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User Manual

1/2,8" HD Camera, Day&Night, 1920x1080, Infrared, WDR, 2,7-12mm, 12/24V, IP67

MCB-72M2712M0A

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Safety instructions

General safety instructions

- Before switching on and operating the system, first read this safety advice and the operating instructions.
- Keep the operating instructions in a safe place for later use.
- Installation, commissioning and maintenance of the system may only be carried out by authorised individuals and in accordance with the installation instructions - ensuring that all applicable standards and guidelines are followed.
- Protect the devices from water penetration and humidity, since these can cause lasting damage.
- Should moisture nevertheless enter the system, under no circumstance switch on the devices under these conditions, instead send them for examination to an authorised specialist workshop.
- The system must never be used outside of the technical specifications, since this can destroy it.
- The device must be protected from excesses of heat, dust, humidity and vibration.
- When separating the system from the voltage supply, only ever use the plug to pull out the cable. Never pull directly on the cable itself.
- Lay the connecting cables carefully and check that they are not mechanically stressed, kinked or damaged and that no humidity can penetrate into them.
- In the event of a malfunction, please inform your supplier.
- Maintenance and repairs may only be carried out by authorised specialist personnel.
- The system must be isolated from the power supply before opening the housing.
- The device may only be opened by qualified service personnel. Unauthorised access invalidates any warranty claim.
- Connection cables should always be exchanged through Videor E. Hartig GmbH.
- Use only original spare parts and accessories from Videor E. Hartig GmbH.
- The housing should only be cleaned using a mild domestic cleaning agent. Never use solvents or petrol as these can permanently damage the surface.
- During installation, it is essential to ensure that the seals provided are correctly installed and that they are not displaced during installation. Damaged seals must not be installed and will invalidate any warranty.
- The installer is responsible for the maintenance of the enclosure as per the technical data, e.g. by sealing the cable outlets with silicone.
- Wire end ferrules should be used when shortening the flexible connection cables.
- The devices may only be operated in the temperature range indicated in the data sheet and within the defined air humidity range.

Product - Specific Safety Instructions

- The camera may never be pointed directly at the Sun with the aperture open (this will destroy the sensor).
- It is unavoidable that during manufacture and to a certain extent during later use, humidity will be present in the ambient air within the device's housing. In the event of large temperature fluctuations, this humidity may condense inside the housing.
- To avoid this condensation inside the very tightly sealed housing, the manufacturer has inserted silica gel sachets in the housing of the various camera types.
- It is however a physical given, that these silica gel bags will reach saturation after a certain amount of time. They should therefore be replaced with new silica gel sachets.
- During installation, it is essential to ensure that the seals provided are correctly installed and that they are not displaced during installation. Damaged seals must not be installed and will invalidate any warranty.
- A multipolar, easily accessible isolation device should be installed in the proximity of the IR Spotlight, in order to disconnect the device from the power supply for service work.
- The earth connection must be made according to the low impedance requirement of DIN VDE 0100.
- Subsequent painting of the equipment surface can impair the function.
- Any warranty claim is invalidated by subsequent painting.
- A safety margin of > 1m from the spotlight must be maintained when viewing directly into the IR Spotlight in a darkened environment.
- Do not look directly at invisible LED radiation using optical instruments (e.g. a reading glass, magnifying glass or microscope), since this can endanger the eyes, LED Class 1M.
- Operation of the IR spotlight with a defective cover or during repair is prohibited.

Class A device note

This is a Class A device. This device can cause malfunctions in the living area; in such an event, the operator may need to take appropriate measures to compensate for these.

WEEE (Waste Electronical & Electronic Equipment)

Correct Disposal of This Product (Applicable in the European Union and other European countries with separate collection systems).

This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources. Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling. Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

Graphical symbols

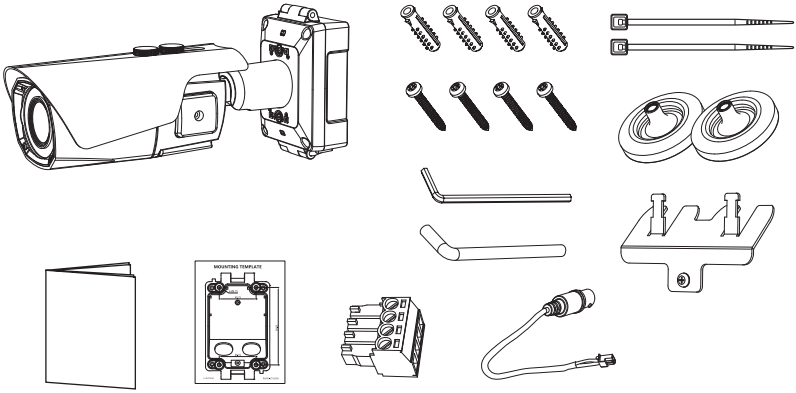
Please pay attention to the safety instructions, and carefully read through this instruction guide before initial operation.

⚠ Important points of warning are marked with a caution symbol.

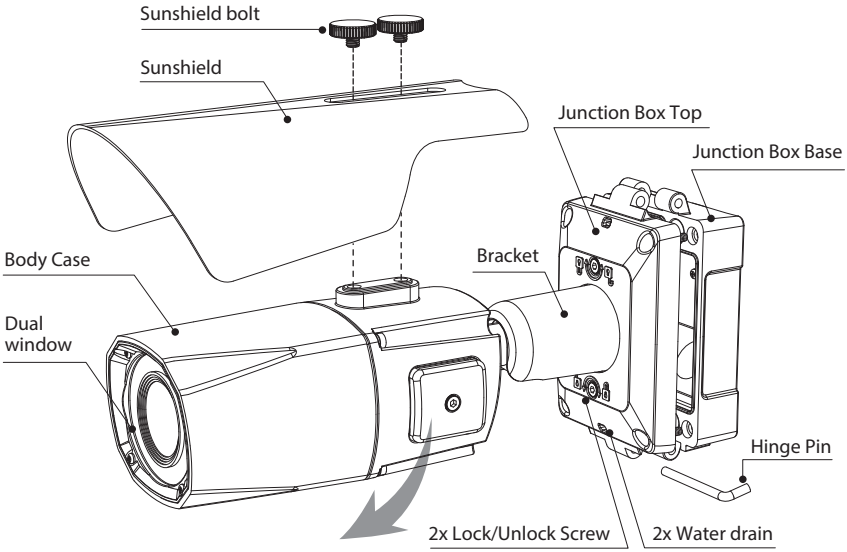
i Important points of advice are marked with a notice symbol.

Parts supplied

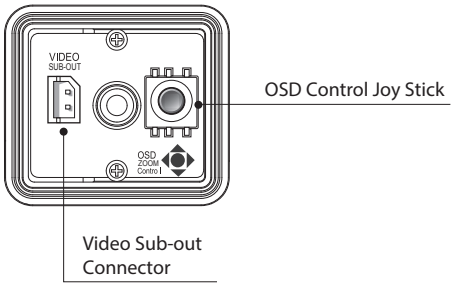
- Camera
- Operating Instruction
- Mounting Template
- Plastic Anchor: 6 x 30mm (4x)
- Mounting Screw: 4 x 30mm (4x)
- Hex Wrench: 3mm (1x)
- Hinge Pin (1x)
- Cable Tie (2x)
- Grommet (2x)
- Video Sub-out Cable (1pc)
- Cable fixation plate with Fixing screw
- Wiring Connector



Part names



Inside of Opening Cover



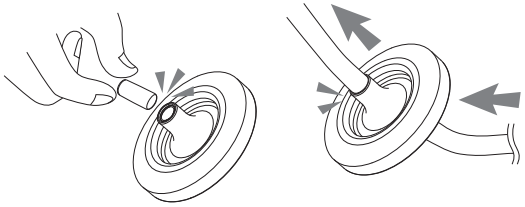
CAUTION:

Extreme care should be taken NOT to scratch the window in front of lens
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.

Installation instructions

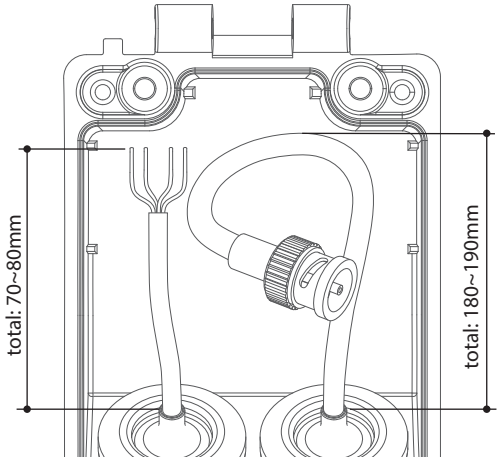
Using Grommet

Tear off the cocks of grommets properly and pull up the grommet so that sealing can wrap the cable properly as illustrated. If it doesn't wrap the cable properly, it could cause the water leakage problem.



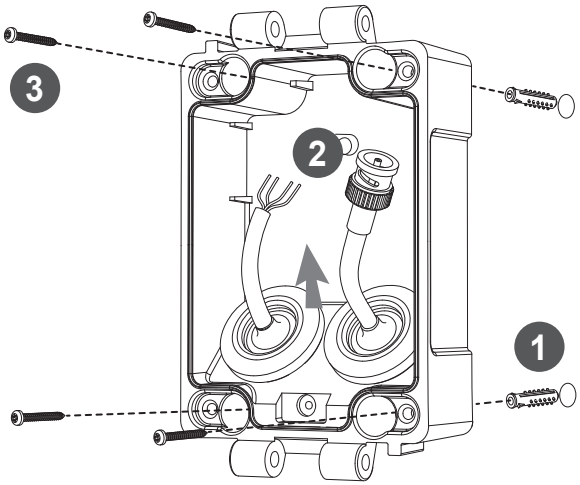
Recommended cable length into the Junction box base

- BNC CABLE: 180mm~190mm
- Power CABLE: 70mm~80mm including cable stripping section

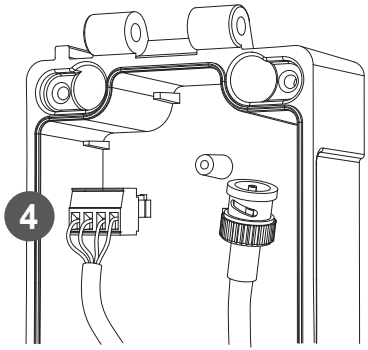


Install the mount onto a strong structure.
Prepare the Junction box base and the accessaries for installation.

1. Locate the mounting template at the installation position and drill the ceiling or wall if needed.
2. Route the Power/Video cables through the grommets from the wall. Insert the grommets onto the Junction box base.
3. Place the Junction box base on pre-drilled position and fix it through using mounting screws (4x30mm).



4. Connect the cable wiring with wiring connector.
5. Fix the cable fixation plate and tie up cable to it.



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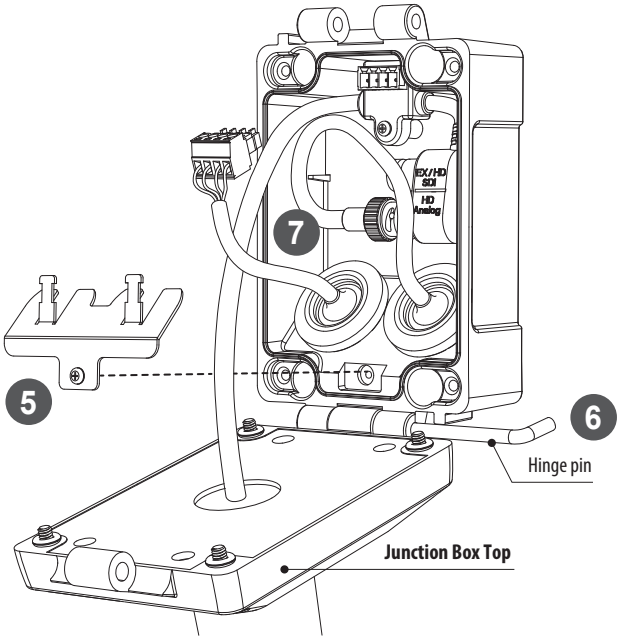
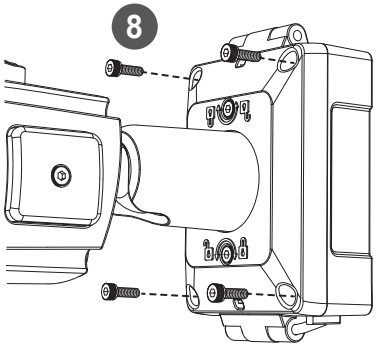
6. Hook up the Junction box top with the Junction box base by the hinge pin.
7. Connects the Power/Video cables from camera as illustrated. Fix the Power/Video cables from camera to junction box base using the supplied screw.



8. Cover the Junction box top and tighten assembly screws. (4pcs)

*** Caution: If assembly screws are not firmly assembled, it causes water leakage.**



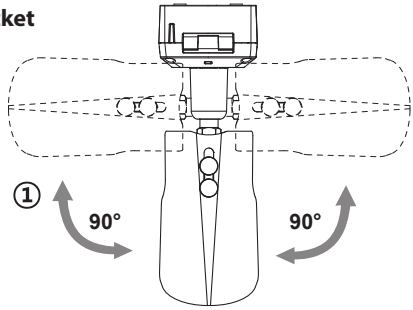
9. Set the camera's orientation and tighten the Lock/Unlock screws using hex wrench.
10. If necessary, open the opening cover and connect the video sub-out cable for OSD menu setting.
11. After all the setting, close the Opening cover and tighten it.
12. Put the sunshield to the camera unit and tighten the sunshield bolts.

Pan & Tilt adjustments

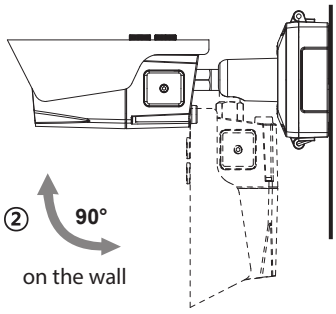
- Unlock the screw on the camera bracket through using the torque wrench supplied
- Set the camera's viewing angle then lock the screw on the bracket.

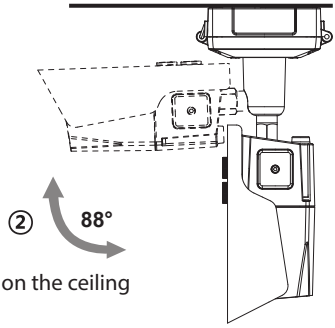
Adjustment of viewing angle with a bracket

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

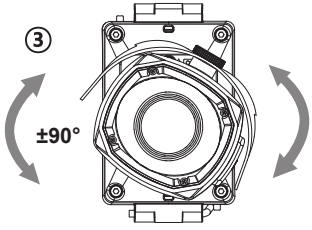


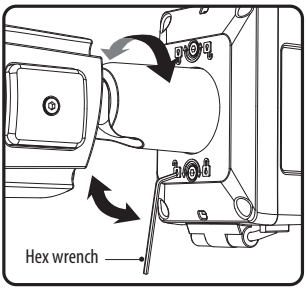
2. Tilt limit : Tilt is limited to 0°(2°) min ~ 90° max. for wall(ceiling) installation respectively with reference to the wall (ceiling) when the inclination of camera module is 0°, that is, the image is aligned horizontally.





3. Inclination limit (Horizontal image alignment): Inclination limited to +/-90° max.



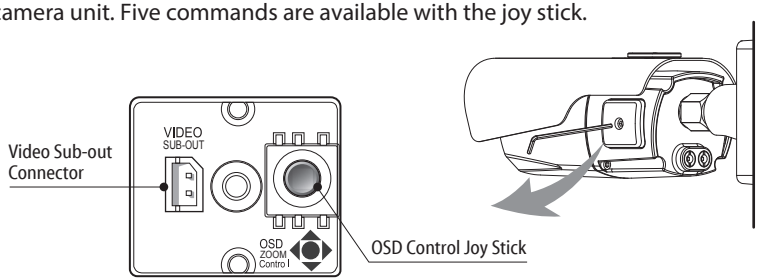


Adjustment of viewing angle with a bracket

Operating instructions

Using OSD controller

Setup menu can be accessed and controlled by OSD control joy stick on the side of camera unit. Five commands are available with the joy stick.



Description of the OSD control operation

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

Description of the Motorized ZOOM&FOCUS adjustment

Works only when OSD Menu is inactive.

1. ▲ : Zoom In
2. ▼ : Zoom Out
3. ◄ : Focus Near
4. ► : Focus Far

i ANALOG OUT0 should be set to TVI MODE, AHD MODE or CVI MODE to get CVBS video in sub-out. If it is set to CVBS, there is no CVBS video in sub-out port. (SYSTEM> OUTPUT> ANALOG OUTPUT0)

i If CVBS video is enabled through ANALOG OUT0 or Sub-out port, WDR and 3D-NR functions are disabled in all video outputs. It should be considered when installer adjusts the video with installation monitor via CVBS video signal.

OSD menu table

MENU	SUB Menu	Configuration		
LENS	DC	MODE (INDOOOR, OUTDOOR, DEBLUR)		
	MANUAL			
ZOOM / FOCUS	AF MODE	ZOOMPUSH, MANUAL		
	MODE CHANGE	ENABLED, DISABLED		
	SCANNING	HALF, FULL		
	ONEPUSHAF	ON		
	SYNC TDN	ON, OFF		
	INITIAL	ON		
EXPOSURE	BRIGHTNESS	0~20		
	SHUTTER	AUTO		
		MANUAL (SPEED)	1/30(1/25), 1/60(1/50), 1/120(100), 1/250(200), 1/500(400), 1/1000(800), 1/2000(1600), 1/4000(3200), 1/8000(6400), 1/15000(12800), 1/30000(25600)	
		FLICKERLESS		
	SENS-UP	OFF, x2, x4, x8, x16, x32		
	AGC	0~10		
BACKLIGHT	OFF			
	HLC	LEVEL, COLOR		
	BLC	H/V-POS, H/V-SIZE		
	WDR	MODE	ROI	WINDOW ZONE/USE, H/V-POS, H/V-SIZE
			NORMAL	
		TARGET-BRT	LOW, MIDDLE, HIGH	
		WEIGHT	LOW, MIDDLE, HIGH	
DAY & NIGHT	EXTERN	SMART IR, ANTI-SAT., DELAY, IR LED CTL (AUTO, OFF)		
	AUTO	SMART IR, ANTI-SAT., AGC THRES, AGC MARGIN, DELAY		
	COLOR			
	B&W	SMART IR, ANTI-SAT.		
COLOR	AWB	AUTO, AUTOext, PRESET, MANUAL (C-TEMP, R/B-GAIN)		
	COLOR GAIN	0~20		
3D-NR	OFF, LOW, MIDDLE, HIGH			

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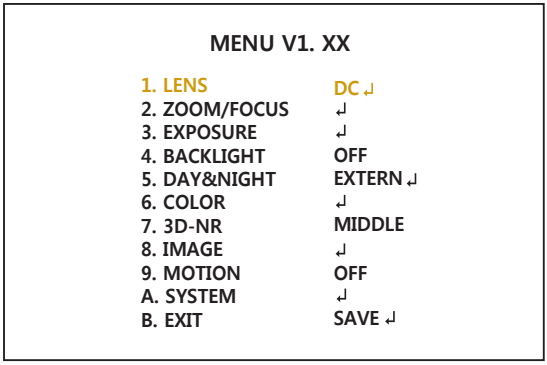
IMAGE	SHARPNESS	MAIN OUTPUT	ANALOG OUT0	ANALOG OUT0	TVI MODE, AHD MODE, CVBS, CVI MODE
				TVI MODE	0~10
				AHD MODE	0~10
				CVI MODE	0~10
			ANALOG OUT1	ANALOG OUT1	CVBS
				SDI&CVBS	0~10
			SDI OUTPUT	SDI OUTPUT	HD-SDI, EX-SDI 1.0, EX-SDI 2.0, OFF
				SDI&CVBS	0~10
	GAMMA	0.45, 0.55, 0.65, 0.75			
	MIRROR	OFF, ON			
	FLIP	OFF, ON			
	D-WDR	OFF, LOW, MIDDLE, HIGH			
	DEFOG	OFF, ON	MODE (AUTO, MANUAL)		
			LEVEL (LOW, MIDDLE, HIGH)		
	PRIVACY	OFF, ON	ZONE NUM, ZONE DISP, H/V-POS, H/VSIZE, Y LEVEL, CB/CR LEVEL, TRANS		
MOTION	OFF, ON	DET WINDOW	WINDOW ZONE, WINDOW USE, DET H/V-POS, DET H/V-SIZE		
		DET TONE	0~4		
		MDRECT FILL	OFF, ON		
		SENSITIVITY	0~10		
		MOTION OSD	OFF, ON		
		TEXT ALARM	OFF, ON		
SYSTEM	OUTPUT	SDI OUTPUT	HD-SDI, EX-SDI 1.0, EX-SDI 2.0, OFF		
		ANALOG OUT0	TVI MODE, AHD MODE, CVBS, CVI MODE		
	RESOLUTION	1080 30P(25P), 720 30P(25P), 720 60P(50P)			
	TV SYSTEM	US(NTSC), EU(PAL)			
	LANGUAGE	ENG, CHN(S), CHN, JPN, KOR, GER			
	CAM TITLE	OFF, RIGHT UP, LEFT DOWN			
	RESET	ON			
EXIT	SAVE, CANCEL				

OSD menu Startup

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

- EXIT : Enters 'EXIT' menu with save current setting or without save.
- RETURN : Returns to the previous menu.



1. LENS

Lens can be selected either DC or MANUAL lens.
It should be selected according to lens type.

1-1. DC : DC is for the best image when DC Auto iris Vari-focal lens is installed.

- MODE : Selects MODE according to lighting condition.
  - INDOOR: Optimized of indoor environment.
  - OUTDOOR: Optimized of outdoor environment.
  - DEBLUR: It enables to reduce the blur in a certain indoor environment. Noise or color rolling can be increased.

1-2. MANUAL : MANUAL is for the best image when Fixed lens is installed.

2. ZOOM/FOCUS

2-1. AF MODE

- ZOOMPUSH: Focusing works steadily for sharp focusing on the object. In the case of a Motor driven lens, focusing resumes in about 7~8 seconds to save the lens lifetime when the focus gets lost.
- MANUAL: Focusing can only be adjusted by ▲,▼ of OSD control joystick.

2-2. MODE CHANGE

MODE CHANGE is activated to set ZOOMPUSH in AF MODE.
It is for locking of the lens control to prevent undesirable operation.

- ENABLED : Locks and disables the lens operation after 3 hours. It is recommended to maintain the working-life of the motorized zoom lens.
- DISABLED : Disables the locking feature allowing lens operation at any time.

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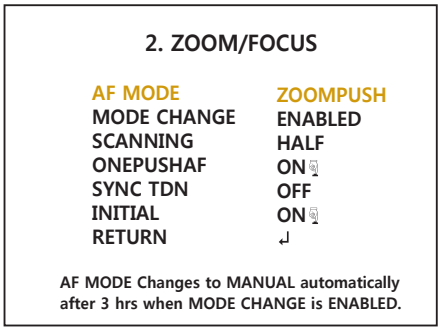
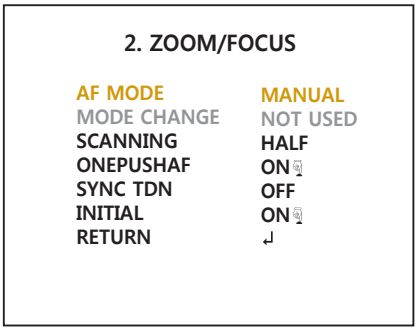




2-3. SCANNING

Lens scanning can be set to performs HALF or FULL on the screen.
Scanning checks the positions for zoom/focus at both of the end positions and saves them for the references.

2-4. ONEPUSHAF

Focusing is activated only when zoom in/out is working.

2-5. SYNC TDN

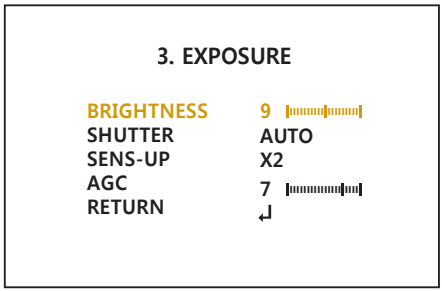
Compensates for IR correction when the camera switches to DAY or NIGHT.
It is recommended to set OFF except specific conditions.

2-6. INITIAL

Lens initialization is necessary during the installation or the regular operation to align the position data with the mechanical positions whose lens elements may move and deviate from its calibrated position by the shock or vibration, for example, during the transportation. Lens initialization is automatically executed at power up.
INITIAL starts the lens initialization when pressing the joystick straight down for about 2 sec. It is strongly necessary to execute LENS INIT in cases below;

- At the final step for the installation.
- When focus becomes out of control by the shock or vibration.

3. EXPOSURE



3-1. BRIGHTNESS

Adjusts the brightness of video (0~20).

3-2. SHUTTER

Selects AUTO or set manually.
If SHUTTER set to MANUAL modes, SENS-UP mode is inactivated.

3-2-1. AUTO: Optimizes the video level by controlling the iris and the shutter speed automatically.

3-2-2. MANUAL : 1/30(1/25), 1/60(1/50), 1/120(100), 1/250(200), 1/500(400), 1/1000 (800), 1/2000(1600), 1/4000(3200), 1/8000(6400), 1/15000(12800), 1/30000 (25600) Shutter can be set to fix.

3-2-3. FLICKERLESS : Flicker is used to remove the flickering on screen due to differences in light and electric frequencies.

3-3. SENS-UP

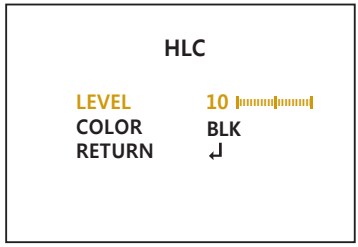
The brighter video can be obtained by increasing the exposure time in the night with SENS-UP. It can be set to Off, x2, x4, x8, x16 or x32. Higher setting can get the brighter video but the slower frame rates with more white pixels.

3-4. AGC

AGC(0~10) amplifies the video gain for brighter video but noise and white pixel accordingly.

4. BACKLIGHT

Compensates the video image to cut out the highlight area with mask or control the contrast of video. It can be set the compendation level or areas.

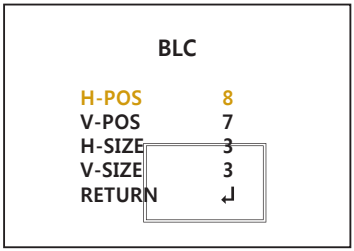


4-1. HLC (High Light Compensation)

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

4-1-1. LEVEL (0~20): Sets the HLC 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 selected color.

4-1-2. COLOR : Select mask color from 9 colors.
Black, White, Yellow, Cyan, Green, Magenta, Red, Blue and Customize.

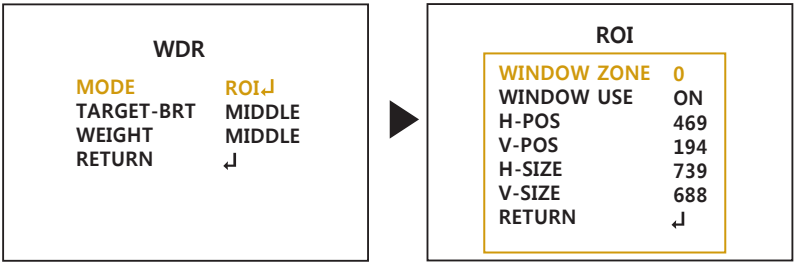


4-2. BLC (Backlight Compensation)

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.
BLC has a target window for compensation and its size and position can be set by H-POS, V-POS, H-SIZE and V-SIZE.

4-2-1. H-POS, V-POS :
Sets the position of BLC area to move vertically and horizontally.

4-2-2. H-SIZE, V-SIZE :
Sets the size of BLC area to move vertically and horizontally.



4-3. WDR (Wide Dynamic Range)

WDR is extended the gain range of the video that is mostly useful if camera takes a simultaneous picture of both indoor and outdoor nearby window.
It improves contrast of the picture in outdoor scenery as well as indoor.
Video outputs image processed from two images by dual shutter (long and short shutter) in a field to provide the best dynamic range. Highlight area is compensated by the short shutter and dark area is compensated by the long shutter. Final video may have less contrast compared to the conventional camera which does not have WDR function.

4-3-1. MODE : Selects WDR mode normal or ROI setting.

- NORMAL: WDR function applies full screen.
- ROI (Region Of Interest) : Sets specific area of WDR by window setting. Select window zone number from 0 to 3 and window use set to on. Then the window zone can be modified position and size.

4-3-2. TARGET-BRT : LOW, MIDDLE, HIGH

Selects the brightness value that you set the target area in MODE.

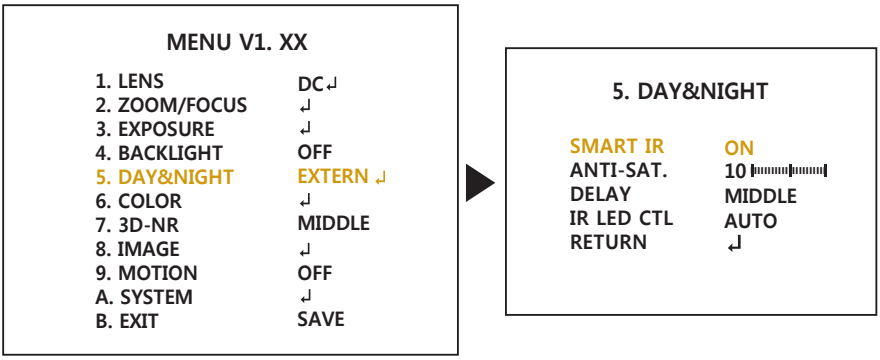
4-3-3. WEIGHT : LOW, MIDDLE, HIGH

Selects the WDR value that you set the target area in MODE.

i If CVBS video is enabled through ANALOG OUT0 or Sub-out port, WDR and 3D-NR functions are disabled in all video outputs. It should be considered when installer adjusts the video with installation monitor via CVBS video signal.

5. 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.



5-1. EXTERN

DAY or NIGHT is determined by the built-in light photo sensor.
Camera with IR LED must be set to EXTERNAL.

5-1-1. SMART IR

SMART IR can be set to reduce the saturation by the strong IR illumination in the night in any menu of EXTERN, AUTO and B/W(NIGHT). Set to ON, SMART IR is enabled and ANTI-SAT. level is controlled.

5-1-2. ANTI-SAT. (Available only with the SMART IR is ON)

Sets the anti saturation level 0~20. Setting high level avoids the saturation strongly but the corners will be darker accordingly.

5-1-3. DELAY

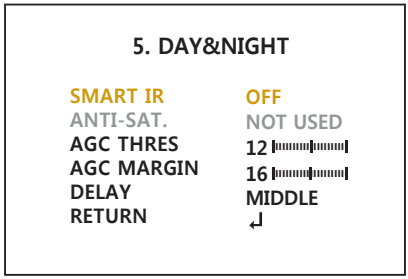
D→N DELAY is time in second while camera maintains its status before Day to Night switches. DELAY can avoid the unwanted/frivolous switching by a short term lights such as light from the passing car. Sets delay term low, middle or high.

5-1-4. IR LED CTL

IR LED Control(AUTO/OFF) is available with IR LED model only.
If it is set to OFF, IR LED will be turned OFF but DAY or NIGHT is still determined by the built-in light photo sensor.

5-2. AUTO

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 AGC threshold level, AGC margin and delay time.



5-2-1. SMART IR

SMART IR can be set to reduce the saturation by the strong IR illumination in the night in any menu of EXTERN, AUTO and B/W(NIGHT). Set to ON, SMART IR is enabled and ANTI-SAT. level is controlled.

5-2-2. ANTI-SAT. (Available only with the SMART IR is ON)

Sets the anti saturation level 0~20. Setting high level avoids the saturation strongly but the corners will be darker accordingly.

5-2-3. AGC THRES

AGC (Auto Gain Control) is a threshold level which determines to switch DAY from/to NIGHT in AUTO mode. Higher value makes the camera switch DAY from/to NIGHT at bright illumination.

5-2-4. AGC MARGIN

Sets the gap level switching from/to DAY(color) or NIGHT(B/W).

5-2-5. 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. Sets delay term low, middle or high.

5-3. COLOR

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

5-4. 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. COLOR

6-1. AWB (Auto White Balance)

Automatically tracks the changes of color temperature and continuously adjusts the white balance. AUTO, AUTOext, PRESET and MANUAL modes are available.

6-1-1. AUTO : Optimized for Indoor installation and more easily compensates AWB for low color temperature such as incandescent lights.

6-1-2. AUTOext : Optimized for outdoor sunlight applications and more easily compensates AWB for high color temperature such as sunlight.

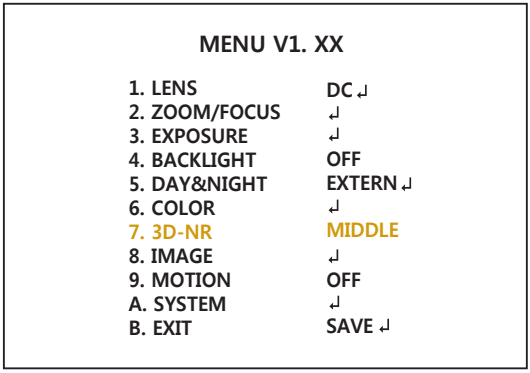
6-1-3. PRESET : AWB is performed only whenever ● is pressed.

6-1-4. MANUAL : White balance is fixed to the settings by Color-Temperature Red-GAIN and Blue-GAIN. It can be used only when the color temperature does not vary.

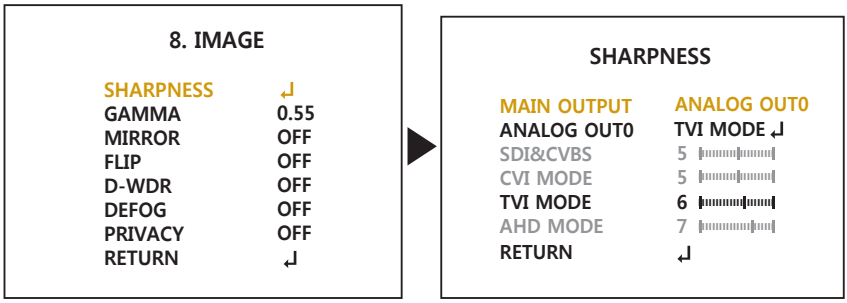
6-2. COLOR GAIN : Sets the color gain control level 0~20.

7. 3D-NR (Digital Noise Reduction)

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



8. IMAGE



EN

8-1. SHARPNESS

Sets the Sharpness level 0~10. 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 in the picture.

8-2. GAMMA

Adjust gamma level of video.

8-3. MIRROR

The Video is reversed left and right if it turns ON.

8-4. FLIP

The Video is reversed upside down if it turns ON. When the video is fliped by Vertical, then the joystick directions are reversed accordingly. It is very useful when a camera in installed in upside

8-5. D-WDR

Improves the visibility for the high bright area and the dark area by compensating the video gain. Care should be taken to select low, middle or high level, because video may lose its quality in some environments by the over compensation. Video noise can be increased in the dark area accordingly.

8-6. DEFOG

Enhance the foggy video according to status of scene. Video quality can be less in normal environments. Sets AUTO or MANUAL mode.

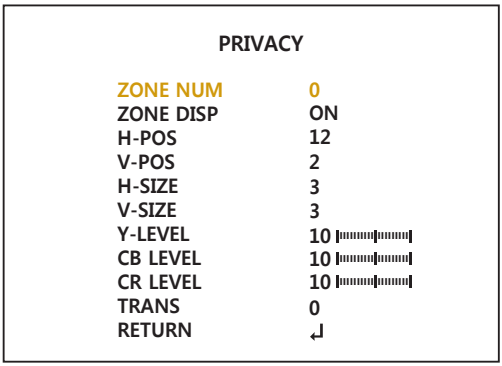
8-6-1. MODE :

- AUTO : Enhance the foggy video automatically according to status of scene.
- MANUAL : Sets to enhance the foggy video manually regardless of status of scene.

8-6-2. LEVEL : Sets Low, Mid or High.
Video quality can be less in normal environments.

8-7. PRIVACY

Sets ON/OFF for enabling/disabling PRIVACY mask. 16 privacy areas are available and each area is programmable in size, color, position and transparency.



8-7-1. ZONE NUM : Selects mask zone number from 0 to 15 to be adjusted.

8-7-2. ZONE DISP: Displays OFF/ON for the mask area which you selected zone.

8-7-3. H-POS, V-POS : Adjusts the mask area H, V position which you selected zone.

8-7-4. H-SIZE, V-SIZE : Adjusts the mask size using H, V direction which you selected zone.

8-7-5. Y LEVEL : Adjusts the mask color by Y LEVEL. (0: black ~ 20: white)

8-7-6. CB LEVEL : Adjusts the mask color by CB LEVEL. (0: yellow ~20: blue)

8-7-7. CR LEVEL : Adjusts the mask color by CR LEVEL. (0: Green ~20: magenta)

8-7-8. TRANS.: Selects transparency rate for the mask area from 0 to 3

0 : Privacy mask is not transparent.
1 : Privacy mask is 25% transparent.
2 : Privacy mask is 50% transparent.
3 : Privacy mask is 100% transparent.

9. MOTION

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.

9-1. DET WINDOW

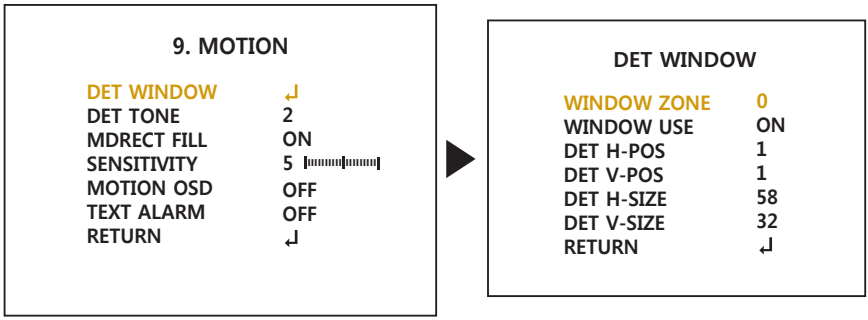
Sets the MOTION DETECTION areas on screen.

9-1-1. WINDOW ZONE : Set the detection zone number from 0 to 3.

9-1-2. WINDOW USE : Sets ON/OFF motion detection area which you selected.
If set to ON, It can be adjusted position and size.

9-1-3. DET H-POS, V-POS: Adjusts the detection area H, V position which you selected zone.

9-1-4. DET H-SIZE, V-SIZE: Adjusts the area size using H, V direction which you selected zone.



9-2. DET TONE

Sets the detection zone 0 to 4 display types which window use setting ON.

0 : Set the 100% opacity level of video background except detection window zone.
1 : Set the 50% opacity level of video background except detection window zone.
2 : Set the 25% opacity level of video background except detection window zone.
3 : Video background image is same as detection window zone.
4 : Detection window zone is displayed with box line

9-3. MDRECT FILL

Sets the motion display type when the motion is detected on video. Setting ON is displayed red solid box type. Setting OFF is displayed red outline box type.

9-4. SENSITIVITY

Sets the detection sensitivity for motion (0~10). 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.

9-5. MOTION OSD

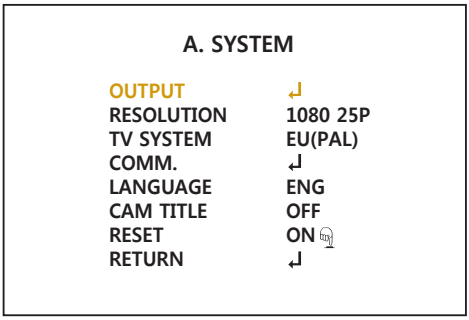
Sets ON or OFF to display the motion results.

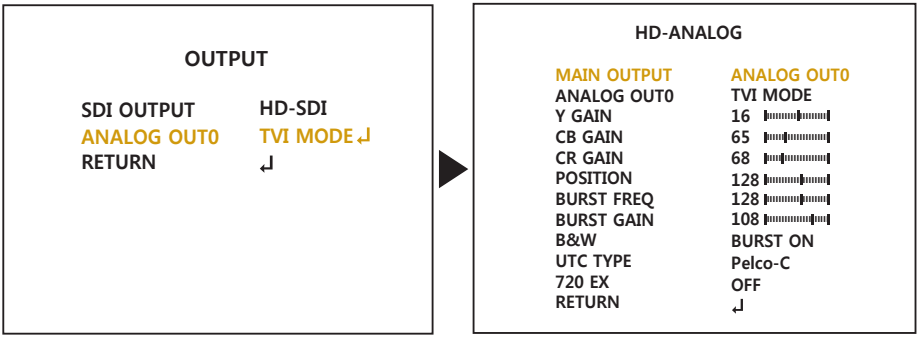
9-6. TEXT ALARM

Setting ON enables to display a text message ' WINDOWS MOVING!!' or icon when the motion is detected.

A. SYSTEM

Sets the system related functions.





A-1. OUTPUT : Selects the main video output.

A-1-1. SDI OUTPUT : Selects the SDI output HD-SDI, EX-SDI 1.0, EX-SDI 2.0, OFF

A-1-2. ANALOG OUT0 :

Selects HD-ANALOG modes TVI MODE, AHD MODE, CVI MODE or CVBS. It can be controlled Y-Gain, CB/CR-Gain, Position, Burst and etc.
Please set ANALOG OUT0 to TVI MODE, AHD MODE or CVI MODE if CVBS video is necessary through sub-out port. If ANALOG OUT0 is set to CVBS, there is no CVBS video through sub-out port and sub-out port outputs CVBS video only.

i If CVBS video is enabled through ANALOG OUT0 or Sub-out port, WDR and 3D-NR functions are disabled in all video outputs. It should be considered when installer adjusts the video with installation monitor via CVBS video signal.

A-2. RESOLUTION

Select the video resolutions, 1080P/720P are available. 1080P outputs 1920x1080 video at the frame rate of 30P/25P. 720P outputs 1280x720 video at the frame rate of 60P/50P.

A-3. TV SYSTEM

Selects HDTV standards for analog video output switches to 60HZ, US(NTSC) or 50HZ, EU(PAL) accordingly.

A-4. COMM.

A-4-1. CAM ID : Assigns the camera ID from 0~255 for the comm. address.

A-4-2. BAUDRATE : Selects the baud rate from 2400~115200.

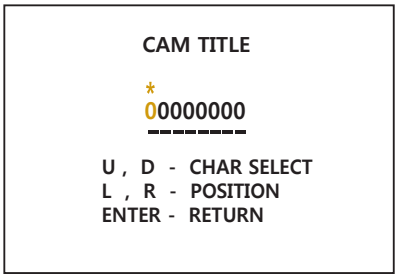
A-4-3. SET DONE : Save the comm. related functions.

A-5. LANGUAGE

6 languages are available for OSD menu.
English, Korean, Japanese, Chinese(S), Chinese, German.

A-6. CAM TITLE

Camera title(name) can be set and edited with alphanumeric characters.
Select the camera title position 'LEFT DOWN' or 'RIGHT UP' on the video.
Then ◀,▶ moves the cursor and ▲,▼ choose a character to select it.
The selected characters are added and displayed on the input line.



A-7. RESET : Loading Factory Default.

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

B-1. SAVE : Save all the setting and exit the setup menu.
B-2. CANCEL : Exit the setup menu without save.

Further information

The manual is also available from the eneo web site at www.eneo-security.com.

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