

USER MANUAL

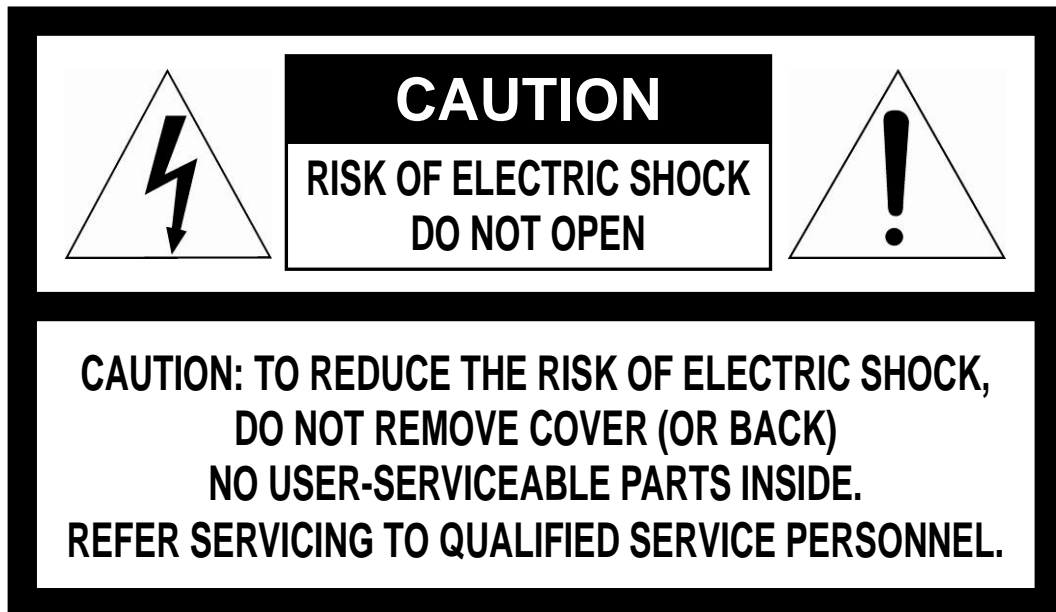
4MP HD ANALOG CAMERA

Please read this manual thoroughly before use and keep it handy for future reference.

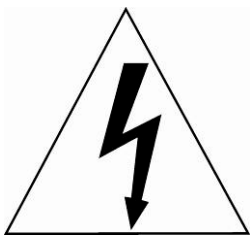
WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE. DO NOT INSERT ANY METALLIC OBJECTS THROUGH THE VENTILATION GRILLS OR OTHER OPENINGS ON THE EQUIPMENT.

CAUTION



EXPLANATION OF GRAPHICAL SYMBOLS



The lightning flash with arrowhead symbol, within an equilateral triangle, 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 exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

FCC COMPLIANCE STATEMENT

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC INFORMATION: 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: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

CE COMPLIANCE STATEMENT

WARNING

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. **CAUTION – THESE SERVICING INSTRUCTIONS ARE FOR USE BY QUALIFIED SERVICE PERSONNEL ONLY. TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT PERFORM ANY SERVICING OTHER THAN THAT CONTAINED IN THE OPERATING INSTRUCTIONS UNLESS YOU ARE QUALIFIED TO DO SO.**
16. **Use satisfy clause 2.5 of IEC60950-1/UL60950-1 or Certified/Listed Class 2 power source only.**



Table of Contents

| | | |
|----------|---|------------------------------------|
| 1 | Introduction | 6 |
| 1.1 | Features | 6 |
| 2 | Installation and Configuration | 7 |
| 2.1 | Package Contents..... | 7 |
| 2.2 | Installing the Camera..... | Fehler! Textmarke nicht definiert. |
| 2.3 | Connections..... | 11 |
| 3 | OSD Menu..... | 12 |
| 3.1 | OSD Menu Structure..... | 12 |
| 3.2 | Exposure | 12 |
| 3.3 | Day & Night | 13 |
| 3.4 | NR | 13 |
| 3.5 | Special | 14 |
| 3.6 | Adjust | 15 |
| 3.7 | Exit..... | 15 |
| 4 | Appendix | 16 |
| 4.1 | Specification | 16 |

1 Introduction

1.1 Features

- 1/2.7" low illumination CMOS image sensor
- 3.6mm fixed or 2.8-12mm varifocal lens
- True D/N (Auto, Day, Night)
- IR LEDs
- HD-TVI, AHD, CVBS selectable(OSD)
- Auto exposure control (1/50,000 ~ Auto)
- Auto white balance
- Lens Shading Correction
- Digital WDR (Wide Dynamic Range)
- DNR (Digital Noise Reduction)
- Defect Detections (Live DPC, White DPC)
- 12VDC for Camera
- Use satisfy clause 2.5 of IEC60950-1/UL60950-1 or Certified/Listed Class 2 power source only.

2 Installation and Configuration

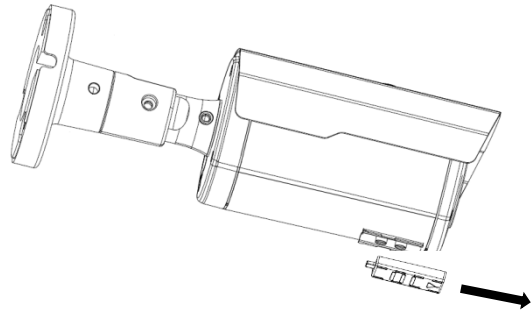
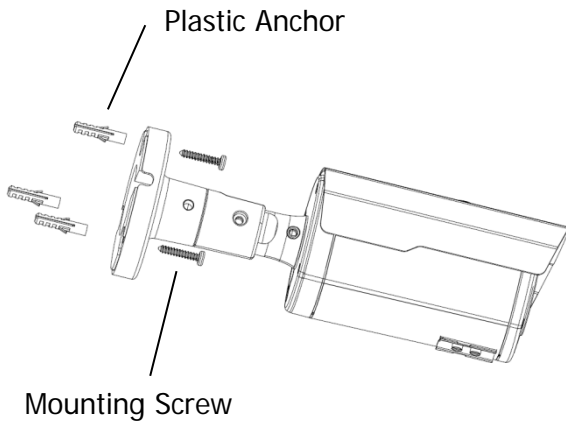
2.1 Package Contents

The package contains the following.

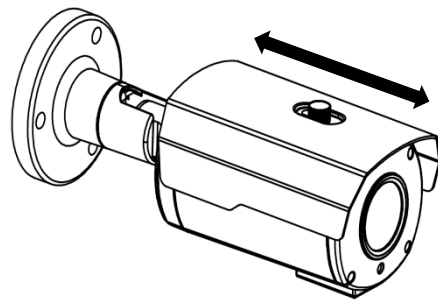
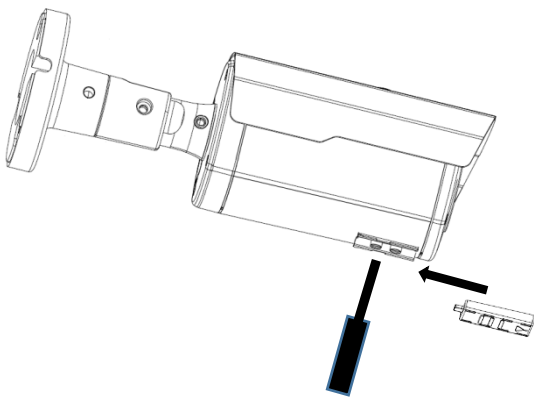
- **Camera** 1
- **User Manual (This Document)** 1
- **Template Sheet(Turret)**..... 1
- **Accessory Kit** 1

VF Bullet Camera

- 1) To mounting the bullet camera, fix the base of the camera with the three screws provided in the accessory kit.
- 2) Adjust the camera angle and tighten the mount using the L-wrench.
- 3) Remove cover of lens adjusting screw.

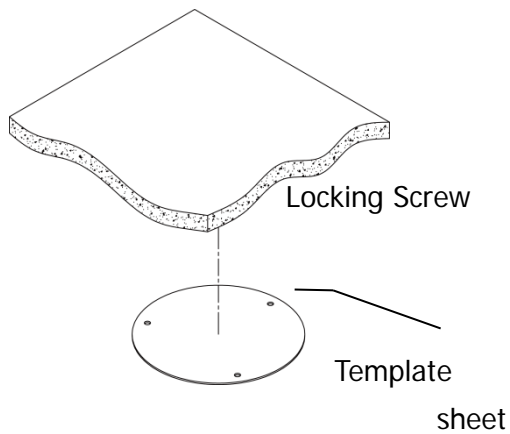


- 4) Adjust zoom and focus using flathead screw driver.
- 5) Attach the lens adjusting screw cover.
- 6) Adjust sun-shield position.

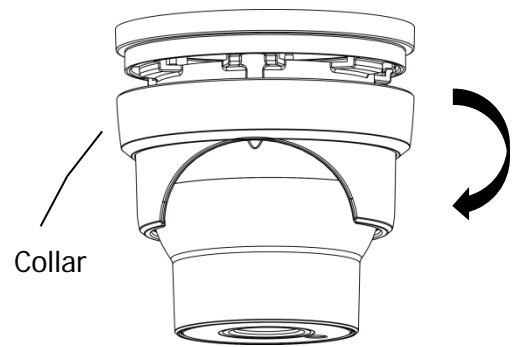


Fixed Turret Camera

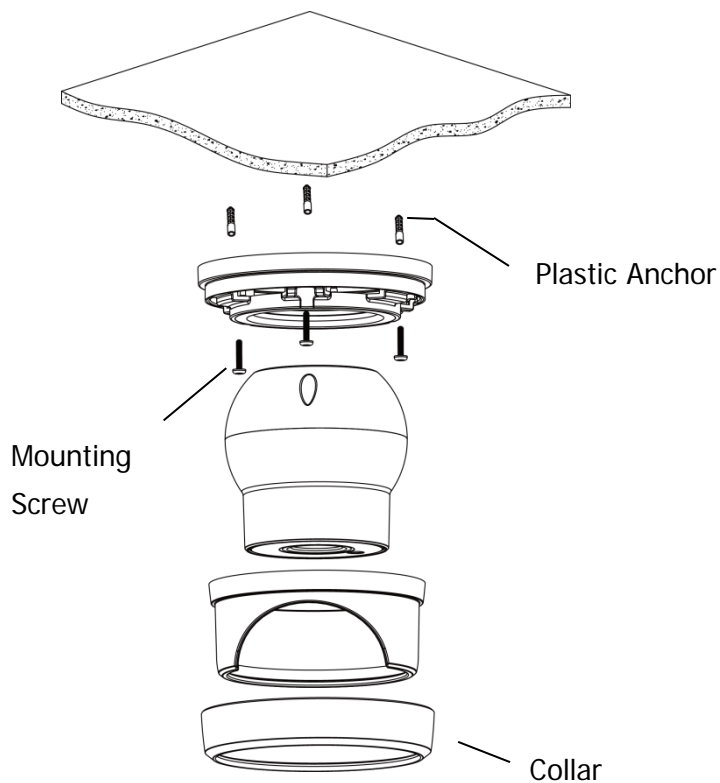
- 1) Paste the template sheet in place at the proper position.



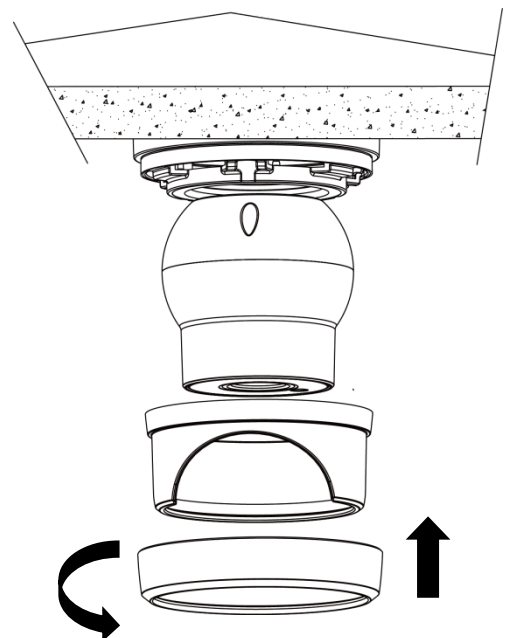
- 2) Remove the collar off the camera by rotating it down.



- 3) Fix the base of the camera with the three screws provided in the accessory kit.

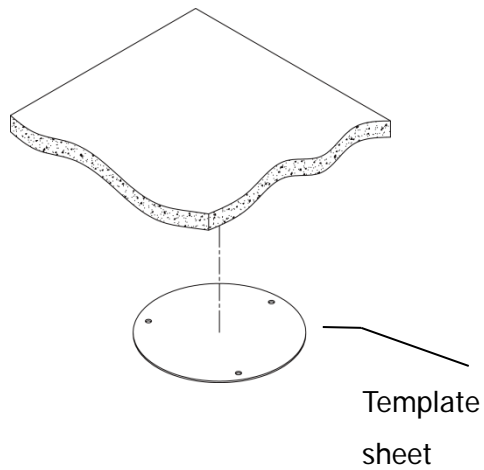


- 4) Mount the collar back by rotating it up.

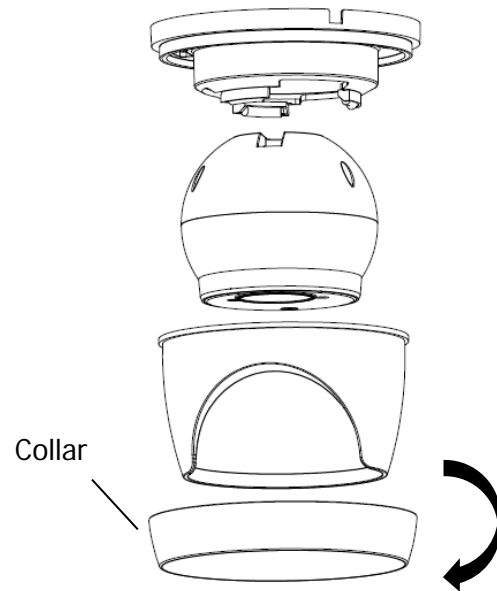


VF Turret Camera

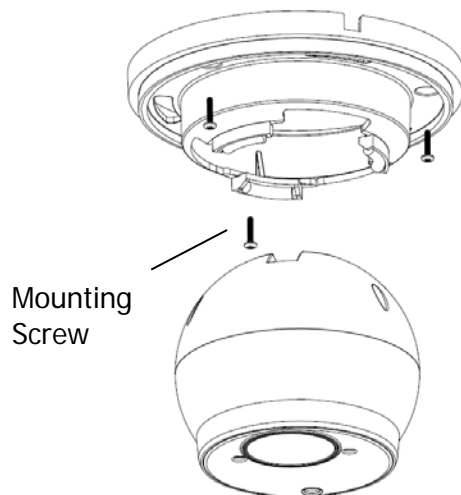
- 1) Paste the template sheet in place at the proper position.



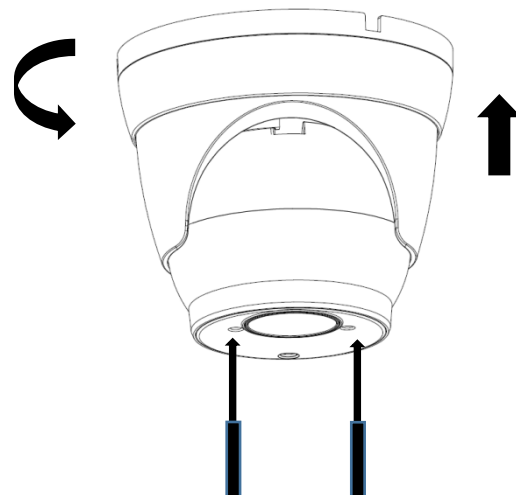
- 2) Remove the collar off the camera by rotating it down.



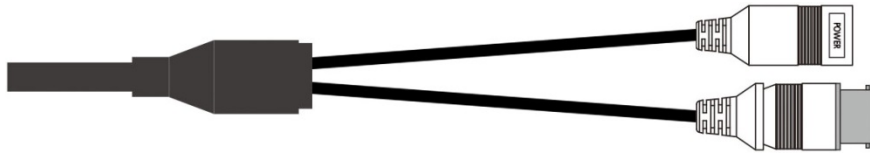
- 3) Fix the base of the camera with the three screws provided in the accessory kit.



- 4) Mount the collar back by rotating it up. Adjust zoom and focus using screwdriver.



2.3 Connections



| No. | Connector | Description |
|-----|-----------|--------------|
| 1 | DC jack | Camera Power |
| 2 | BNC jack | Video Out |

The camera must be installed by qualified service personnel in accordance with all local and federal electrical and building codes.

- **Connecting Video Output connector**

Connect the video output (BNC) connector to the video input.

- **Connecting the Power**

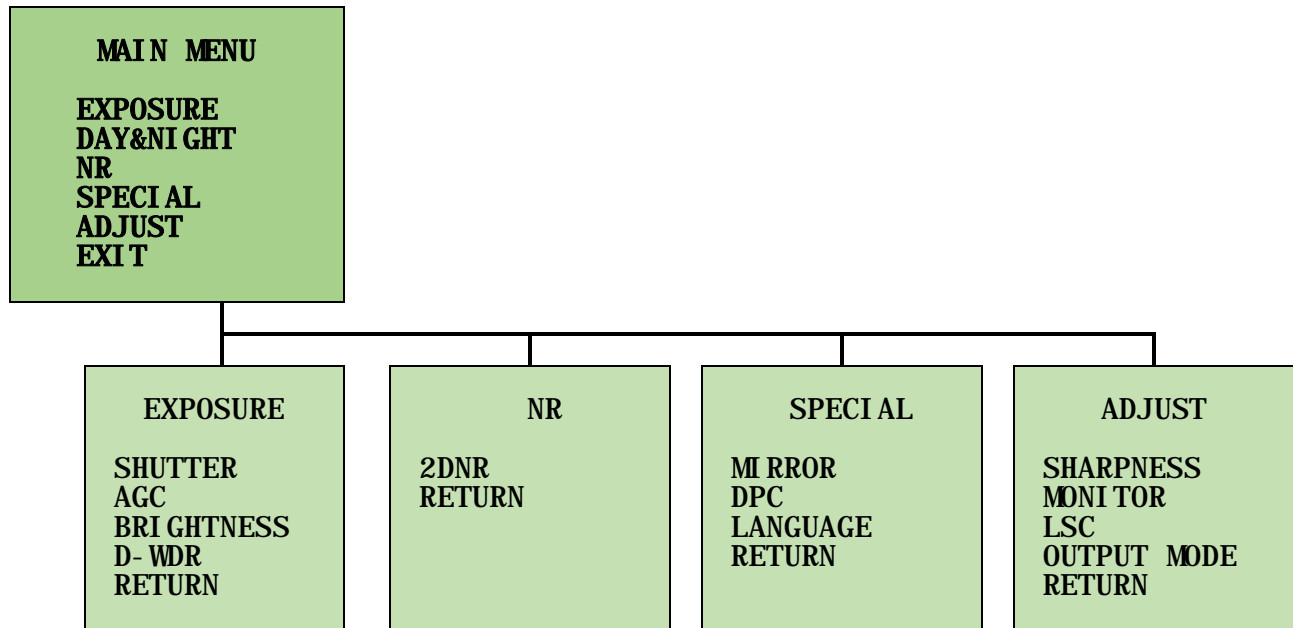
Connect power of 12VDC for the camera.

When using a 12VDC adapter, connect the positive (+) pole to the '+' position and the negative (-) pole to the '-' position.

Use satisfy clause 2.5 of IEC60950-1/UL60950-1 or Certified/Listed Class 2 power source only.

3 OSD Menu

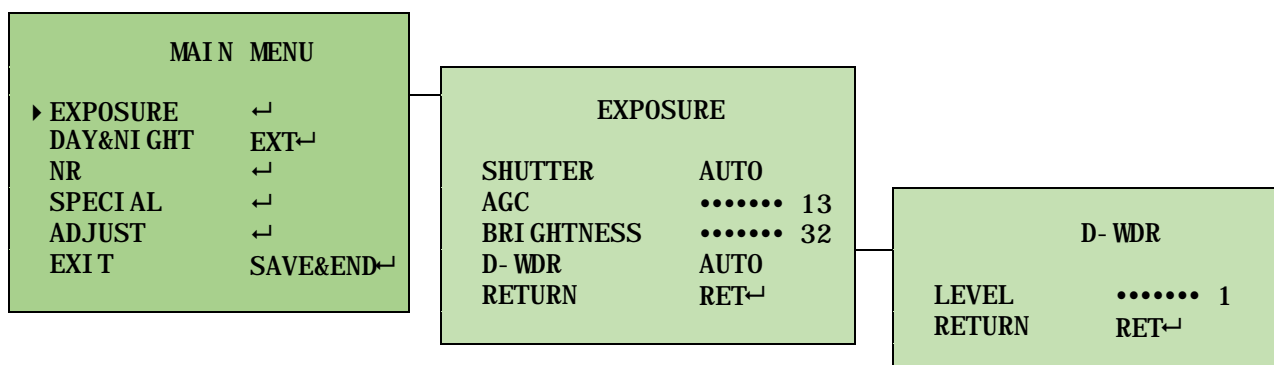
3.1 OSD Menu Structure



Note. OSD menu can be controlled by coaxial communication (UTC).

| Video Mode | Control Protocol (MSR series) | Control Protocol (MER series) |
|------------|-------------------------------|-------------------------------|
| THD(TVI) | C-protocol(H) | TVI-UTC |
| AHD | A-CP(AHD) | AHD-C |
| CVBS | A-CP(AHD) | AHD-C |

3.2 Exposure



SHUTTER: select the Shutter speed level.

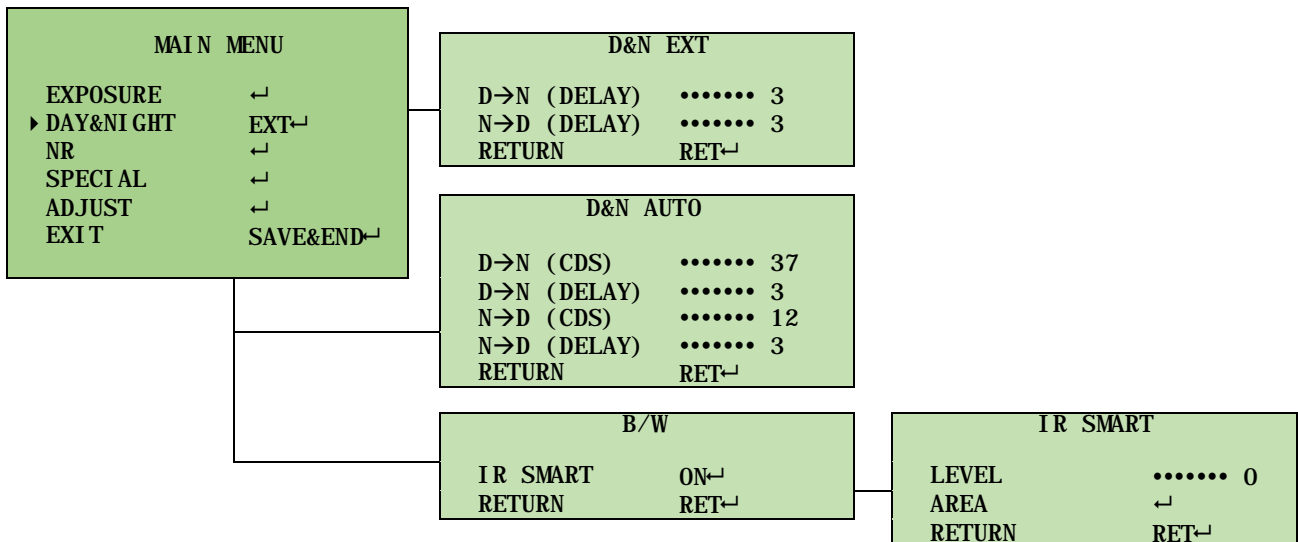
Auto, 1/25(30), 1/50(60), FLK, 1/400(480), 1/1000, 1/2000, 1/5000, 1/10000, 1/50000

AGC: 1 to 15

BRIGHTNESS: Adjust the Brightness. 1 to 100

D-WDR: Select the Digital WDR. Auto, Off, **On↵** Level: 0 to 15

3.3 Day & Night



EXT, AUTO, COLOR, B/W

EXT: Day/ night mode is changed by external sensor on the IR board.

D→N (Delay): 0 to 60

N→D (Delay): 0 to 60

AUTO: Day/night mode is changed by AGC level of the video.

D→N (AGC): 0 to 255

D→N (Delay): 0 to 60

N→D (AGC): 0 to 255

N→D (Delay): 0 to 60

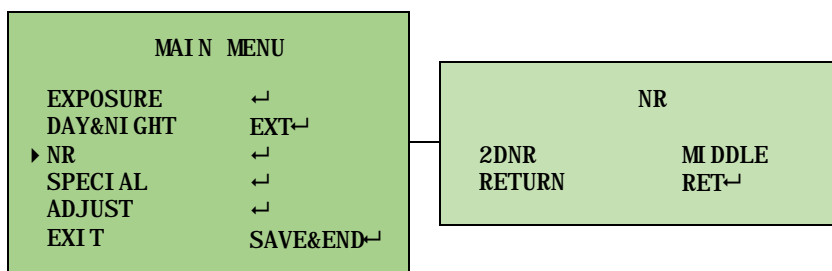
COLOR: Permanent color mode

B/W IR Smart: Off, **On** Level: 0 to 15

Area/Size: Use up, down, right, left buttons to adjust both position and size of area.

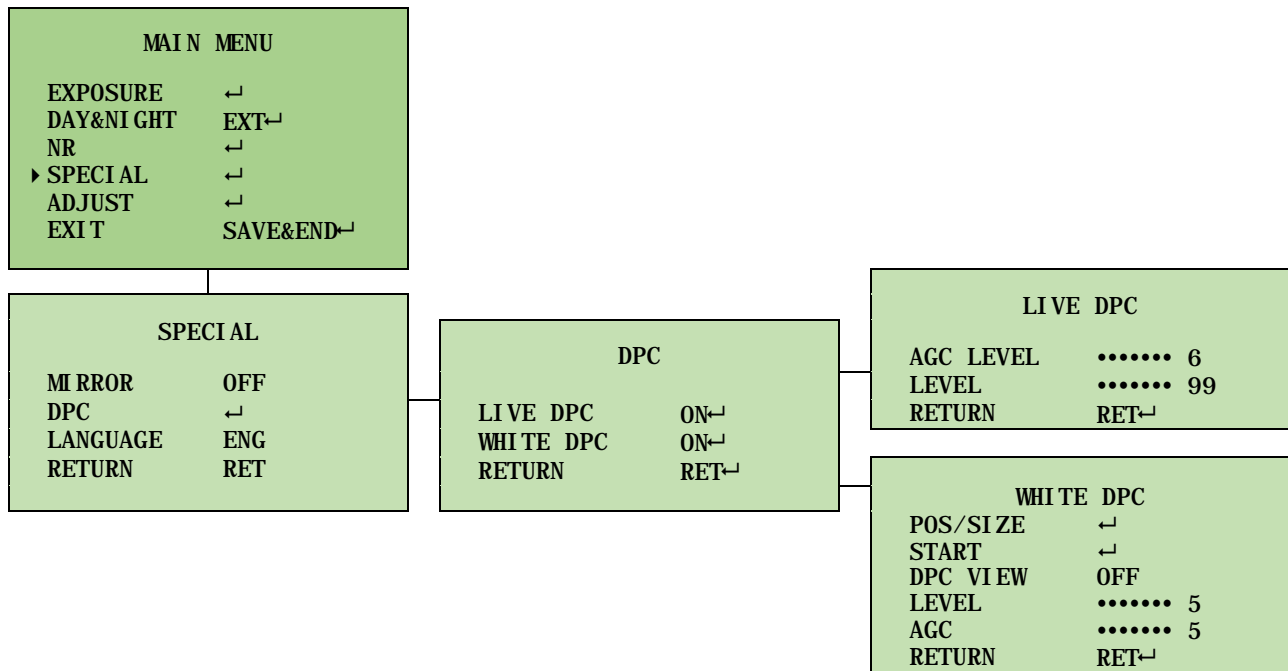
3.4 NR

Select Digital Noise Reduction mode.



2DNR: Off, Low, Middle, High

3.5 Special



MIRROR: Off, Mirror, V-Flip, Rotate

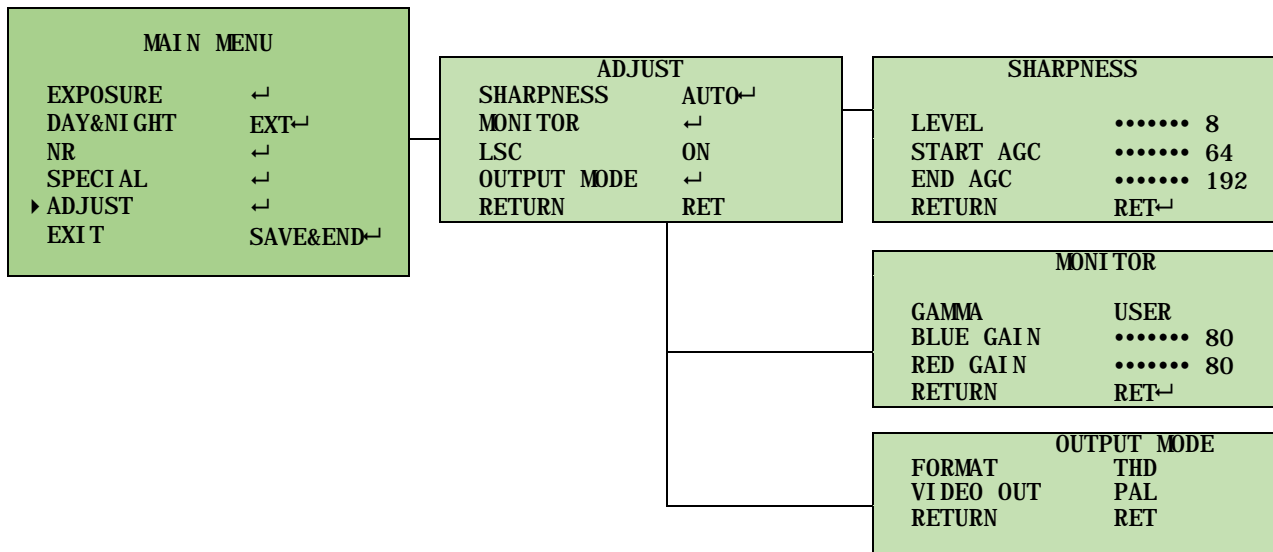
DPC: Live DPC: Off, **On**↵ AGC Level: 0 to 255
Level: 0 to 100

White DPC: Off, **On**↵ Pos/Size: Use up, down, right, left buttons to adjust both position and size of area.
Start: Close the iris then press enter button.
DPC View: Off, On
Level: 0 to 60
AGC: 0 to 14

Black DPC: Off / **On**↵ Pos/Size: Use up, down, right, left buttons to adjust both position and size of area.
Start: Press enter button.
DPC View: Off / On
Level: 0 to 100

LANGUAGE: ENG (English), CHN1 (Chinese 1), CHN2 (Chinese 2), GER (German), FRA (French), ITA (Italian), SPA (Spanish), POL (Polish), RUS (Russian), POR (Portuguese), NED (Dutch), TUR (Turkish), JPN(Japanese)

3.6 Adjust



SHARPNESS: Off, **Auto**↵ Level: 0 to 10
Start AGC: 0 to 255
End AGC: 0 to 255

MONITOR: LCD↵ Black Level: 0 to 60
Gamma: User, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.00
Blue Gain: 0 to 100
Red Gain: 0 to 100

LSC: Select the Lens Shading Compensation. Off, On

OUTPUT MODE: Select video format and scan mode.

FORMAT: Select THD, AHD or CVBS mode.

VIDEO OUT: Select NTSC or PAL.

NRT: Under AHD mode, user can enable NRT(Non Real Time) mode.

*NRT: frame rate is 15fps.

3.7 Exit

SAVE&END: Save and exit OSD menu.

RESET: Full factory reset

NOT SAVE: Exit the OSD without saving settings.

4 Appendix

4.1 Specification

Bullet Camera

| | | |
|------------------------|----------|--|
| Model | | MEB-64V2812M0A |
| IMAGE | | |
| Lens | | Varifocal 2.8~12mm F1.6 |
| Angle of View | | 94° ~ 26.5°(H) |
| Image Sensor | | 1/2.7" CMOS |
| Min. Illumination | | Color: 0.5Lux@F1.6, 50IRE BW: 0Lux@IR LED On |
| Scanning Mode | | Progressive Scan |
| Sync. System | | Internal |
| Day and Night Mode | | True D/N(Auto, Color, B&W) |
| Wide Dynamic Range | | Yes |
| Noise Reduction | | 2DNR |
| White Balance Control | | AWB, ATW, AWC, Indoor, Outdoor, Manual |
| Image Effect | | Mirror, V-Flip, Rotate, LSC(Lens Shading Correction) |
| Shutter Speed | | Auto, FLK ~ 1/50,000sec |
| S/N Ratio | | More than 50dB(AGC off) |
| IR Illuminator | Quantity | 30 SMD IR LEDs |
| | Distance | 20m |
| | | |
| Resolution | | 4MP(TVI, AHD) |
| Frame Rate | | 25/30fps(PAL/NTSC) |
| Video Output | | TVI, AHD, CVBS Selectable(OSD) |
| Video Mode | | NTSC, PAL Selectable(OSD) |
| FUNCTION | | |
| Defect Detection | | Live DPC, White DPC |
| Language | | ENG, CHN, GER, FRA, ITA, SPA, POL, RUS, POR, NED, TUR, JPN |
| OSD Setup | | Coaxial Control(UTC) |
| EXTERNAL IN/OUT | | |
| Power Input | | DC Jack |
| Video Output | | BNC Connector |
| ETC | | |
| Operating Humidity | | 0 ~ 96%RH(Non-condensing) |
| Operating Temperature | | -20°C ~ +50°C |
| Power Supply | | DC12V ± 10% |
| Power Consumption | | 5.3W |
| Dimensions | | 83.6(W) x 82.2(H) x 241(D)mm |
| Net Weight | | Approx 735g |
| Ingress Protection | | IP66 |

Turret Camera

| Model | | MED-54F0036MBA | MED-64V2812MBA |
|------------------------|----------|--|---|
| IMAGE | | | |
| Lens | | Fixed 3.6mm F2.0 | Varifocal 2.8~12mm F1.6 |
| Angle of View | | 76°(H) | 94° ~ 26.5°(H) |
| Image Sensor | | 1/2.7" CMOS | 1/2.7" CMOS |
| Min. Illumination | | Color: 0.5Lux@F2.0, 50IRE BW: 0Lux@IR LED On | Color: 0.5Lux@F1.6, 50IRE BW: 0Lux@IR LED On |
| Scanning Mode | | Progressive Scan | Progressive Scan |
| Sync. System | | Internal | Internal |
| Day and Night Mode | | True D/N(Auto, Color, B&W) | True D/N(Auto, Color, B&W) |
| Wide Dynamic Range | | Yes | Yes |
| Noise Reduction | | 2DNR | 2DNR |
| White Balance Control | | AWB, ATW, AWC, Indoor, Outdoor, Manual | AWB, ATW, AWC, Indoor, Outdoor, Manual |
| Image Effect | | Mirror, V-Flip, Rotate, LSC(Lens Shading Correction) | Mirror, V-Flip, Rotate, LSC(Lens Shading Correction) |
| Shutter Speed | | Auto, FLK ~ 1/50,000sec | Auto, FLK ~ 1/50,000sec |
| S/N Ratio | | More than 50dB(AGC off) | More than 50dB(AGC off) |
| IR Illuminator | Quantity | 18 SMD IR LEDs | 40 SMD IR LEDs |
| | Distance | 20m | 20m |
| VIDEO | | | |
| Resolution | | 4MP(TVI, AHD) | 4MP(TVI, AHD) |
| Frame Rate | | 25/30fps(PAL/NTSC) | 25/30fps(PAL/NTSC) |
| Video Output | | TVI, AHD, CVBS Selectable(OSD) | TVI, AHD, CVBS Selectable(OSD) |
| Video Mode | | NTSC, PAL Selectable(OSD) | NTSC, PAL Selectable(OSD) |
| FUNCTION | | | |
| Defect Detection | | Live DPC, White DPC | |
| Language | | ENG, CHN, GER, FRA, ITA, SPA, POL, RUS, POR, NED, TUR, JPN | |
| OSD Setup | | Coaxial Control(UTC) | Coaxial Control(UTC) |
| EXTERNAL IN/OUT | | | |
| Power Input | | DC Jack | DC Jack |
| Video Output | | BNC Connector | BNC Connector |
| ETC | | | |
| Operating Humidity | | 0 ~ 96%RH(Non-condensing) | 0 ~ 96%RH(Non-condensing) |
| Operating Temperature | | -20°C ~ +50°C | -20°C ~ +50°C |
| Power Supply | | DC12V ± 10% | DC12V ± 10% |
| Power Consumption | | 3.7W | 5.3W |
| Dimensions | | 90Ø x 85(H)mm | 135.4Ø x 127.7(H)mm |
| Net Weight | | Approx 360g | Approx 770g |
| Ingress Protection | | IP66 | IP66 |

※ Specifications are subject to change without notice.

4MP HD ANALOG CAMERA

