USER-FRIENDLY MANUAL FOR

OSD MENU

▶ You may select the OSD menu items you desire to adjust by using OSD buttons.

◈ **To use OSD menu, press SET button and CAMERA SETTING menu will appear on the screen as follows.**

```
CAMERA SETTING

▶ CAMERA ID        OFF
  EXPOSURE         ALC ◄┘
  WHITE BAL        ATW
  DAY/NIGHT        AUTO ◄┘
  MOTION DET       OFF
  3D-DNR           MIDDLE
  PRIVACY          OFF
  SPECIAL ◄┘
  RESET ◄┘
  EXIT ◄┘
```

◈ **Move the arrow to select functions by using UP / DOWN & LEFT / RIGHT buttons.**

1. CAMERA ID
  You may select the CAMERA ID.

2. EXPOSURE
  You may select ALC or ELC. You could also change BRIGHTNESS, AGC, SHUTTER (Shutter Speed) and SENSE-UP in this menu.

3. WHITE BAL
  You may select this menu to correct balance of red and blue for current environment.
  Please choose the desired option from ATW, AWC→PUSH and MANUAL.

4. DAY NIGHT
  You may select the desired option from AUTO, Night, Day and EXT.

5. MOTION DET (Motion Detection)
  The camera can detect the change in motion for your desired areas.

6. 3D-DNR
  It digitally reduces noise and shows more clear images at low illumination.

7. PRIVACY
  You may hide a part of the image on the screen for your desired areas.

8. SPECIAL
  You may utilize the options for D-ZOOM, D-EFFECT, SHARPNESS, STABILIZER, COLOR, USER TITLE and LANGUAGE.

9. RESET
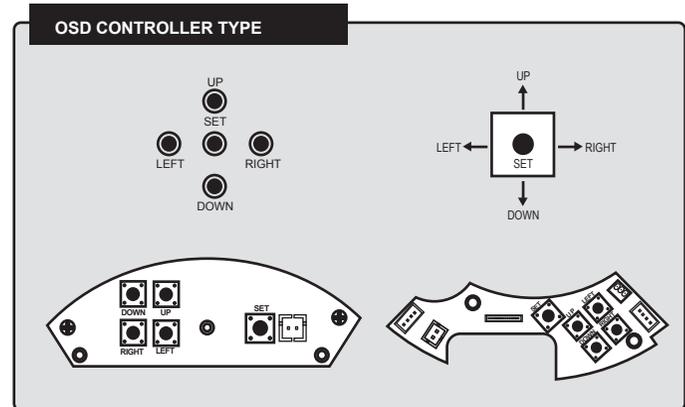 You may utilize the options for CAMERA REBOOT, FACTORY RESET and COMMUNICATION.

10. EXIT
  When you finish modifying the functions in the OSD menu, you may EXIT by pressing SET button.

```
COMMUNICATION

▶ PROTOCOL         LG
  BAUD RATE        9600bps
  SAVE & REBOOT
  EXIT
                   RET
```

- COMMUNICATION : You may select PROTOCOL among LG, PELCO-D & PELCO-P and BAUD RATE among 2400, 4800 & 9600bps. After setting PROTOCOL and BAUD RATE, please SAVE & REBOOT.

10. EXIT : Press SET button after placing the arrow at EXIT.

```
OSD CONTROLLER TYPE
```

8-2. D-EFFECT (Digital Effect)

- OFF : Shows the image as it appears.
- V-FLIP : Flips the image upside down.
- MIRROR : Shows the image as you look into mirror.
- ROTATE : Roates the image by 180 degrees.

8-3. SHARPNESS

- Image clarity can be improved by adjusting the level for SHARPNESS ranging from 0 to 68.
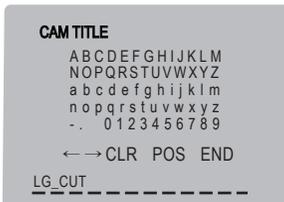
8-4. STABILIZER

- When you turn STABILIZER on, the camera automatically compensates for vibration to show stable images.

8-5. COLOR

- When you set it to OFF, you will see only black & white images.

8-6. SYNC : INT (Internal) Only

8-7. USER TITLE : You may designate USER TITLE as shown in the picture.

```
CAM TITLE
    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
    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
    - .    0 1 2 3 4 5 6 7 8 9

        ← → CLR   POS   END
LG_CUT
_ _ _ _ _ _ _ _ _ _ _ _ _ _ _
```

- USER TITLE could be up to 15 alphanumeric characters.
  You may choose a character by using UP / DOWN & LEFT / RIGHT buttons to locate and pressing SET button. Please repeat the step until USER TITLE is created.

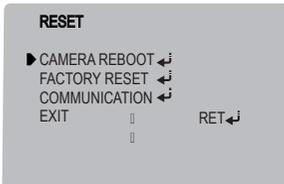To erase all the characters you have input, move the cursor to CLR and press SET button.
To move the position of USER TITLE to your desired location on the screen, move the cursor to POS and press SET button.
To exit after creating USER TITLE, move the cursor to END and press SET button.

8-8. LANGUAGE : You may select the language you prefer by pressing LEFT / Right buttons.
It supports 15 different languages.

9. RESET

- There are 3 options for RESET as shown in the picture.

```
RESET
 ▶ CAMERA REBOOT ↵
   FACTORY RESET  ↵
   COMMUNICATION  ↵
   EXIT           RET↵
```

- CAMERA REBOOT : Saves all the modifications you have made and reboots the camera.
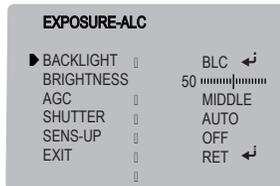- FACTORY RESET : Starts from the original settings from the factory.

▶ Detailed Description for OSD Main Menu

1. CAMERA ID : You may designate the CAMERA ID from 1 to 255.

2. EXPOSURE
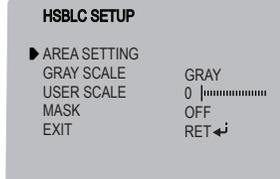When you get into EXPOSURE, you may adjust the functions as shown in the picture.
You may select ALC for a camera containing a DC auto iris lens or ELC for a camera containing a manual iris lens.

```
EXPOSURE-ALC
 ▶ BACKLIGHT        BLC  ↵
   BRIGHTNESS       50 ▯▯▯▯▯▯▯▯|▯▯▯▯▯▯
   AGC              MIDDLE
   SHUTTER          AUTO
   SENS-UP          OFF
   EXIT             RET  ↵
```

2-1. BACKLIGHT
You may select the option from BLC and HSBLC.
When you select BLC, you may adjust the level by choosing LOW, MIDDLE or HIGH.

```
HSBLC SETUP
 ▶ AREA SETTING
   GRAY SCALE       GRAY ▯▯▯▯▯▯▯▯▯
   USER SCALE       0 |▯▯▯▯▯▯▯▯▯
   MASK             OFF
   EXIT             RET↵
```

When you select HSBLC, HSBLC SETUP menu will appear as shown in the picture.
You may set the areas for HSBLC among 16 areas by using LEFT / RIGHT buttons and turn it on by pressing UP / DOWN buttons.
Please select GRAY, DARK GRAY or BLACK for GRAY SCALE.
USER SCALE ranges from 0 to 5 and you may turn MASK on or off.
When you finish HSBLC SETUP, press SET button.

2-2. BRIGHTNESS
You may select the level of BRIGHTNESS from 0 to 100.

2-3. AGC
You may select OFF, LOW, MIDDLE or HIGH for Auto Gain Control.

2-4. SHUTTER
You may choose the desired shutter speed ranging from X1/90,000 to X512.
FLK is recommended to select when flickering occurs.

2-5. SENSE-UP
You may select the value for SENSE-UP ranging from x2 and x128.
When AGC is set to OFF, you cannot operate SENSE-UP. In addition, SHUTTER must be set to AUTO to activate SENSE-UP.

3. WHITE BAL

- ATW (Auto Tracking Whtie Balance) : Generally selected for color temperature ranging from 1,800K to 10,500K.
- AWC→PUSH : Let the camera focus on a piece of white paper and press SET button to obtain the best result.
  When light source for the environment changes, readjustment for WHITE BALANCE will be required.
- MANUAL : When you select MANUAL for WHITE BALANCE, WB MANUAL SETUP menu will appear as shown
  in the picture.

WB MANUAL SETUP

▶ COLOR TEMP   INDOOR
  RED   0
  BLOUE   0
  EXIT   RET↵

- You may set the COLOR TEMPERATURE to INDOOR or OUTDOOR.
  Please adjust the levels for RED (Red Gain) and BLUE (Blue Gain)
  while mornitoring color of the image. The values range from -100 to 100.

4. DAY NIGHT

- AUTO : When you select AUTO, D/N AUTO SETUP menu will appear as shown in the picture.
         You may select the LEVEL among LOW, MIDDLE and HIGH. DWELL TIME rages from 5 to 60 seconds.

D/N AUTO SETUP

▶ LEVEL   MIDDLE
  DWELL TIME   10 SEC
  EXIT   RET↵

- NIGHT : The image is always shown in black & white mode.
- DAY : The image is always shown in color mode.
- EXT (External) : It can be carried out by setting the value externally.

5. MOTION DET
- Access to MOTION DET to activate MOTION DETECTION as shown in the picture.

MOTION DETECTION

▶ ZONE NUMBER   AREA1
  ZONE STATE   OFF
  HEIGHT   40
  WIDTH   40
  MOVE Y   50
  MOVE X   50
  SENSITIVITY   50
  EXIT   RET↵

- ZONE NUMBER : There are 4 zones you could select for motion detection.
- ZONE STATE : For each designated zone, you may turn MOTION
              DETECTION on or off.
- HEIGHT : You may increase or decrease heigh of the designated zone.
          Ranges from 12 to 92.
          (Left Button → Decreases / Right Button → Increases)
- WIDTH : You may increase or decrease the width of the designated zone.
         Ranges from 16 to 98.
         (Left Button → Decreases / Right Button → Increases)
- MOVE Y : You may move the designated zone up or down.
          Ranges from 6 to 94.
          (Left Button → Up / Right Button → Down)
- MOVE X : You may move the designated zone left or right.
          Ranges from 8 to 92.
          (Left Button → Left / Right Button → Right)
- SENSITIVITY : You may adjust the level of SENSITIVITY ranging from 0 to 100.

6. 3D-DNR

- You may activate DIGITAL NOISE REDUCTION by selecting the level for 3D-DNR from LOW, MIDDLE and HIGH.
  When you deactivate 3D-DNR, noise will not be reduced.

7. PRIVACY

- When you turn PRIVACY on, PRIVACY SETUP menu will appear as shown in the picture.
- Operating PRIVACY is very similar to operating MOTION DET.

PRIVACY SETUP

▶ MASK NUMBER   AREA1
  DISPLAY   ON
  COLOR   BLACK
  HEIGHT   4
  WIDTH   4
  MOVE Y   2
  MOVE X   2
  EXIT   RET↵

- MASK NUMBER : There are 8 areas you could select to hide.
- DISPLAY : For each designated area, you may turn PRIVACY on or off.
- COLOR : You may select the desired color to hide each designated area
         from GRAY, WHITE and BLACK.
- HEIGHT : You may increase or decrease heigh of the designated area.
          Ranges from 4 to 100.
          (Left Button → Decreases / Right Button → Increases)
- WIDTH : You may increase or decrease the width of the designated area.
         Ranges from 4 to 100.
         (Left Button → Decreases / Right Button → Increases)
- MOVE Y : You may move the designated area up or down. Ranges from 2 to 98. (Left Button → Up / Right Button → Down)
- MOVE X : You may move the designated area left or right. Ranges from 2 to 98. (Left Button → Left / Right Button → Right)

8. SPECIAL

- When you get into SPECIAL, SPECIAL menu will appear as shown in the picture.

SPECIAL

▶ D-ZOOM   OFF
  D-EFFECT   OFF
  SHARPNESS   50
  STABILIZER   OFF
  COLOR   ON
  SYNC   INT
  USER TITLE   ON ↵
  LANGUAGE   ?
  EXIT   RET↵

8-1. D-ZOOM (Digital Zoom)

DIGITAL ZOOM

▶ ZOOM   X 1.1
  PAN   0
  TILT   0
  EXIT   RET↵

- D-ZOOM : Available within the range of X1.1 and X8.0
- PAN : Available to move left ranging from 0 to -100 and right from 0 to 100.
- TILT : Available to move up ranging from 0 to -100 and down from 0 to 100.