COLOR               CYN
TRANS               4
RETURN
```

– SHADING : When using wide angle lens, you can compensate darkness of corner on the screen.

– HLM (High Light Mask)

HLM (High Light Mask) funcion is being prevented against headlights of vehicle effectively. It is the most suitable function to see license plates at night

```
            🖾 IMAGE                            HLM
  SHARPNESS         8              LEVEL          |■|■||■■|
  MIRROR            OFF            COLOR          BLK
  FLIP              OFF            RETURN
  FREEZE            OFF
  DZOOM             0
  PRIVACY           OFF
  SHADING           OFF
  HLM               SET  ↵
  ACE               OFF
  RETURN
```

• LEVEL : Left Key (Level DEC), Right Key (Level INC)
• COLOR : WHT / YEL / CYN / GRN / MAG / RED / BLU / BLK
• RETURN

– ACE (Adaptive Color & Contrast Enhancement) : OFF / ON

```
            🖾 IMAGE
  SHARPNESS         8
  MIRROR            OFF
  FLIP              OFF
  FREEZE            OFF
  DZOOM             0
  PRIVACY           OFF
  SHADING           OFF
  HLM               OFF
  ACE               ON
  RETURN
```

ACE black performs an image Enhancement processing to enhance visibility of an image by changing the brightness values to the level that people can recognise the change.
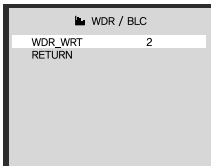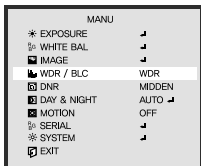This processing technique is equivalent to the dynamic range reduction technique. Which converts the HDR (High Dynamic Range) into the restricted LDR (Low Dynamic Range)

– RETURN

📷 WDR / BLC

• OFF : function does not operate.

```
            MANU
☀ EXPOSURE           ↵
🔲 WHITE BAL          ↵
🔲 IMAGE              ↵
📷 WDR / BLC         WDR
🔲 DNR               MIDDEN
🔲 DAY & NIGHT       AUTO ↵
🔲 MOTION            OFF
🔲 SERIAL            ↵
☀ SYSTEM             ↵
🔲 EXIT
```

```
      📷 WDR / BLC
WDR_WRT              2
RETURN
```
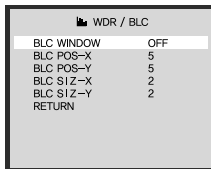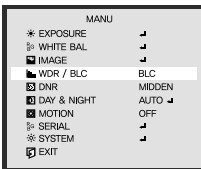
WDR (ON)

WDR (OFF)

• WDR (Wide Dynamic Range)

Realize the improved backlight compensation function more than existed WDR (Wide Dynamic Range) with a fusion ratio of the optimum by pixel, when they composite both a shutter of high speed at the light area and the shutter of low speed at the dark area.

– WDR_WGT : The available range of level is 0 ~ 4
– RETURN

• BLC (Backlight Compensation)

When there is a strong backlight behind the object, clear images of the background as well as the object can still be obtained by using the BLC function.

```
            MANU
☀ EXPOSURE           ↵
🔲 WHITE BAL          ↵
🔲 IMAGE              ↵
📷 WDR / BLC         BLC
🔲 DNR               MIDDEN
🔲 DAY & NIGHT       AUTO ↵
🔲 MOTION            OFF
🔲 SERIAL            ↵
☀ SYSTEM             ↵
🔲 EXIT
```

```
      📷 WDR / BLC
BLC WINDOW           OFF
BLC POS-X            5
BLC POS-Y            5
BLC SIZ-X            2
BLC SIZ-Y            2
RETURN
```
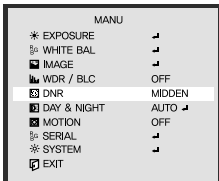
– BLC WINDOW : You can choice ON or OFF
– BLC POS-X : The available range of level is 0 ~ 20
– BLC POS-Y : The available range of level is 0 ~ 20
– BLC SIZ-X : The available range of level is 0 ~ 20
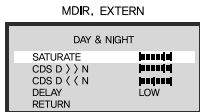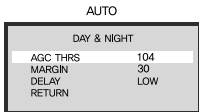– BLC SIZ-Y : The available range of level is 0 ~ 20
– RETURN

▣ DNR

DNR (Digital Noise Reduction)

- Improve S/N ratio and more clean the low illumination quality and can be monitoring at night clearly without the image drag and noise phenomenon.

```
                    MANU
        ☀ EXPOSURE              ↵
        ▩ WHITE BAL             ↵
        ▨ IMAGE                 ↵
        ▥ WDR / BLC             OFF
        ▦ DNR                   MIDDEN
        ▣ DAY & NIGHT           AUTO ↵
        ▨ MOTION                OFF
        ▩ SERIAL                ↵
        ☀ SYSTEM                ↵
        ▣ EXIT
```

- OFF : DNR function does not operate.
- LOW / MIDDLE / HIGH : You can select 'LOW', 'MIDDEN' or 'HIGH' menu as DNR condition.

▣ DAY&NIGHT

```
              MANU
   ☀ EXPOSURE          ↵
   ▩ WHITE BAL         ↵
   ▨ IMAGE             ↵
   ▥ WDR / BLC         OFF
   ▦ DNR               MIDDEN
   ▣ DAY & NIGHT       AUTO ↵
   ▨ MOTION            OFF
   ▩ SERIAL            ↵
   ☀ SYSTEM            ↵
   ▣ EXIT
```

AUTO

```
         DAY & NIGHT
   AGC THRS          104
   MARGIN            30
   DELAY             LOW
   RETURN
```

MDIR, EXTERN

```
         DAY & NIGHT
   SATURATE          ▦▦▦▦▦
   CDS D ⟩ ⟩ N       ▦▦▦▦▦
   CDS D ⟨ ⟨ N       ▦▦▦▦▦
   DELAY             LOW
   RETURN
```

- AUTO : The camera will automatically show color image in high lux and black / white image in low lux.
- COLOR : This picture is always displayed in color.
- B&W : The picture is always displayed in black and white.
  You can turn on or off the burst signal on B/W mode.
- EXTERN : Select this when the color is controlled by CDS sersor.
- MDIR : IR LED is normally off at Night mode. As soon as it detects any motion, IR LED will be operated automatically. When detecting motion is finished, It will be off again.

▶ May not work for some models

⊠ MOTION

This product has a feature that allows you to observe movement of objects in 3 different areas on the screen, and the words 'MOTION' appear on the screen when movement is detected. you can monitor activity more efficient.

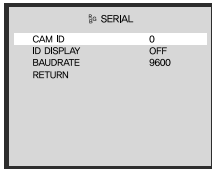| MANU	
☀ EXPOSURE	◢
▥ WHITE BAL	◢
▣ IMAGE	◢
▦ WDR / BLC	OFF
▨ DNR	MIDDEN
◨ DAY & NIGHT	AUTO ◢
⊠ MOTION	SET ◢
▚ SERIAL	◢
☀ SYSTEM	◢
▤ EXIT	

⊠ MOTION	
RESOLUTION	▮▯▯▮▮▮▮
SENSITIVITY	▮▯▯▮▮▮▮
RETURN	
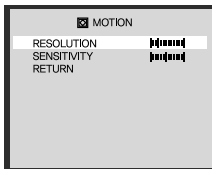
- OFF : MOTION mode is cancelled.
- SET : Any motion in the selected areas is observed.
  - Please select the area you wish to observe from the areas in SELECT mode.
  - Please select ON mode for the chosen area.
  - Please adjust the level of observation by using MOTION mode.
  - Please press the RETURN to save the changes and complete the setting.

▚ SERIAL

MANU	
☀ EXPOSURE	◢
▥ WHITE BAL	◢
▣ IMAGE	◢
▦ WDR / BLC	OFF
▨ DNR	MIDDEN
◨ DAY & NIGHT	AUTO ◢
⊠ MOTION	OFF
▚ SERIAL	◢
☀ SYSTEM	◢
▤ EXIT	

▚ SERIAL	
CAM ID	0
ID DISPLAY	OFF
BAUDRATE	9600
RETURN	
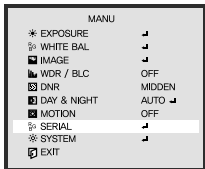
− CAM ID : You can select camera ID from 0 to 254 when using remote control.
− ID DISPLAY : You can select ID ON or OFF
− BAUDRATE : You can select 2400 / 4800 / 9600 / 19200/ 57600 / 115200 bps. Support "pel−D protocol"

☼ SYSTEM

```
              MANU
  ☀ EXPOSURE            ⏎
  ▒ WHITE BAL           ⏎
  ▥ IMAGE               ⏎
  ▨ WDR / BLC           OFF
  ▦ DNR                 MIDDEN
  ▧ DAY & NIGHT         AUTO ⏎
  ▩ MOTION              OFF
  ▥ SERIAL              ⏎
  ☼ SYSTEM              ⏎
  ▣ EXIT
```
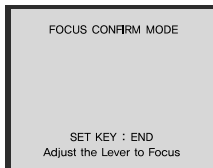
```
         ☼ SYSTEM
  DOUT SCALE        COMP ◄
  GAMMA SET         0.55
  DOUT FORMAT       1080P
  FRAME             30
  DEFEC DET         OFF
  FCM MODE          OFF
  FACTORY SET       ON
  RETURN
```

− DOUT SCALE : - FULL : Full Image out / COMP : Compress Image out
                - The available image to level is 16 ~96
− GAMMA SET : You Can Select 0.40 / 0.45 / 0.50 / 0.55 / 0.60 / 0.65 / 0.70 / 0.75
− DOUT FORMAT : You can select (1080P / 720P)
− FRAME: Set output frame to 25 or 30. (Be set 50 or 60 at 720P mode.)

```
         ☼ SYSTEM
  DOUT SCALE        COMP ◄
  GAMMA SET         0.55
  DOUT FORMAT       1080P
  FRAME             30
  DEFEC DET         OFF
  FCM MODE          OFF
  FACTORY SET       ON
  RETURN
```

```
  DEFECT_DET (L, SET, R) ◄

   1. CLOSING LENS
   2. START SET KEY




     LIMIT        0000006
```

− DEFECT DET
  • OFF : DEFCET DET Mode is off.
  • ON : Close the lens to block the light.
  • Adjust left & right buttons and press "SET" button to automatically start the mode.

```
            ☼ SYSTEM
    DOUT SCALE        COMP ↵
    GAMMA SET         0.55
    DOUT FORMAT       1080P
    FRAME             30
    DEFEC DET         OFF
    FCM MODE          OFF
    FACTORY SET       ON
    RETURN
```

```
        FOCUS CONFIRM MODE




          SET KEY : END
      Adjust the Lever to Focus
```

– FCM MODE (In this mode, the instruction flickers.)
  • OFF : FOCUS ADJ Mode is off.
  • ON : Zoom mode is activated automatically.
  • Adjust the focusing knob. The focusing is displayed on the screen.
    Press the "SET" button for desired focus.

– FACTORY SET : Factory initialize
– RETURN

Above specifications may be changed without any notice.