ENFORCER®

EV-C1303-NMGQ

High Resolution 1000 TV Line Camera

OSD Manual

- 1000 TV Lines
- Wide Dynamic Range (WDR)
- Digital Noise Reduction (DNR)
- Smart IR
- Motion detection

- Digital Slow Shutter (DSS)
- High Light Compensation (HLC) and Back Light Compensation (BLC)
- Day/Night Mode
- Defog

SECO-LARM® **SLI**

FC CE RoHS

Table of Contents:

Features:

1000 TV Lines
• 1000 TV Line resolution with a 1.3 Megapixel Sony Exmor Sensor (IMX 138).

Shutter/AGC
• Adjusts the shutter speed and automatic gain control (AGC)

Wide Dynamic Range (WDR)
• Provides clear images even under circumstances in which backlight illumination can vary.

Digital Noise Reduction (DNR)
• Prevents the blurring of moving objects and activates only when moving objects appear.

Smart IR
• Reduces the saturation of close objects in low-light conditions by controlling the IR sensitivity.

Digital Slow Shutter (DSS)
• Improves image clarity in low-light environments.

High Light Compensation (HLC)
• Defines target areas and remove spotlights to make certain objects visible.

Back Light Compensation (BLC)
• Adjusts the exposure to properly display the subject in front of a bright light source.

White Balance
• Adjusts the picture's color temperature/image color.

Day/Night Mode
• Adjusts the level of ambient light that triggers the camera to switch between color and B/W.

Privacy
• Blocks out or emphasize a portion of the image.

Motion Detection
• Detects if there is motion in the scene.

Defog
• Improves the clarity of images taken in poor conditions such as fog, smoke, rain or snow.

Menu Diagram:

1. Lens	DC	MODE	INDOOR / OUTDOOR / DEBLUR	
		RETURN		
	MANUAL	MODE	NORMAL / DEBLUR	
		RETURN		
2. Exposure	BRIGHTNESS (0~20)			
	SHUTTER	AUTO		
		MANUAL	SPEED (1/60~1/60000)	
			RETURN	
		FLICKER		
	SENS-UP (OFF / 2x~32x)			
	AGC (0~20)			
	RETURN			
3. White Bal	ATW			
	AWB			
	AWC-SET			
	MANUAL	KELVIN	LOW / MIDDLE / HIGH	
		R-GAIN (0~20)		
		B-GAIN (0~20)		
		RETURN		
4. Backlight	OFF			
	HLC	LEVEL (0~20)		
		MODE	ALL DAY / NIGHT ONLY	
		RETURN		
	BLC	H-POS (0~20)		
		V-POS (0~20)		
		H-SIZE (0~20)		
		V-SIZE (0~20)		
		RETURN		
	WDR	WEIGHT	LOW / MIDDLE / HIGH	
		RETURN		
5. DNR	OFF			
	LOW			
	MIDDLE			
	HIGH			
6. Day & Night	EXTERN	SMART IR (0~20)		
		EXTERN S/W	LOW / HIGH	
		DELAY	LOW / MIDDLE / HIGH	
		RETURN		
	AUTO	SMART IR (0~20)		
		AGC THRES (0~20)		
		AGC MARGIN (0~20)		
		DELAY	LOW / MIDDLE / HIGH	
		RETURN		
	COLOR			
	B/W	SMART IR (0~20)		
		RETURN		

Menu Diagram, continued:

7. Image	SHARPNESS (0~10)				
	GAMMA (0.45~0.65)				
	PEDESTAL (0~20)				
	COLOR GAIN (0~20)				
	MIRROR (OFF / ON)				
	FLIP (OFF / ON)				
	RETURN				
8. System	COM	CAM ID (0~255)			
		BAUDRATE	2400 / 4800 / 9600 / 57600 / 115200		
		RETURN			
	VIEW ANGLE	WIDE 4:3			
		WIDE 16:9	XY ADJUST		
		NORMAL	XY ADJUST		
	CVBS	NTSC / PAL			
	RESET	ON	PUSHING		
	RETURN				
9. Special	D-ZOOM (1.0x~8.0x)				
	D-WDR	OFF / LOW / MIDDLE / HIGH			
	DEFOG	OFF			
		ON	MODE	AUTO	
				MANUAL	
			LEVEL	LOW	
				MIDDLE	
				HIGH	
			RETURN		
	SHADING	OFF			
		ON	WEIGHT (0~100%)		
			RETURN		
	PRIVACY	OFF			
		ON	ZONE NUM (0~15)		
			ZONE DISP (ON / OFF)		
			H-POS (0~40)		
			V-POS (0~32)		
			H-SIZE (0~40)		
			V-SIZE (0~32)		
			Y-LEVEL (0~20)		
			CR LEVEL (0~20)		
			CB LEVEL (0~20)		
			RETURN		

Menu Diagram, continued:

9. Special	INTELLIGENT	MTN TRACKER	OFF	
			ON	DET. SETTING → SENSITIVITY (0~20)
				DET. SETTING → OBJ. KEEP LV (0~60)
				DET. SETTING → MOTION EST. (0~20)
				DET. SETTING → SIGNAL OUT (OFF / ON)
				DET. SETTING → RETURN
				WINDOW TONE (0~6)
				WINDOW ZONE (0~3)
				WINDOW USE (OFF / ON)
				DETH-POS (0~40)
				DETV-POS (0~32)
				DETH-SIZE (0~40)
				DETV-SIZE (0~32)
				RETURN
		ALARM	ANTI-SHIFT (OFF / ON)	
			SHIFT SCALE (0~20)	
			ANTI-BLOCK (OFF / ON)	
			BLOCK SCALE (0~20)	
			RETURN	
		QUICK ZOOM	OFF	
			ON	MOVING (0/60~240/60 sec)
				ZOOM IN (0/60~240/60 sec)
				STANDBY (0/60~240/60 sec)
				SYNCHRONOUS (OFF / ON)
				TRACKING (OFF / ON)
				REPEAT (OFF / ON)
				RETURN
	RETURN			
10. Exit				

Navigating the OSD:

Menu items can be selected using the OSD controller.

1. Press down on the joystick. The Setup Menu will be displayed on the monitor.
2. Move to and highlight the required function by moving the joystick up and down.
3. Select the required function by pressing down on the joystick.
4. Change the menu setting by moving the joystick left and right.
5. After choosing the settings, move the cursor to EXIT and press down on the joystick.

NOTE:
- A submenu is available where the option reads ← .
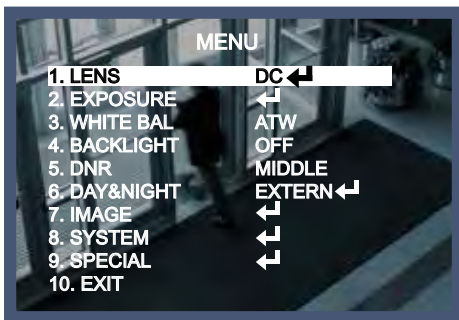
Lens:

This function controls the camera's lens operation.

1. Move the joystick up or down to highlight LENS on the SETUP menu screen.
2. Select the desired mode by moving the joystick left or right.
3. Select RETURN to return to the SETUP menu.

A. DC: Select DC for a DC lens, and choose a setting based on the operating environment (INDOOR / OUTDOOR / DEBLUR)
B. Manual: Select Manual for a Manual lens, and choose a setting based on the operating environment (NORMAL / DEBLUR)
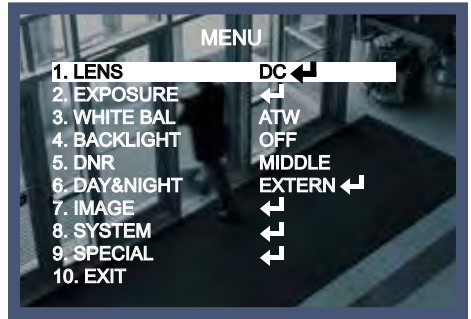
Exposure:

This function controls exposure via one of four modes (Brightness, Shutter, Sens-Up, and AGC).

1. Move the joystick up or down to highlight EXPOSURE on the SETUP menu screen.
2. Select the desired mode by moving the joystick left or right.
3. Select RETURN to return to the SETUP menu.

A. Brightness: Adjust the overall brightness level (0~20).
B. Shutter: Adjust the shutter speed.
   i.   AUTO: Automatically adjust the shutter speed.
   ii. MANUAL: Manually adjust the shutter speed (1/60~1/60,000).
   iii. FLICKER: Select FLICKER to avoid image flickering in different frequencies.
C. Sens-Up: Slow the shutter speed to allow the sensor to accumulate more light (2x~32x).
D. Automatic Gain Control (AGC): A higher level of AGC increases brightness, but also increases any noise (0~20).
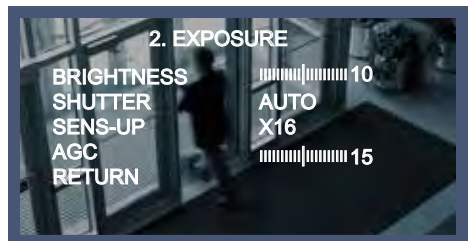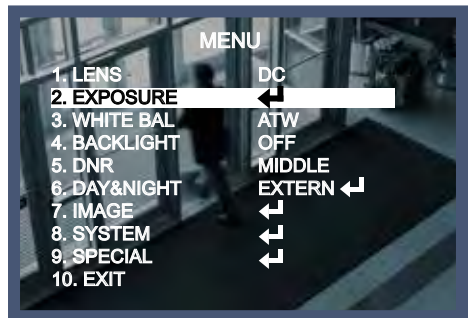
White Balance:

This function is used to adjust the color temperature and image color of the picture.

1. Move the joystick up or down to highlight WHITE BALANCE on the SETUP menu screen.
2. Select the desired mode by moving the joystick left or right.
3. Select RETURN to return to the SETUP menu.

A. Automatic Tracking White Balance (ATW): Automatically adjust the white balance when the image color temperature changes, within a range of 1,800°K~10,500°K (for example, a fluorescent lamp or outdoors).

B. Automatic White Balance (AWB): Match the ambient environment's color temperature. This should be used when the color temperature is between 3,000°K~7,000°K.

C. AWC→SET: After allowing the camera to focus on a blank white piece of paper, press the SET button. If the lightning conditions change, readjustment is needed.

D. Manual: After adjust the white balance using ATW or AWB, use the Manual setting to set the white balance level manually using red and blue levels.
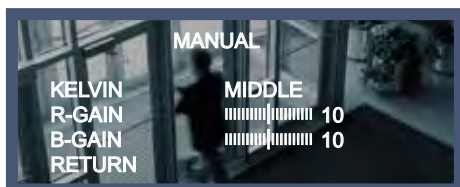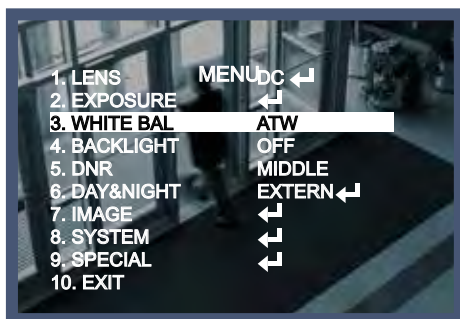
NOTE: White Balance may not function properly under the following circumstances; in these cases, use AWB mode:

- There is a very high color temperature around the subject (for example, while there is a clear sky or during sunset).
- It is very dark.
- The camera is directly facing fluorescent lighting or there is a drastic lighting change.

Back Light:

This function is used to control the light level to compensate for strong backlight conditions.

1. Move the joystick up or down to highlight BACKLIGHT on the SETUP menu screen.
2. Select the desired mode by moving the joystick left or right.
3. Select RETURN to return to the SETUP menu.
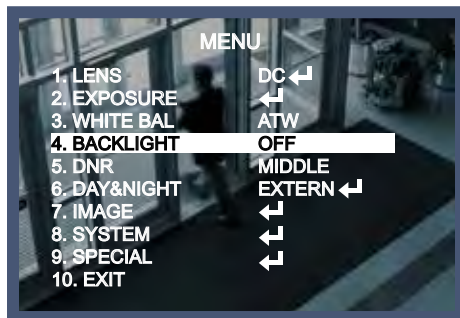
Back Light, continued:

A. High Light Compensation (HLC): Select this mode to improve the clarity of the picture by blocking a strong backlight.
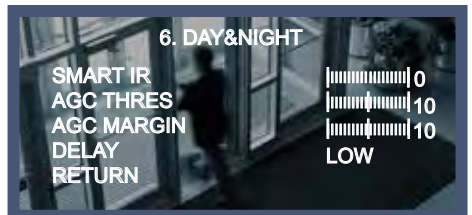

HLC OFF

HLC ON

B. Back Light Compensation (BLC): Select this mode to correct the exposure of subjects that are in front of a strong backlight.
   i.   H-POS: Adjust the horizontal position of the BLC area (0~20).
   ii. V-POS: Adjust the vertical position of the BLC area (0~20).
   iii. H-SIZE: Adjust the horizontal size of the BLC area (0~20).
   iv. V-SIZE: Adjust the vertical size of the BLC area (0~20.
C. Wide Dynamic Range (WDR): This function provides clear images even under intense backlight conditions, even when light levels can vary excessively (LOW / MIDDLE / HIGH).
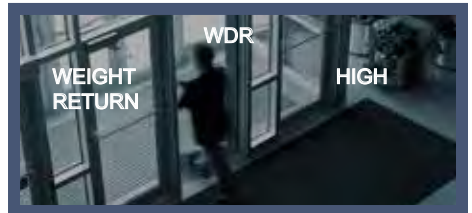
WDR OFF

WDR ON

DNR:

This function is used to control the reduction of digital noise in low-light conditions (OFF / LOW / MIDDLE / HIGH).
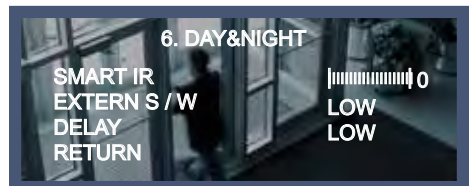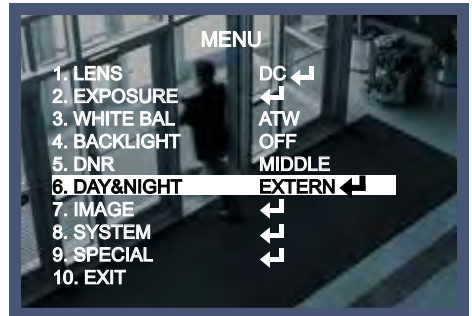
1. Move the joystick up or down to highlight DNR on the SETUP menu screen.
2. Select the desired mode by moving the joystick left or right.
3. Select RETURN to return to the SETUP menu.

NOTE: Increasing the DNR level increases the effectiveness of noise reduction. However, a high DNR level may cause ghosting to appear in the image.

```
                    MENU
1. LENS                 DC ◄┘
2. EXPOSURE                ◄┘
3. WHITE BAL            ATW
4. BACKLIGHT            OFF
5. DNR                  MIDDLE
6. DAY&NIGHT            EXTERN ◄┘
7. IMAGE                   ◄┘
8. SYSTEM                  ◄┘
9. SPECIAL                 ◄┘
10. EXIT
```
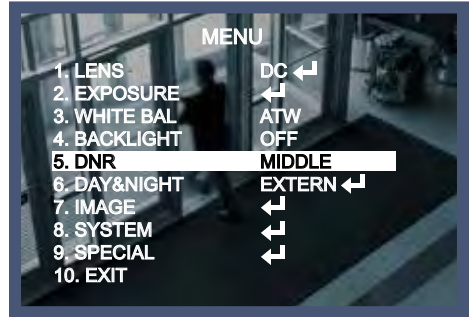
Day & Night:

This function will switch the camera to color or black and white mode automatically, depending on the current illumination conditions.

1. Move the joystick up or down to highlight DAY & NIGHT on the SETUP menu screen.
2. Select the desired mode by moving the joystick left or right.
3. Select RETURN to return to the SETUP menu.

A. EXTERN: Change between COLOR and B&W modes automatically through the connection with the ground terminal.
   i.   SMART IR: Compensate for IR saturation (0~20).
   ii. EXTERN S/W: (LOW / HIGH).
   iii. DELAY: Set the delay for switching between the two modes (LOW / MIDDLE / HIGH).
B. AUTO: Select to automatically shift into color mode in bright environments and B&W in low-light environments.
   i.   SMART IR: Compensate for IR saturation (0~20).
   ii. AGC THRES: AGC threshold level (0~20).
   iii. AGC MARGIN: AGC Day/Night margin level (0~20).

```
                    MENU
1. LENS                 DC ◄┘
2. EXPOSURE                ◄┘
3. WHITE BAL            ATW
4. BACKLIGHT            OFF
5. DNR                  MIDDLE
6. DAY&NIGHT            EXTERN ◄┘
7. IMAGE                   ◄┘
8. SYSTEM                  ◄┘
9. SPECIAL                 ◄┘
10. EXIT
```

```
            6. DAY&NIGHT
SMART IR            |⊪⊪⊪⊪⊪⊪⊪| 0
EXTERN S / W        LOW
DELAY               LOW
RETURN
```

```
            6. DAY&NIGHT
SMART IR            |⊪⊪⊪⊪⊪⊪⊪| 0
AGC THRES           |⊪⊪⊪⊪⊪⊪⊪| 10
AGC MARGIN          |⊪⊪⊪⊪⊪⊪⊪| 10
DELAY               LOW
RETURN
```

Day & Night, continued:

C. COLOR: Set the video output to always be color.

D. B/W: Set the video output to always be black and white.

    i.   SMART IR: Compensate for IR saturation (0~20).

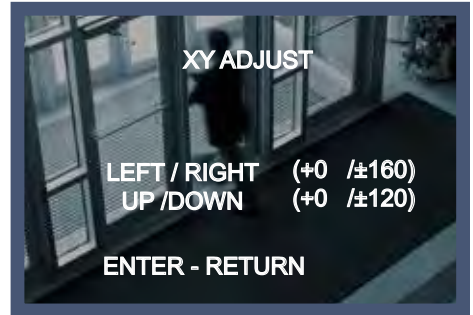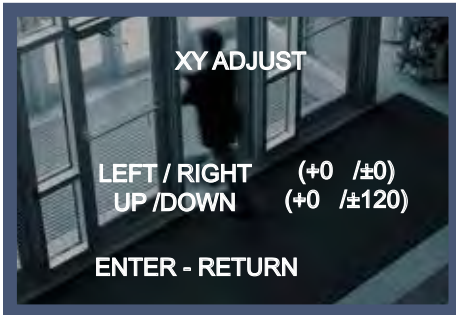# Image:

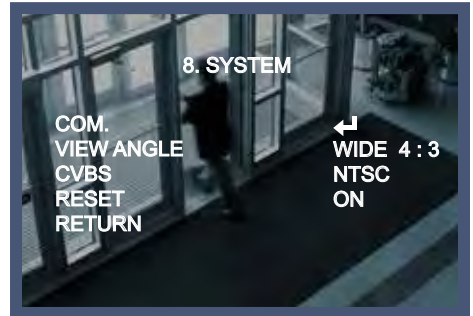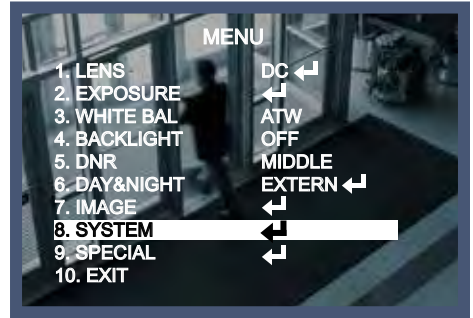This function allows additional control over image settings.

1. Move the joystick up or down to highlight IMAGE on the SETUP menu screen.
2. Select the desired mode by moving the joystick left or right.
3. Select RETURN to return to the SETUP menu.

A. SHARPNESS: Increase the sharpness of the image's outline (0~10).

B. GAMMA: Adjust the gamma level (0.45~0.65).

C. PEDESTAL: Adjust the pedestal level (0~20).

D. COLOR GAIN: Adjust the color gain level (0~20).

E. MIRROR: Reverse the image horizontally.

F. FLIP: Reverse the image vertically.
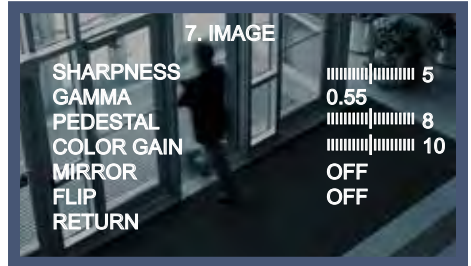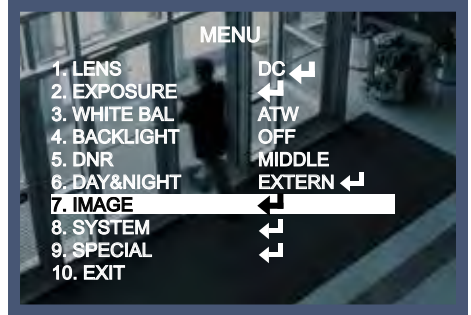
System:

This function is used to change the viewing angle, switch between PAL and NTSC systems, and reset the camera settings.

1. Move the joystick up or down to highlight SYSTEM on the SETUP menu screen.
2. Select the desired mode by moving the joystick left or right.
3. Select RETURN to return to the SETUP menu.

A. COM: Not used.
B. VIEW ANGLE: Adjust the aspect ratio (WIDE 4:3 / WIDE 16:9 / NORMAL).
  i. XY ADJUST: Adjust the screen image (Left/Right and Up/Down).

NOTE: XY ADJUST is only available when WIDE 16:9 or NORMAL has been selected from the VIEW ANGLE menu.


```
                    MENU
    1. LENS                  DC ⏎
    2. EXPOSURE                 ⏎
    3. WHITE BAL             ATW
    4. BACKLIGHT            OFF
    5. DNR                  MIDDLE
    6. DAY&NIGHT           EXTERN ⏎
    7. IMAGE                    ⏎
    8. SYSTEM                   ⏎
    9. SPECIAL                  ⏎
    10. EXIT
```



```
                8. SYSTEM

    COM.                        ⏎
    VIEW ANGLE              WIDE  4 : 3
    CVBS                   NTSC
    RESET                  ON
    RETURN
```



```
            XY ADJUST



    LEFT / RIGHT    (+0   /±0)
     UP /DOWN       (+0   /±120)

      ENTER - RETURN
```



```
            XY ADJUST



    LEFT / RIGHT    (+0   /±160)
     UP /DOWN       (+0   /±120)

      ENTER - RETURN
```

System, continued:

C. CVBS: Switch between PAL and NTSC systems.

D. RESET: Press and hold the SET button for 2~3 seconds to restore the camera's settings to their factory default values.
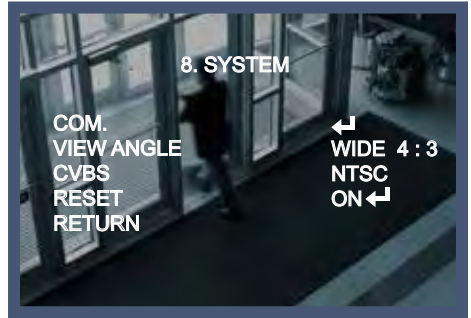
Special:

This function is used to control various functions, including zoom, motion detection, and privacy.

1. Move the joystick up or down to highlight SPECIAL on the SETUP menu screen.
2. Select the desired mode by moving the joystick left or right.
3. Select RETURN to return to the SETUP menu.

A. D-ZOOM: Enable digital zoom (1x~8x).

B. D-WDR: Compensate for strong backlight conditions using intelligent light level control (OFF / LOW / MIDDLE / HIGH).
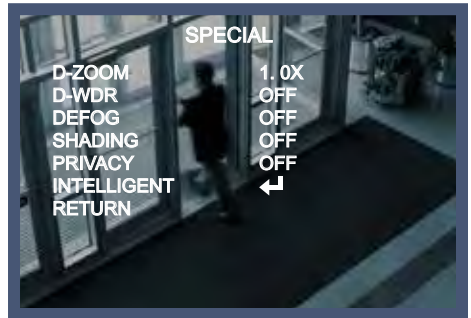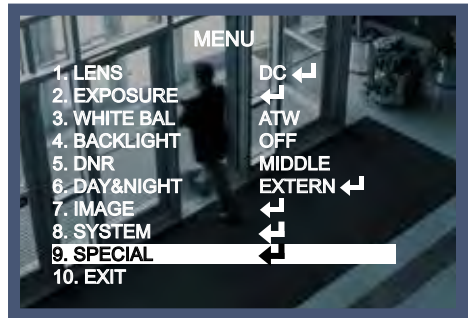
Special, continued:

C. DEFOG: Improve image clarity in foggy or dusty conditions.
   i. MODE: Change the DEFOG mode (AUTO / MANUAL).
   ii. LEVEL: Change the level of DEFOG (LOW / MIDDLE / HIGH).

D. SHADING: Increase brightness level when a wide lens angle causes the sides of the images to be darker than the center.
   iii. WEIGHT: Adjust the amount of shading compensation (0~100%).
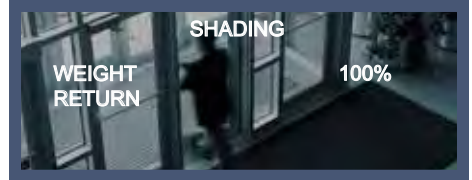
DEFOG OFF

DEFOG ON

E. PRIVACY: Hide up to 15 different areas of the image. The size of each privacy mask is adjustable.
   iv. ZONE NUM: Select the privacy mask to adjust (0~15).
   v. ZONE DISP: Turn selected privacy mask ON or OFF.
   vi. H-POS: Adjust the area's horizontal position (0~40).
   vii. V-POS: Adjust the area's vertical position (0~32).
   viii. H-SIZE: Adjust the area's horizontal size (0~40).
   ix. V-SIZE: Adjust the area's vertical size (0~32).
   x. Y LEVEL: Adjust the Y level (0~20).
   xi. CR LEVEL: Adjust the CR level (0~20).
   xii. CB LEVEL: Adjust the CB level (0~20).
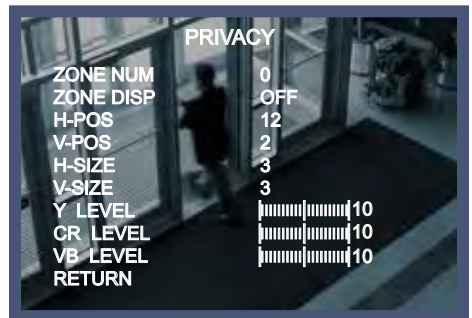
Special, continued:

F. INTELLIGENT: Provides intelligent functions based on motion tracking, intended for crime prevention and detection.

    i.   MTN TRACKER: Adjust a motion tracking area.

        a. DET SETTING: Adjust the motion detection settings.

           • SENSITIVITY: Adjust the motion detection sensitivity (0~20).

           • OBJ KEEP LV: Set the level at which objects will remain highlighted (0~60).

           • MOTION EST: Set the level at which objects are estimated (0~20).

           • SIGNAL OUT: Not used.

        b. WINDOW TONE: Set the shade of the masked area (0~6).

        c. WINDOW ZONE: Select the window zone to adjust (0~3).

        d. WINDOW USE: Turn the selected zone on or off (OFF / ON).

        e. DET H-POS: Adjust the horizontal position.

        f. DET V-POS: Adjust the vertical position.

        g. DET H-SIZE: Adjust the horizontal size.

        h. DET V-SIZE: Adjust the vertical size.

    ii. ALARM: Set ANTI-BLOCK or ANTI-SHIFT, offering security against potential tampering.

        a. ANTI-SHIFT: Enable or disable ANTI-SHIFT. While ANTI-SHIFT is enabled, if someone attempts to shift the camera, a warning message (SHIFTING DETECTED!) will appear on screen.

        b. SHIFT SCALE: Adjust the level of ANTI-SHIFT (0~20).

        c. ANTI-BLOCK: Enable or disable ANTI-BLOCK. While ANTI-BLOCK is enabled, if someone attempts to block the camera, a warning message (BLOCKING DETECTED!) will appear on screen.

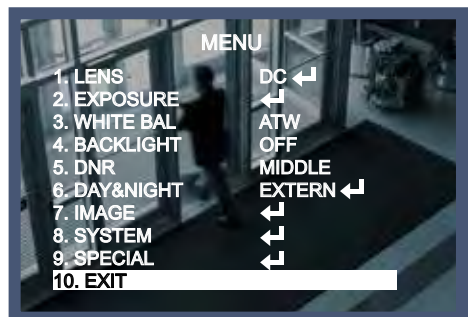   d. BLOCK SCALE: Adjust the level of ANTI-BLOCK (0~20).
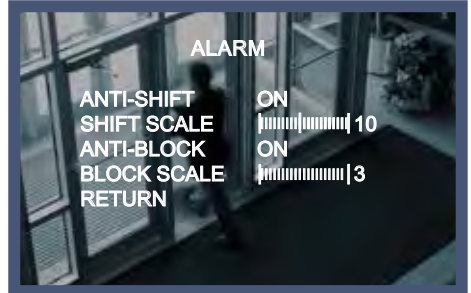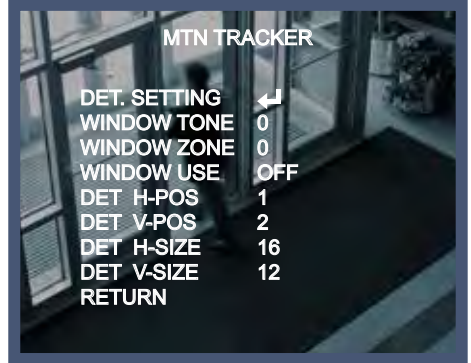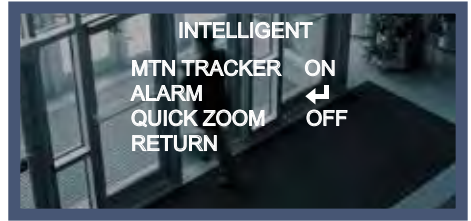
Special, continued:

iii. QUICK ZOOM: Enable QUICK ZOOM to have the camera zoom in on a designated motion detection area when motion is detected in that area. The area must be set using the MTN TRACKER setting (see pg. 14).

    a. MOVING: Set the zoom in/out speed (0/60~240/60 seconds).

    b. ZOOM IN: Set the time left zoomed in (0/60~240/60 seconds).

    c. STANDBY: Set the delay time before zooming in (0/60~240/60 seconds).

    d. SYNCHRONOUS: Turn synchronous zoom ON or OFF.

    e. TRACKING: Turn motion tracking ON or OFF.

    f. REPEAT: Turn repeat zoom ON or OFF.
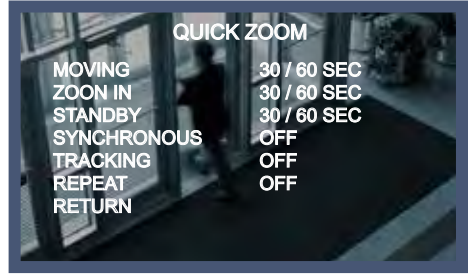
Exit:

Navigate to the EXIT option to save the current settings and exit the setup menu.

Troubleshooting:

Nothing appears on the screen.	• Check the power cable, power supply output, and video connection between the camera and monitor.
The image on the screen is dim.	• Clean the camera lens / lens glass with a soft clean cloth. • Adjust the monitror controls as required. • If the camera is facing a very strong light, change the camera position. • Adjust the lens focus.
The image on the screen is dark.	• Adjust the contrast control of the monitor. • If there is an intermediate device, correctly set the 75Ω/Hi-z.
The camera is not working properly and the surface of the camera is hot.	• Check that the camera is correctly connected to an appropriate regulated power source.
Motion detection is not activated.	• Check that MOTION DET has been set to ON in the Setup Menu. • Check that the MD AREA has been properly defined.
The color of the picture is not correct.	• Check the settings in the WHITE BALANCE menu.
The image on the screen flickers.	• Make sure that the camera isn't facing direct sunlight or fluorescent light; if necessary, change the camera position.
SENS-UP does not work.	• Check that the AGC setting in the EXPOSURE menu isn't set to OFF. • Check the EXPOSURE menu and make sure SHUTTER is set to AUTO.