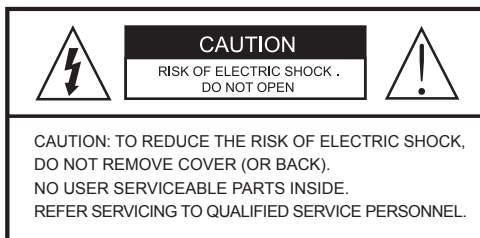# eneo®

User Manual

1/2.8" HD Camera, Day&Night, 1920x1080, Infrared, D-WDR, 12VDC, IP66

MEB-62F0036P0A
MEB-62V2812P0B

Safety Precaution

- To prevent electric shocks and risk of fire hazards, do NOT use other than specific power source.

CAUTION
RISK OF ELECTRIC SHOCK .
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The symbol is intended to alert the user to the presence of important operating and maintenance(servicing) instructions in the literature accompanying the unit.

- **Warning** :
  This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

- **Caution** :
  Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
  Mains power quality should be that of a typical commercial environment. If the user of the model requires continued operation during power mains interruptions, it is recommended that the model be powered from an uninterruptible power supply (UPS) or a battery.

Safety Precaution

NOTICE

- The image used in this instruction manual are processed to help comprehension and may differ from actual video of the camera.
- Avoid installing areas where has shock or vibration which results in the problems.
- Pay attention to safety when laying the connection cable and observe that the cable is not subjected to heavy loads, kinks or damage and no moisture can get in.
- The warranty becomes void if repairs are undertaken by unauthorized persons.
- Maintenance and repair have to be carried out only by authorized service centers.
- Use only a mild detergent to clean the housing.
- The camera should never be operated beyond the technical specifications. This can lead to destruction.
- The camera should never be operated in water.

Contents

Features

Key Features

- 1/2.8" SONY Exmor CMOS sensor
- 1080P TVI mode, CVI mode, AHD Video or 960H CVBS Video Selectable
- TVI mode/CVI mode/AHD Video Transmission Distance over Coax.; 500M
- Automatically removable IR Cut filter by Dual filter switcher
- Lens
> MEB-62V2812P0B : f=2.8~12mm F1.3 Mega pixel DC Auto Iris Vari-focal lens
> MEB-62F0036P0A : f=3.6mm F2.0, Mega pixel fixed lens
- Sensitivity of Color 0.3 Lux / BW 0.005 Lux (@IRE 40, Sens-up On, IR Off)
- D-WDR (Wide Dynamic Range)
- Improved noise reduction 2D+3DNR(TVI mode/CVI mode/AHD), 2DNR(CVBS)
- FOCUS ASSIST for Error free focus adjustment
- 2 Auto(AE/AWB) control
- LSC (Lens Shading Compensation)
- DPC (Defective Pixel Compensation)
- Motion detection, Privacy mask, BLC/HSBLC, Defog, Sens-up(~x30),
  Mirror/Flip, Freeze, Negative Image, IR Smart, Cam Title
- Built-in 4pcs High power SMD LED
- UTC control through HD DVR. (Hikvision, Pelco-C)
- OSD MENU & CVBS output for easy installation & maintenance
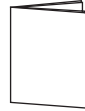- Dual Window, 3-Axis bracket
- IP66 Protection
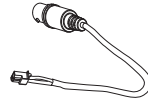
Composition
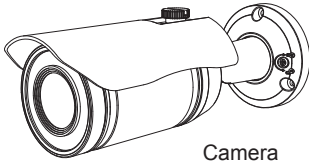
Camera
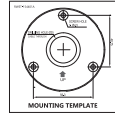
Mounting
Template

Operating
Instruction

Plastic Anchor:
6 x 30mm (3pcs)

Mounting Screw:
3.5 x 25mm (3pcs)

Video Sub-out Cable

Dimensions

(unit : mm)

Ø78.5
Ø66

214
135
120
199

Part Names

SUNSHIELD BOLT

SUNSHIELD

POWER Cable

DUAL WINDOW

BRACKET

REAR CASE

FRONT CASE

Case open
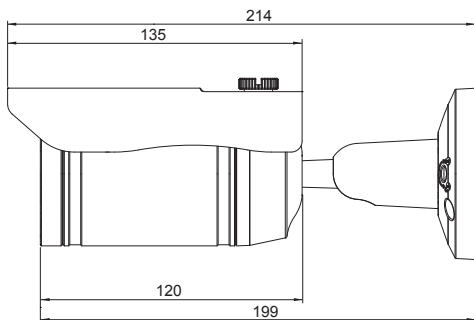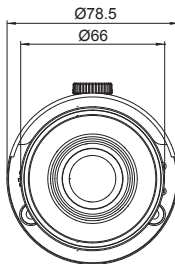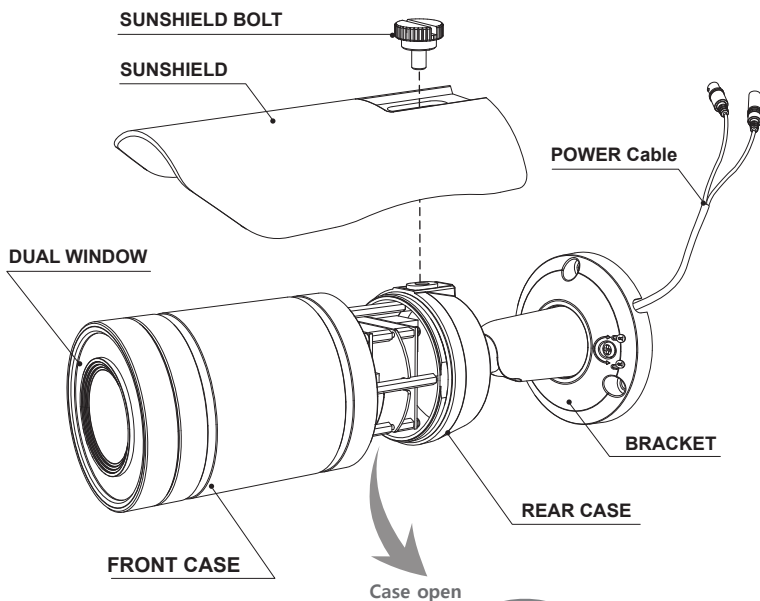
■ **Focus/Zoom Adjustment**
(MEB-62V2812P0B)

Focus Lever

Zoom Lever
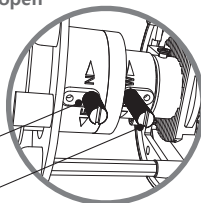
⚠ *CAUTION*

- Extreme care should be taken NOT to scratch the surface of window while the camera installing or adjusting.
- Care should be taken the cable is NOT to be damaged, kinked or exposed in the hazardous area.
- Do not expose the camera directly to a strong light source such as the sun or spot light.
- When assembling the front case, be sure that a Rubber sealing is not protrusive. If the front case is tightened excessively, sealing may not be ensured.

Installation Instructions

1. Locate the mounting template at the installation position and drill the ceiling or wall if needed.
2. Route the Power cable to the connecting place.
3. Place the camera bracket on pre-drilled position and fix it through using mounting screws.
4. Set the camera's viewing angle by using the driver. (Refer to 'TIP').
5. Put the sunshield to the camera unit and tighten the sunshield-bolt.

Mounting Screw : 4x40mm   Plastic Anchor : 6x30mm
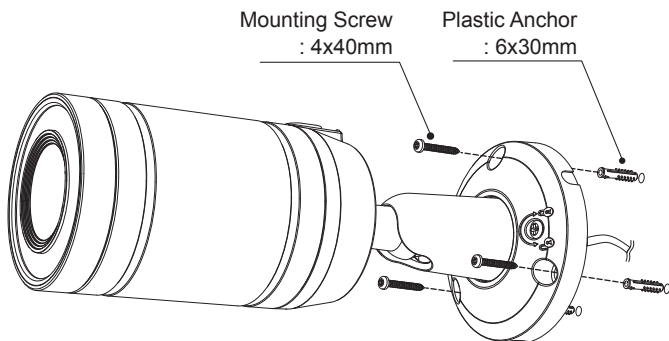
Pan & Tilt adjustments

• Pan: Adjusts view direction
• Tilt: Adjusts view angle
• Inclination: Adjusts view rotation

1) Pan limit:
    Pan is limited to +/- 90°.

2) Tilt limit:
    Tilt is limited to 0°(2°) min ~ 90° max.
    for wall(ceiling) installation respectively
    with reference to the wall(ceiling) when
    the inclination of camera module is 0°,
    that is, the image is aligned horizontally.

① 90°   90°

Installation Instructions

② 90°
• on the wall

② 90°
• on the ceiling
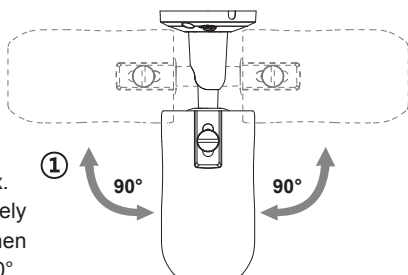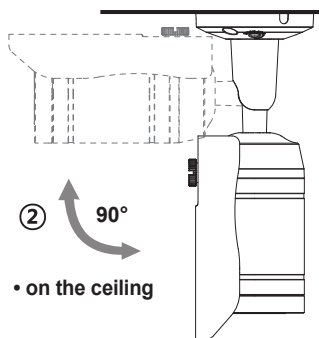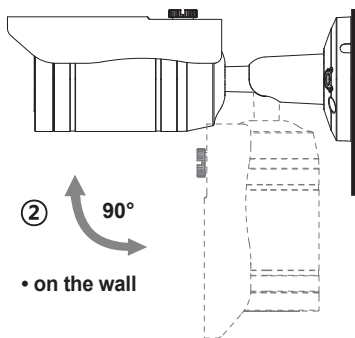
3) Inclination limit
(Horizontal image alignment):
Inclination limited to +/-90° max.

③ ±90°

[TIP] **Adjustment of viewing angle with 3-Axis bracket.**

• Unlock the Lock/Unlock screw on the camera bracket using the driver.
• Adjust the camera's viewing angle then lock the Lock/Unlock screw and fix
 the sub-lock screw on the other side of bracket.

② ①

Tilt

Pan

Inclination
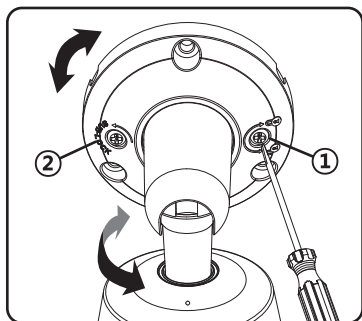
① Lock/Unlock Screw
② Sub-Lock Screw
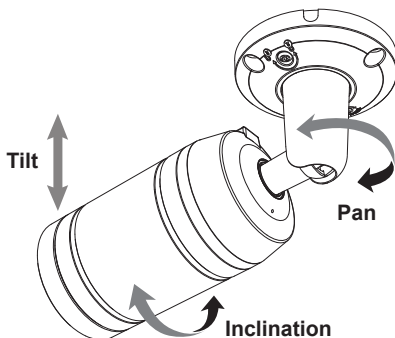
Operating Instructions

Power Supply Connections

Camera can be operated with the regulated or unregulated DC12V but the regulated power supply of DC12V is recommended.
Camera is protected from the damage by the reverse connection of polarity.

VIDEO (BNC)

POWER (⊖ⓒ⊕)
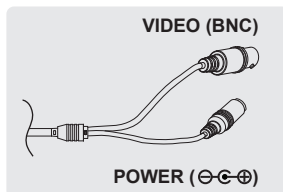
Using OSD Control Controller

Setup menu can be accessed and controlled by OSD control joy stick inside of the camera unit. Five commands are available with the joy stick.
The design of OSD could be different according to the Model.

■ Description of the OSD control operation

1] SET Key (●) : Access to the menu or enter the setting.
To enter the main menu, press the Set Key down.
2] UP/DOWN Key (▲/▼) : Choose the desired sub-menu and to move the cursor up or down.
3] LEFT/RIGHT Key (◄/►) : Set up the value of the selected menu. Used to adjust the desired menu selection and to move the cursor left or right.

◈ NOTE

If OSD menu is adjusted in specific video format, adjusted value is applied to only related video format. For example, if the menu is adjusted in CVBS mode, adjusted value is applied to CVBS video only.

Video Sub-out connector

OSD Control & Video format Joystick

Video format DIP Switch
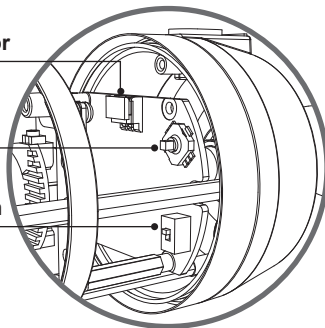
Operating Instructions

Using Video Format Switch

■ DIP SWITCH setting

The DIP SWITCH setting has first priority.
If the switch is set to CVBS, only CVBS output is available for both main video output and sub-out. Please be advised that camera generates only one video output for both main video output and sub-out. It takes 3~5 seconds when video format is changing. The default DIP SWITCH setting is CVBS mode.

■ JOYSTICK setting

Switching video format is available by Video format joystick.
If you want to set the HD video format, set the DIP Switch to HD mode first.
Then set the one of HD Video format by joystick. The default setting is TVI mode.

1] **TVI mode** (Up▲) : Moving up direction for about 3 seconds to TVI mode.

2] **CVBS** (Down▼) : Moving down direction for about 3 seconds to CVBS.

3] **AHD** (Left◄) : Moving left direction for about 3 seconds to AHD.

4] **CVI mode** (Right►) : Moving right direction for about 3 seconds to CVI mode.

OSD menu Startup

Press the 'OSD menu SET key' down to access the setup menu mode.

• EXIT : Enters 'EXIT' menu.
• RETURN : Returns to the previous menu.
• DEFAULT : Restores to factory default.

```
                    MAIN MENU

    ►  1. LENS            DC ↵
       2. FOCUS ASSIST    ↵
       3. EXPOSURE        ↵
       4. BACKLIGHT       OFF
       5. WHITE BAL       ATW
       6. DAY & NIGHT     AUTO ↵
       7. NR              ↵
       8. SPECIAL         ↵
       9. ADJUST          ↵
      10. EXIT            SAVE&END ↵
```

Operating Instructions

OSD menu Table

MAIN MENU	SUB MENU	CONFIGURATION	
LENS	DC	MODE	INDOOR, OUTDOOR
		IRIS SPEED	
	MANUAL		
FOCUS ASSIST	DN DWELL		
EXPOSURE	SHUTTER	FLK, 1/60(1/50), 1/30(1/25), AUTO, x30~x2, 1/50000~1/200	
	AGC	0~15	
	SENS UP	OFF, AUTO (2x~30x)	
	BRIGHTNESS	1~100	
	D-WDR	ON(LEVEL:0~8), AUTO, OFF	
	DEFOG	OFF, AUTO	POS/SIZE, GRADATION(0~2), DEFAULT
BACKLIGHT	OFF		
	HSBLC	SELECT	AREA1~4
		DISPLAY	ON, OFF
		BLACK MASK	ON, OFF
		LEVEL	0~100
		MODE	ALL DAY, NIGHT(AGC LEVEL)
		DEFAULT	
BACKLIGHT	BLC	LEVEL, AREA, DEFAULT	
WHITE BAL	ATW, AWB, MANUAL(BLUE/RED GAIN), OUTDOOR, INDOOR, AWC->SET		
DAY & NIGHT	AUTO	D->N(AGC/CDS), D->N(DELAY), N->D(AGC/CDS), N->D(DELAY)	
	EXT	D->N(DELAY), N->D(DELAY)	
	B/W	BURST, IR SMART, IR PWN*	
	COLOR		
NR	2DNR	LOW, MIDDLE, HIGH	
	3DNR(AHD only)	LOW, MIDDLE, HIGH	
SPECIAL	CAM TITLE	OFF, ON	
	D-EFFECT	FREEZE	OFF, ON
		MIRROR	MIRROR, V-FLIP, ROTATE, OFF
		NEG. IMAGE	
	MOTION	SELECT	AREA1~4
		DISPLAY	OFF, ON(POSITION, SIZE)
		SENSITIVITY	0~100
		COLOR	Green, Red, White, Blue
		TRANS	0.00~1.00
		ALARM*	VIEW TYPE, OSD VIEW, ALARM OUT, TIME

Operating Instructions

SPECIAL	MOTION	DEFAULT		
	PRIVACY	OFF, ON	SELECT	AREA1~4
			DISPLAY	COLOR, INV, MOSAIC
			COLOR	White, User, Cyan, Green, Yellow, Blue, Red, Black
			TRANS	0.25~1.00
			DEFAULT	
	LANGUAGE	ENG, TUR, NED, POR, RUS, POL, SPA, ITA, FRA, GER, CHN1/CHN2		
	DEFECT	LIVE DPC	AGC LEVEL(0~255), LEVEL(0~100)	
		WHITE DPC	SENS-UP, POS/SIZE, START, DPC VIEW, AGC	
		BLACK DPC	POS/SIZE, START, DPC VIEW, LEVEL	
	RS-485*	CAM ID, ID DISPLAY, BAUDRATE		
	VERSION	FW VER, ISP VER, AHD RX VER		
	COLOR BAR	OFF, ON		
ADJUST	SHARPNESS	AUTO	LEVEL, START AGC, END AGC	
		OFF		
	MONITOR	LDC, CRT		
	LSC	OFF, ON		
	VIDEO OUT	NTSC/PAL		
	COMET (CVBS)	OFF, ON		
	MONITOR OUT(HD)	AHD, TVI mode, CVI mode, CVBS		
EXIT	SAVE&END, NOT SAVE, RESET			

(*) : Not Available

Operating Instructions

OSD menu Setup

1. LENS (default: DC)

Lens can be selected either DC or MANUAL lens.
Lens MUST be set to DC for the best image when DC iris lens is installed

DC LENS MODE	
► 1. MODE	OUTDOOR
2. IRIS SPEED	▬▬▬▮▬▬ 9
3. RETURN	RET ↵

OUTDOOR MODE	
► 1. MIN SHU.	1/25
2. MAX SHU.	1/2000
3. RETURN	RET ↵
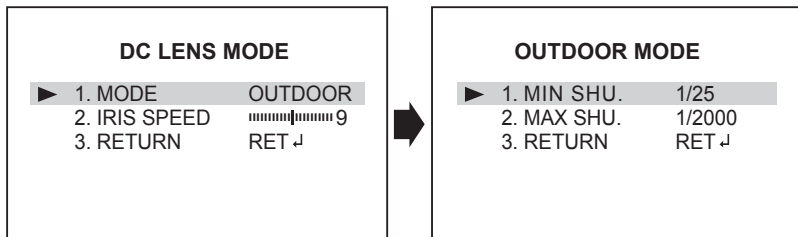
1-1. DC LENS MODE

: Selects lens mode according to installation place.

1-1-1. MODE

• INDOOR: Optimized of indoor environment.
• OUTDOOR: Optimized of outdoor environment. Can set Min.SHUTTER speed or Max.SHUTTER speed

1-1-2. IRIS SPEED

: Sets IRIS speed for INDOOR or OUTDOOR mode.

1-2. MANUAL LENS MODE

: Horizontal wave or bar may be seen when MANUAL is selected and the camera is working under florescent or similar lights.

2. FOCUS ASSIST

Usually cameras are installed in the day time and they often become OUT OF FOCUS at night time and IN FOCUS again at next day time.
This problem can occur at any cameras regardless of types or manufacturers.
FOCUS ASSIST menu is the unique and patented feature that prevents from the wrong focus and helps the EXACT NEEDLE focus by simulating DAY & NIGHT conditions.
Set zoom first and adjust focus to get NEEDLE FOCUS while switching at DAY & NIGHT.

Operating Instructions

```
            FOCUS ASSIST

    ► 1. DN DWELL      5 SEC
       2. RETURN       RET↵




   ADJUST ZOOM & FOCUS ON LENS
   FOR DAY & NIGHT WHILE SWITCHINGS
```

2-1. DN DWELL
: ICR switcher switches DAY & NIGHT at the interval of D/N DWELL to help the EXACT NIDDLE focus at DAY and NIGHT mode.
Further simulations are performed internally during switching.

3. EXPOSURE

[video format: **HD**]   [video format: **CVBS**]

```
         EXPOSURE                        EXPOSURE

 ► 1. SHUTTER    FLK                1. SHUTTER    - - -
   2. AGC        ⅲⅲⅲⅲⅲⅲⅲ13          2. AGC        ⅲⅲⅲⅲⅲⅲⅲ13
   3. SENS-UP    - - -            ► 3. SENS-UP    AUTO↵
   4. BRIGHTNESS ⅲⅲⅲⅲⅲ45            4. BRIGHTNESS ⅲⅲⅲⅲⅲ48
   5. D-WDR      OFF                5. D-WDR      OFF
   6. DEFOG      OFF                6. DEFOG      OFF
   7. RETURN     RET↵               7. RETURN     RET↵
```

3-1. SHUTTER (default: FLK)
: Selects AUTO, FLK(Flickerless), or set manually.
If SHUTTER set to MANUAL or FLK modes, SENS-UP mode is inactivated.
If DC LENS MODE in the LENS option is set to OUTDOOR, SHUTTER mode is inactivated.

• FLK : Reduces the flicker in video when NTSC/PAL mode is used in 50Hz / 60Hz fluorescent lighting respectively.
• 1/60(1/50), 1/30(1/25), x30~x2, 1/50000 ~ 1/240: Shutter can be set to fix.
• AUTO: Optimizes the video level by controlling the iris and the shutter speed automatically.

Operating Instructions

3-2. AGC

: AGC(0~15) amplifies the video gain for brighter video but noise and white pixel accordingly. AGC level less than 10 disables AUTO in DAY/NIGHT.

3-3. SENS-UP

: The brighter video can be obtained by increasing the exposure time in the night with SENS-UP. SENS-UP is the maximum integrations of frame by DSS (Digital Slow Shutter) in the low light.

• AUTO: SENS-UP is enabled or disabled automatically by the scene brightness. Higher SENS-UP can get the brighter video but the slower frame rates with more white pixels. If set to AUTO, maximum integration limit for SENS-UP can be set to x2, x4, x6, x8, x10, x15, x20, x25, x30 in SENS-UP menu.

• OFF: Disables SENS-UP.

3-4. BRIGHTNESS

: Adjusts the brightness of video(1~100).

3-5. D-WDR

: Improves the visibility for the high bright area and the dark area by compensating the video gain. Selects OFF, AUTO or ON. With D-WDR On, the level can be set. Care should be taken to select this mode because video may lose its quality in some environments by the over compensation. Video noise can be increased in the dark area accordingly.

※ CVBS video signal:Connecting 2nd video to CVBS port disables D-WDR function temporary. It should be considered when installer adjusts the video with installation monitor via CVBS video signal.

3-6. DEFOG (default: OFF)

: Enhance the foggy video according to status of scene. Video quality can be less in normal environments. Setting to AUTO, it can be adjusted working area on screen.

3-6-1. POS/SIZE
: Sets the position and size to make activated area box.

3-6-2. GRADATION
: Sets the level from 0 to 10.

3-6-3. DEFAULT
: Restores to factory default.

```
              DEFOG

  ►  1. POS/SIZE      ↵
     2. GRADATION   |ııııııııııııııı 0
     3. DEFAULT       ↵
     4. RETURN       RET↵
```
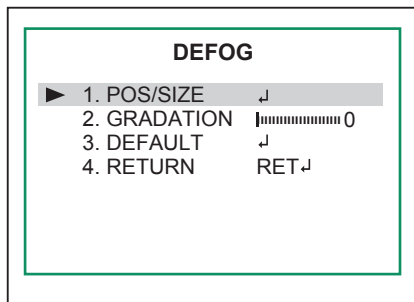
Operating Instructions

4. BACKLIGHT

: Cuts out the highlight area with black mask and excludes it from compensation.
It has target areas for compensation and each area can be set LEVEL, MODE,
and DISPLAY.

```
                        HS BLC

       ► 1. SELECT          AREA1
         2. DISPLAY         ON ↵
         3. BLACK MASK      ON
         4. LEVEL           ▥▥▥▥▥▥▥▥|▥▥ 80
         5. MODE            ALL DAY
         6. DEFAULT         ↵
         7. RETURN          RET↵
```
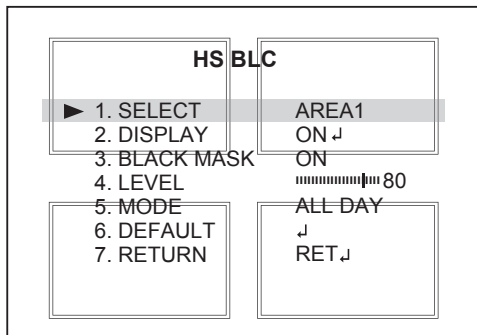
4-1. HS BLC

: Cuts out the highlight area with black mask and excludes it from compensation.

4-1-1. SELECT : Select areas to set HSBLC function

4-1-2. DISPLAY : Displays ON/OFF the selected area and adjusts position/size.

4-1-3. BLACK MASK : Sets ON or OFF the black mask.

4-1-4. LEVEL (0~100): Sets the HS BLC level. It determines the video level
that starts cutting out. Lower setting starts the cut out at lower level.
The cut out area is masked with black color.

4-1-5. MODE : Sets NIGHT only or ALL DAY.
• ALL DAY : Enables HS BLC regardless of DAY or NIGHT mode.
• NIGHT : Enables HLC only when camera works in NIGHT mode.
Can be adjusted AGC level.

4-1-6. DEFAULT : Restores to factory default.

4-2. BLC

: This function is used to brighten an image in the foreground with a highly
light area behind it such as sunlight, limiting the affect of silhouette.

4-2-1. LEVEL (default: MIDDLE) : Sets the BLC level.

4-2-2. AREA : Sets BLC area with position and size.

4-2-3. DEFAULT : Restores to BLC factory default.

Operating Instructions

5. WHITE BALANCE (default: ATW)

ATW, AWB, OUTDOOR, INDOOR, AWC->SET, and MANUAL are available for the white balance modes.

5-1. ATW (Auto Trace White balance)

: Automatically tracks the changes of color temperature and continuously adjusts the white balance. The white balance range is 2,500°K~8,500°K.

5-2. AWB (Auto White Balance)

: Automatically tracks the changes of color temperature and continuously adjusts the white balance. The white balance range is 2,000°K~11,000°K.

5-3. MANUAL

: White balance is fixed to the settings by Red_GAIN and Blue-GAIN. This mode can be used only when the color temperature does not vary.

5-4. OUTDOOR

: Optimized for outdoor sunlight applications and more easily compensates ATW for high color temperature such as sunlight.

5-5. INDOOR

: Optimized for Indoor installation and more easily compensates ATW for low color temperature such as incandescent lights.

5-6. AWC->SET

: WB is performed only whenever ● is pressed.

6. DAY & NIGHT

DAY/NIGHT is used to control the setting during day-time and night-time operation. Select the mode according to the light condition and the camera types.

[None LED model]

D&N AUTO

► 1. D ➔ N (AGC) ▬▬▮▬▬ 120
   2. D ➔ N (DELAY) ▮▬▬ 3
   3. N ➔ D (AGC) ▮▬▬ 24
   4. N ➔ D (DELAY) ▮▬▬ 3
   5. RETURN   RET↵

[Built-in LED model]

D&N AUTO

► 1. D ➔ N (CDS) ▬▬▮▬▬ 120
   2. D ➔ N (DELAY) ▮▬▬ 3
   3. N ➔ D (CDS) ▮▬▬ 24
   4. N ➔ D (DELAY) ▮▬▬ 3
   5. RETURN   RET↵

Operating Instructions

6-1. AUTO (AGC/CDS)

Used when DAY or NIGHT is determined by light level through the lens and DAY from/to NIGHT is switched automatically by the scene brightness.
It can be controlled the threshold level and delay time.

6-1-1. D→N (AGC/CDS):

D→N is a threshold level which determines to switch from DAY to NIGHT. Lower(Higher) value makes the camera switch from Day to Night at lower(higher) illumination. If it stays in Day(Color) mode at night time, increase DAY→NIGHT threshold value until it just switches to Night.

6-1-2. D→N (DELAY):

D→N DELAY is time in second while camera maintains its status before Day to Night switches. DELAY can avoid the unwanted/frivolous switching by a short term lights such as light from the passing car.

6-1-3. N→D (AGC/CDS):

N→D is a threshold level which determines to switch from NIGHT to DAY. Lower(Higher) value makes the camera switch from Night to Day at lower(higher) illumination. If it stays in NIGHT(B/W) mode at day time, decrease NIGHT→DAY threshold value until it just switches to DAY.

6-1-4. N→D (DELAY):

N→D DELAY is time in second while camera maintains its status before Night to Day switches.

6-2. EXT

EXT is not related to this model. AUTO(CDS) works like EXT.

6-3. B/W

The camera is always in B/W mode.
Forcibly removes IR cut filter and switches to B/W regardless of light level.

6-3-1. BURST :

Sets the BURST option ON/OFF to output burst signal in B/W mode.

6-3-2. IR SMART :

SMART IR can be set to reduce the saturation by the strong IR illumination in the night in any menu. Zero(0) turns off SMART IR and High setting avoids the saturation strongly but the corners will be darker accordingly.

• LEVEL (0~15): Sets the IR brightness level
• AREA: Sets the IR SMART working area with position and size.

6-3-3. IR PWM* : Not Available

Operating Instructions

6-4. COLOR

The camera is always in COLOR mode.
Forcibly DAY/NIGHT is disabled and outputs color video.

7. NR (Noise Reduction)

NR function improves picture quality by filtering out signal noise which is generated under the low light conditions. Sets 2DNR or 3DNR level. 3DNR(3-dimensional noise reduction) which reduces the noise by the multi frames (HD format only). Noise Reduction is effective at low light. Setting high level is strength of noise reduction but the result may occur in loss of sharpness and the tail effect of a comet.

[video format: **HD**]

```
                 NR

    ► 1. 2DNR        LOW
      2. 3DNR        MIDDLE
      3. RETURN      RET↵
```

[video format: **CVBS**]

```
                 NR

    ► 1. 2DNR        MIDDLE
      2. RETURN      RET↵
```

8. SPECIAL

```
              SPECIAL

    ► 1. CAM TITLE     ON ↵
      2. D-EFFECT      ↵
      3. MOTION        OFF
      4. PRIVACY       OFF
      5. LANGUAGE      ENG↵
      6. DEFECT        ↵
      7. RS485         ↵
      8. VERSION       ↵
      9. COLOR BAR     OFF
     10. RETURN        RET↵
```

Operating Instructions

```
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 ▶ → ← ↑ ↓ ( )
‾ – _ ■ / = & : ~ , .

←  →   CLR   POS   END

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _
        └── Input line
```

8-1. CAM TITLE

: Camera title(name) can be set and edited up to 15 alpha numeric and symbolic characters. ▲,▼,◀,▶ moves the cursor and choose a character to select it. The selected characters are added and displayed on the input line.
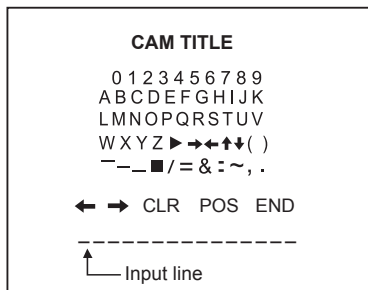
- ● ← → : To move the cursor on input line
- ● **CLR** : To clear CAMERA TITLE on input line when pressed '●'.
- ● **POS** : To set the location of CAM TITLE to be displayed on the monitor, move a cursor to POS and press '●' set button. Moves CAMERA TITLE where desired position by using four direction buttons then press a set button '●' to fix.
- ● **END** : Finish the CAMERA TITLE on input line and return to previous menu mode.

8-2. D-EFFECT

: It is relatived picture adjustments.

8-2-1. FREEZE : The still cut picture from video is displayed while setting to ON.

8-2-2. MIRROR : The picture will be flipped horizontally or vertically if it turns ON. When the video is fliped by Ver. or HV, then the joystick directions are reversed accordingly. It is very useful when a camera in installed in upside down.

- • OFF : Normal display without mirroring or flipping
- • MIRROR. : Video is reversed left and right
- • V-FLIP : Video is reversed upside down
- • ROTATE : Video is reversed width and length

8-2-3. NEG.IMAGE : The picture will be changed to negative image if it turns ON.

8-3. MOTION

Up to 4 motion detection areas are available and each area is programmable in size and location. The motion can be detected the changes in the motion areas and displays the results in blocks and/or a text message.

Operating Instructions

```
                        MOTION

    ► 1. SELECT          AREA1
      2. DISPLAY         ON ↵
      3. SENSITIVITY     ▥▥▥▥▥▥▥▥▥ 64
      4. COLOR           GREEN
      5. TRANS           1.00
      6. ALARM           ↵
      7. DEFAULT         ↵
      8. RETURN          RET ↵
```
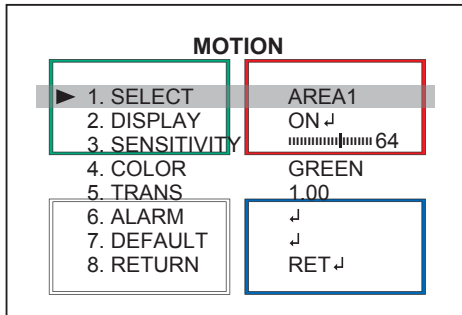
8-3-1. SELECT : Selects one of 4 areas.

8-3-2. DISPLAY : Displays ON/OFF the motion area which you selected. It can
      be adjusted position and size.

8-3-3. SENSITIVITY : Sets the detection sensitivity for motion. (0~100)
      High value increases the sensitivity to detect the small motion easily.
      Too low value will cause the erratic detection by the tree leaves or the
      light level changes.

8-3-4. COLOR : Selects one of 4 colors. (Green, Red, White, Blue)

8-3-5. TRANS : Sets transparency rate for the motion block. From 0.25 to 1.00

      0.25 - Motion block is 25% transparent.
      0.50 - Motion block is 50% transparent.
      1.00 - Motion block is not transparent.

8-3-6. ALARM : Sets ON or OFF to display the motion results.

```
                        ALARM

    ► 1. VIEW TYPE       ALL
      2. OSD VIEW        ON
      3. ALARM OUT       ON
      4. TIME            ▥▥▥▥▥▥▥▥▥ 3
      5. RETURN          RET ↵
```
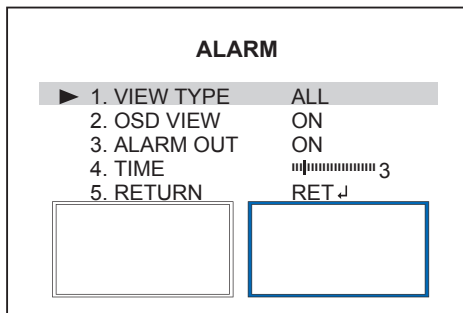
Operating Instructions

• VIEW TYPE: Selects display type for motion detection.
> ALL - Enables to display types both of OUTLINE and BLOCK, if motion is detected.
> OUTLINE - Enables to display box shape, if motion is detected.
> BLOCK - Enables to display mosaic shape, if motion is detected.
> OFF - Disables to display

• OSD VIEW : ON enables to display a text message or icon.
• ALARM OUT : Not Available.
• TIME (1~15) : Sets the interval time from the starting of motion operation until being ready for the next motion operation.

8-3-7. DEFAULT : Restores to factory default.

8-4. PRIVACY

Sets ON/OFF for enabling/disabling PRIVACY.
Up to 4 privacy areas are available and each area is programmable in size, color and position.

```
                    PRIVACY

     ► 1. SELECT        AREA1
       2. DISPLAY       COLOR↵
       3. COLOR         WHITE
       4. TRANS.        1.00
       5. DEFAULT       ↵
       6. RETURN        RET↵
```

8-4-1. SELECT : Selects one pre-setting from AREA1 to AREA4.

8-4-2. DISPLAY : Enables or disables the privacy mask which you selected AREA by COLOR, INV. or MOSAIC.

8-4-3. COLOR : Choose one of 8 colors to be masked.
WHITE, USER, CYAN, GREEN, YELLOW, BLUE, RED, BLACK

8-4-4. TRANS.: Selects transparency rate for the mask area from 0.25 to 1.00

0.25 - Privacy mask is 25% transparent.
0.50 - Privacy mask is 50% transparent.
1.00 - Privacy mask is not transparent.

8-4-5. DEFAULT : Restore the current setting to factory default.

Operating Instructions

8-5. LANGUAGE

12 languages are available for OSD menu. ENG, TUR, NED, POR, RUS, POL, SPA, ITA, FRA, GER, CHN2, CHN1.
Choose one prefered language and enter the 'SET' key.

8-6. DEFECT

: Detects and compensates the defective pixels.
Once CALIBRATE is selected, the pixel calibration is initiated with lens closed and can't cancel.

8-6-1. LIVE DPC :
Sets AGC level and DPC level for live DPC function.

LIVE DPC

► 1. AGC LEVEL ▭▭▭▭ 64
   2. LEVEL ▭▭▭▭ 100
   3. RETURN RET↵

8-6-2. WHITE DPC : Setting for white defective pixels.

• POS/SIZE: Adjusts DPC AREA window size and position.
• START : Starts up detecting and compensation.
• DPC VIEW: Shows the original defective pixels if set to ON
• LEVEL: Sets the threshold of the detection for white pixels. High value increases the video gain in order to show the defective pixels easily. Too high value can result in compensation failure.
• AGC : Sets AGC level. AGC amplifies the video gain for brighter video but noise and white pixels accordingly.
• SENS-UP:
Sets sens-up level by the scene brightness.
Setting high level can get the brighter video but white pixels accordingly.

WHITE DPC

► 1. POS / SIZE ↵
   2. START ↵
   3. DPC VIEW OFF
   4. LEVEL ▭▭▭▭ 4
   5. AGC ▭▭▭▭ 14
   6. SENS-UP x2
   7. RETURN RET↵

Operating Instructions

8-6-3. BLACK DPC : Setting for white defective pixels.

  • POS/SIZE: Adjusts DPC AREA window size and position.
  • START : Starts up detecting and compensation.
  • DPC VIEW: Shows the original defective pixels if set to ON
  • LEVEL: Sets the threshold of the detection for black pixels. High value
    increases the video gain in order to show the defective pixels easily.

```
              BLACK DPC

► 1. POS / SIZE        ↵
  2. START             ↵
  3. DPC VIEW          OFF
  4. LEVEL             ||||||||||||||||100
  5. RETURN            RET↵
```
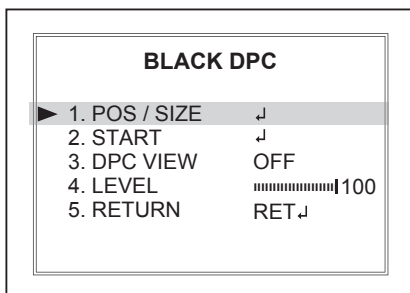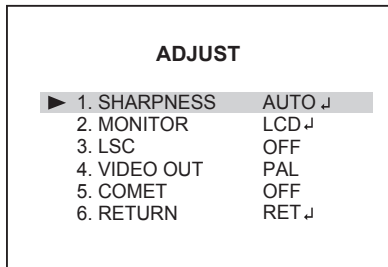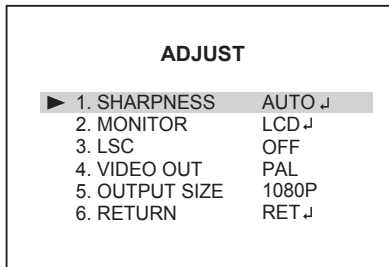
8-7. RS 485*: Not Available

  • CAM ID : Assigns the camera ID from 1~255 for the comm. address.
  • ID DISPLAY : Displays CAM ID On or OFF.
  • BAUD RATE : Selects the baud rate from 2400~115200.

8-8. VERSION: Display F/W Version.

9. ADJUST

[video format: **HD**]

```
            ADJUST

► 1. SHARPNESS      AUTO ↵
  2. MONITOR        LCD↵
  3. LSC            OFF
  4. VIDEO OUT      PAL
  5. OUTPUT SIZE    1080P
  6. RETURN         RET↵
```

[video format: **CVBS**]

```
            ADJUST

► 1. SHARPNESS      AUTO ↵
  2. MONITOR        LCD↵
  3. LSC            OFF
  4. VIDEO OUT      PAL
  5. COMET          OFF
  6. RETURN         RET↵
```

9-1. SHARPNESS
  : Sets AUTO or OFF. If set to AUTO, can be adjusted LEVEL and AGC.

Operating Instructions

9-1-1. LEVEL : Increases or decreases the sharpness of the picture.
Too much sharpness can make image harsh and show more noise as
well as line flicker at the edge of object.

9-1-2. START AGC : Defines the AGC level to start up for sharpness

9-1-3. END AGC : Defines the AGC level to end up for sharpness

9-2. MONITOR

: Selects LCD or CRT modes the correct type of viewing monitor will ensure
the most optimal picture. Each monitor type can be adjusted picture quality
by BLUE/RED GAIN.

[video format: **HD**]

```
                LCD

►  1. GAMMA         USER
   2. BLUE GAIN     |||||||||||||||||| 68
   3. RED GAIN      |||||||||||||||||| 65
   4. RETURN        RET↵
```

[video format: **CVBS**]

```
                LCD

►  1. BLACK LEVEL   |||||||||||||||| 0
   2. GAMMA         USER
   3. BLUE GAIN     |||||||||||||||||| 58
   4. RED GAIN      |||||||||||||||||| 58
   5. RETURN        RET↵
```

[video format: **HD**]

```
                CRT

►  1. BLUE GAIN     |||||||||||||||||| 58
   2. RED GAIN      |||||||||||||||||| 58
   3. RETURN        RET↵
```

[video format: **CVBS**]

```
                CRT

►  1. BLACK LEVEL   |||||||||||||||| 0
   2. BLUE GAIN     |||||||||||||||||| 52
   2. RED GAIN      |||||||||||||||||| 52
   3. RETURN        RET↵
```

• GAMMA :
Select the brightness level of monitor from USER, 1.00, 0.95 ~0.45.
• BLUE/RED GAIN :
Set the saturation level of monitor with BLUE or RED GAIN.
• BLACK LEVEL (960H format only):
Compensates dark area of monitor image. It can be adjusted level from
0 to 60.

Operating Instructions

9-3. LSC (Lens Shade Compensation)

: Enhances the brightness at the corners caused by the lens or the narrow emitting angle of IR LEDs. Picture could be noisy if it is ON. When relatively picture looks noisy, please set it to OFF.

9-4. VIDEO OUT

: Selects HDTV standards for analog video output switches to NTSC or PAL accordingly. If the TV standard is changed, it is applied to all video format. (TVI mode, CVI mode, AHD, CVBS)

9-5. MONITOR OUT (TVI mode/CVI mode/ AHD/ CVBS)

: 1080P Full-HD. It takes 3~5 seconds when video format is switching. Please check that video format of the DIP Switch on OSD board.

■ NOTE

The DIP Switch setting has first priority. If the switch is set to CVBS, the video format is not available change to HD video format(TVI mode, CVI mode, AHD). At that time, please set the switch to CVBS.

9-5. COMET (CVBS only) : Not Available

10. EXIT : Exits SETUP MENU and returns to the normal display.

10-1. SAVE & END : Save all the setting and exit the setup menu.
10-2. NOT SAVE : Exit the setup menu without save.
10-3. RESET : Loading Factory Default.

Specifications

ITEM	MEB-62V2812P0B	MEB-62F0036P0A
Imaging Sensor	1/2.8" Sony Exmor CMOS	
Effective Pixels	1920(H) x 1080(V) x 25p	
Scan Frequency	HD] 25Hz(V), 18.75Khz(H) / Progressive	
	CVBS] 50Hz(V), 15.625Khz(H) / 2:1 Interlace	
Electronic Iris	1/25~1/50,000sec	
Video Format	HD] 16:9, 1080p@25fps	
Synchronization	Internal	
H. Resolution	HD] 1080p@30/25 fps	
Sensitivity	Color: 0.3 Lux (@IRE 40, Sens-up On, IR Off) BW: 0.005 Lux (@IRE 40, Sens-up On, IR Off)	
S/N Ratio	More than 52dB with AGC Off at 50 IRE	
Lens	f= 2.8~12mm F1.3 Mega pixel D/N DC Auto Iris vari-focal lens	f= 3.6mm F2.0 Mega pixel D/N Fixed lens
LED	4pcs x 850nm High power SMD LED	
DAY / NIGHT	True Day&Night by ICR	
White Balance	ATW / AWB / AWC -> SET / INDOOR / OUTDOOR / MANUAL	
Sens-up	Yes (2x ~30x)	
WDR	D-WDR	
DNR	HD] 2D+3DNR	
	CVBS] 2DNR	
Mirror/Flip	Off, H, V, H/V	
Function	Focus Assist, BLC/HSBLC, Motion detection, Privacy mask, Freeze, Defog, Negative Image, IR Smart, Cam Title, LSC (Lens Shading Compensation), DPC(Defective Pixel Compensation)	
Remote Control	UTC by HD-DVR (Hikvision, Pelco-C)	
Language	ENG, TUR, NED, POR, RUS, POL, SPA, ITA, FRA, GER,CHN2/CHN1	
Video Output	TVI mode/CVI mode/AHD, 1080P(@30/25 fps)	
	CVBS (NTSC/PAL)	
Installation Temp.	-20ºC ~ +50ºC (Humidity: 20%RH ~ 80%RH.)	
Operating Temp.	-20ºC ~ +50ºC (Humidity: 20%RH ~ 80%RH.)	

Specifications

Power Consumption	DC12V=520mA Circuit protection against faulty connection in power polarity.
Housing	IP66, Polycarbonate & Aluminum Cast, 3-Axis locking bracket, Dual window
Dimension	78.5mm(ø)x78.5mm(H)x214mm(L) / About 520g

(*) Design and specifications are subject to change for product improvements without prior notice.

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