



EN

# User Manual

**1/3" HD Dome, Fixed, Day&Night,  
1920x1080, Infrared, 1,34mm, 360°,  
Indoor, 12VDC**

**TSD-52F0013P0A**

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## **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, rather send them for examination by 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 effects.
- 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 ever 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.
- 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:**

#### **Dome cameras**

- Do not attempt to remove the camera module from the dome.
- The camera may never be pointed at the Sun with the aperture open (this will destroy the sensor).
- All of the openings in the housing intended for installation must be closed and/or sealed.


- 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 bags in the housing.
- 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.
- The installer is responsible for the maintenance of the enclosure in accordance with the technical data, e.g. through the use of all the accompanying seals and O-rings, through sealing of the cable outlets with silicone and by laying the cables in such a way that no "water channel" results through the cable.
- 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.

### **WEEE (Waste Electrical & Electronic Equipment)**



#### **Correct Disposal of This Product**

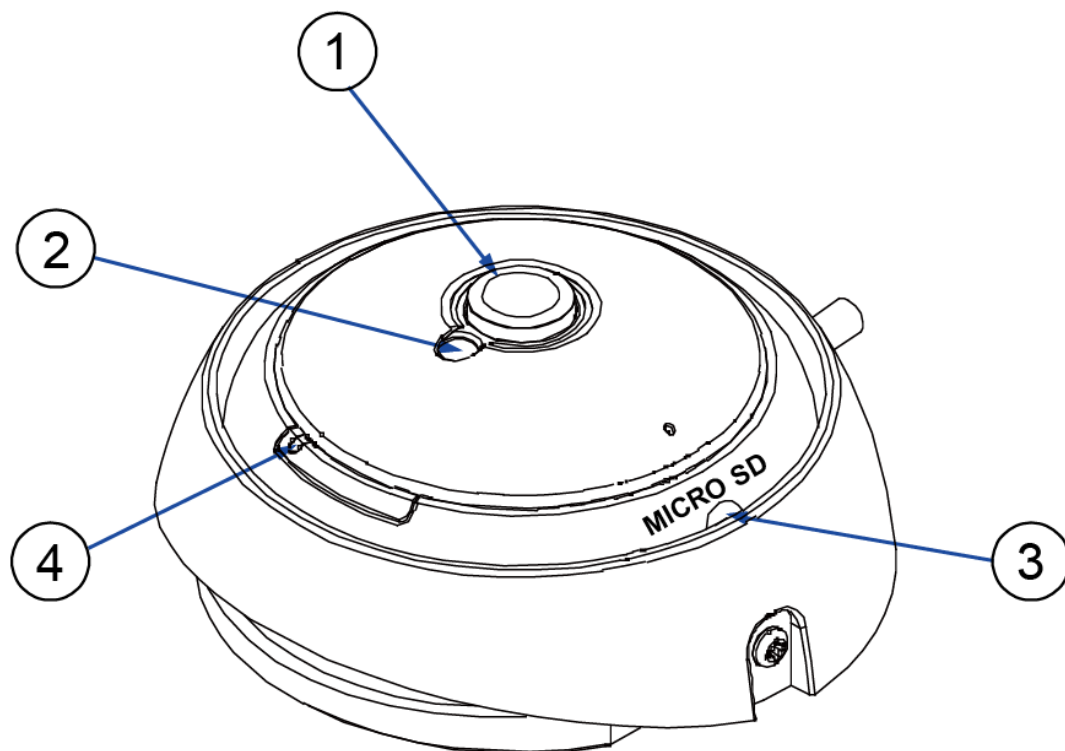
**(Applicable in the European Union and other European countries with separate collection systems)**

	<p>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.</p> <p>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.</p> <p>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.</p>
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## **1. Product Features**

- Full HD Image Quality and Details: A high-resolution megapixel sensor provides latency-free 1920x1080P Full HD resolution video to ensure that you won't miss a thing.
- Day/Night Surveillance: Integrated infrared LED illuminates darkness and provides a clear picture at night for a dependable, 24-hour surveillance solution.
- Direct fit to your existing HD-TVI DVR system: Just replacing your standard resolution analog system with the HD-TVI compliant products through coaxial cable, you can seamlessly upgrade your system to a HD analog system without additional cabling.
- 360° and assorted viewing modes.
- Cost-effective Solution: Greater field of view at one time makes it a cost-effective replacement for four separate 720P cameras.
- OSD Menu: Functional cable (in-line joystick) with easier adjustment.

## 2. The Overview



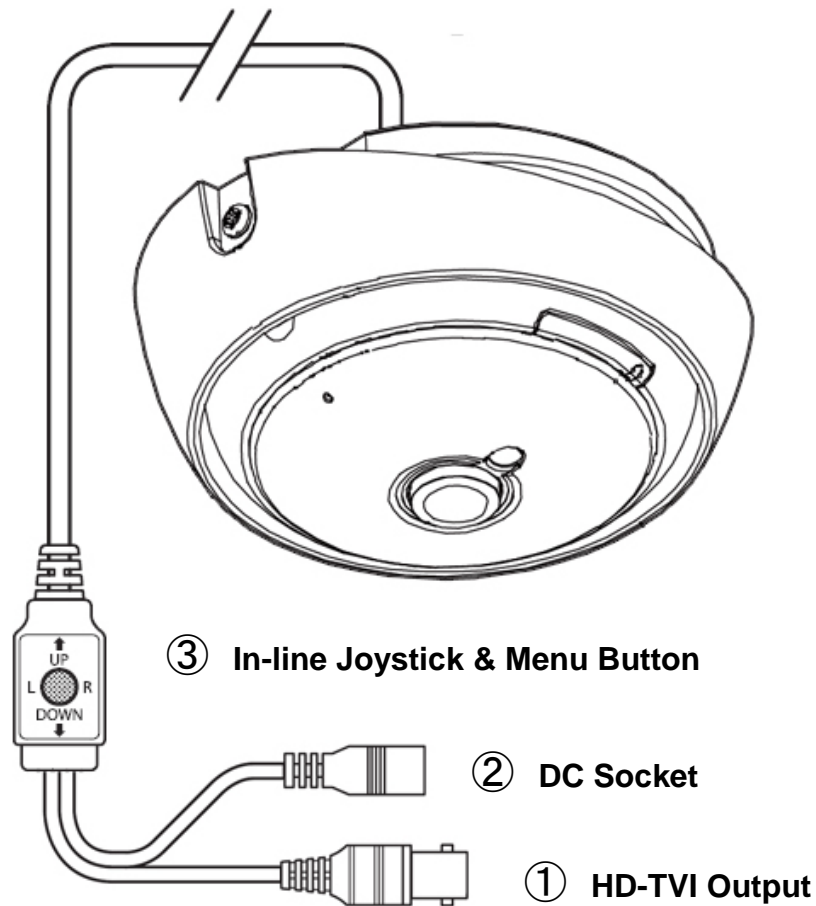
1. **Camera Lens.**
2. **Light Sensor:** Detects light levels and adjusts IR-LEDs accordingly.
3. **Micro SD Card Slot:** Insert a micro SD card for firmware upgrading.
4. **Power LED.**

### **3. Installation**

Please follow the instructions below to set up the system.

#### **3.1 Connections**

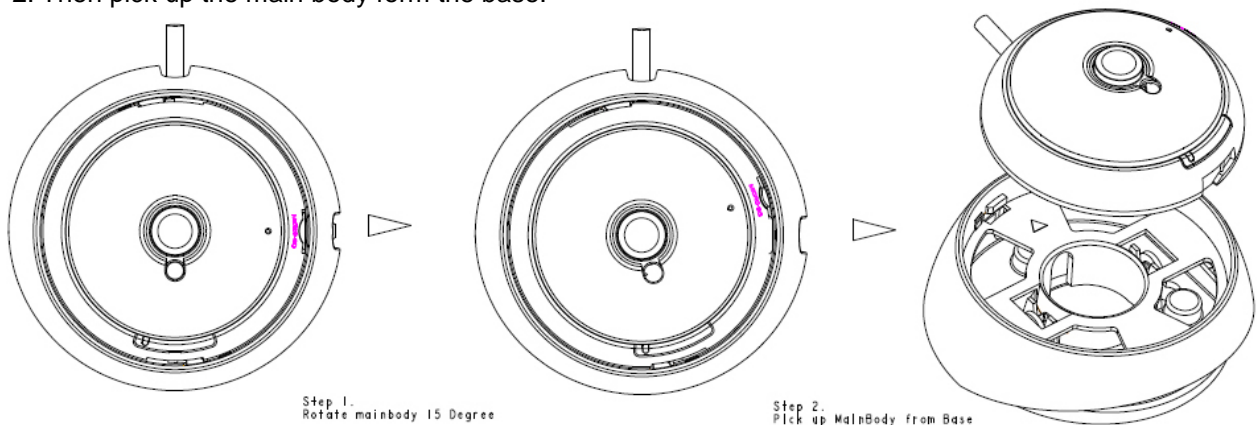
1. Connect the video output (①) from the camera to the DVR via BNC connector.
2. Connect the inlet (②) to an external power supply. Please connect with the 12V DC Power Supply.
3. The camera OSD menu is displayed by pressing the joystick in-line joystick (③)



#### **3.2 Separate the main body of the camera and the base**

To separate the main body of the camera and the base, please:

1. Rotate the main body 15 degrees in anticlockwise direction.
2. Then pick up the main body from the base.

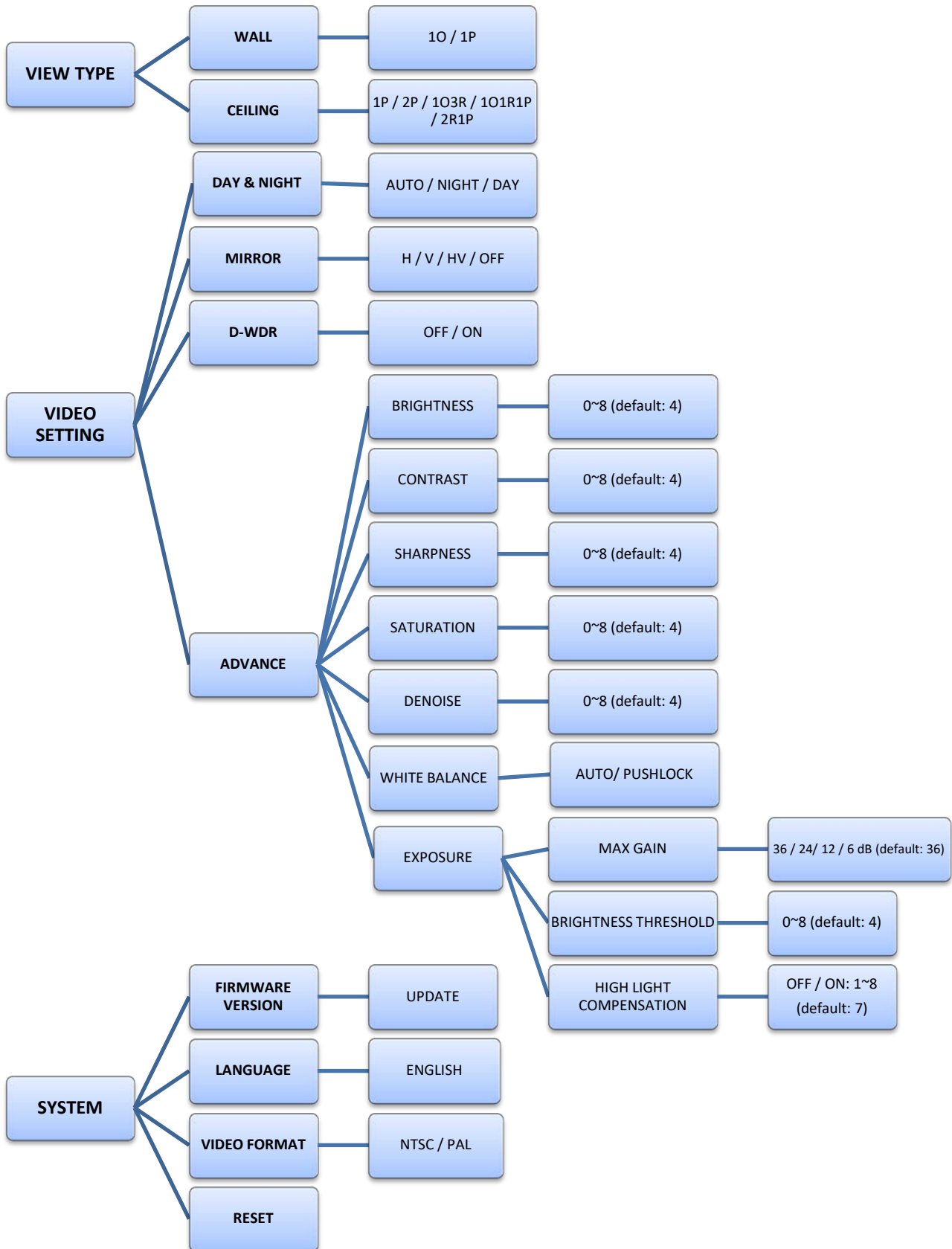


## 4. Menu Operation

This section shows you how to operate and manage the camera.

The operation interface of the different DVR may differ. Please refer to the actual operation interface.

**The OSD Menu Structure:**





## 4.1 Main Menu

There are 2 ways to enter the camera's OSD menu:

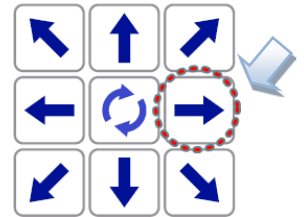
### By the In-line Joystick of the Camera:

1. The OSD menu will be displayed by pressing the joystick of the camera.
2. Press right direction to enter the OSD menu. Navigate through the menus and change parameters using the joystick via pressing the direction buttons.
3. To confirm (save and exit) your selection please press the center button again.

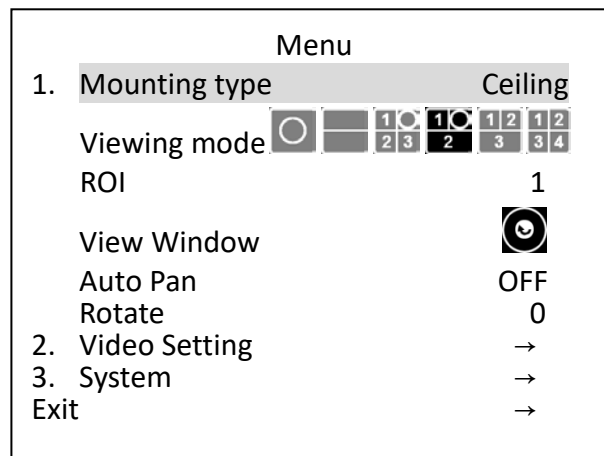


### By the Coax Control of the DVR:

1. Our camera features the coax telemetry. It enables you to instantly see on-screen the effects of any changes made.
2. Access the OSD menu via a DVR PTZ control panel.
3. Press the "→" (right direction) button to enter the OSD menu. Navigate through the menus and change parameters by pressing the direction buttons.
4. To confirm your selection please press the "→" (right direction) button again.



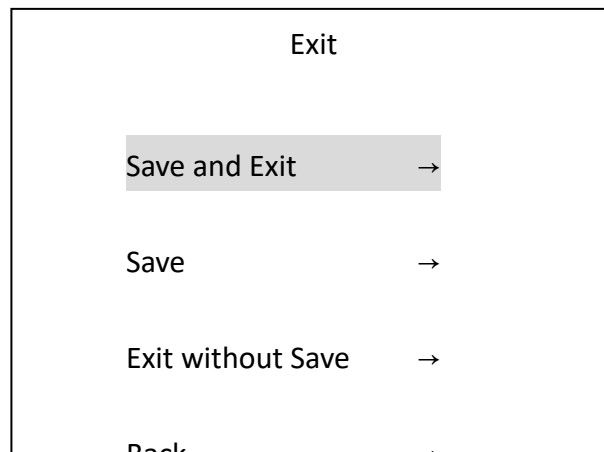
### The camera's OSD main menu:



### The Exit menu:

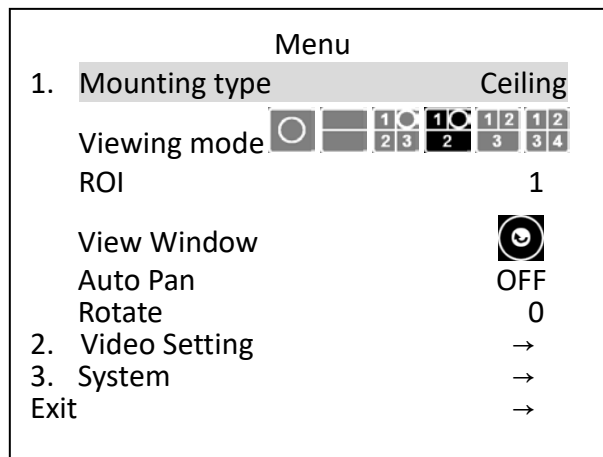
After changing any parameter, please remember to select the **Exit** item to enter the Exit menu.

Select the **Save and Exit** or **Save** item to change any configuration, and all the changes will only take effect after saving.



## 4.2 Video Type

The video types are adjustable from both **Wall** and **Ceiling** mounting positions.



1. **Viewing mode:** Select the multiple viewing modes as you need.



**1O:** One original fisheye view.



**2P:** Two panoramic views.



**1O3R:** One original fisheye view and three regional views.



**1O1R1P:** One original fisheye view, one regional view and one panoramic view.



**1P2R:** One panoramic and two regional views



**4R:** Four regional views.

2. **ROI:** Select the desired section of the viewing mode from 1~3/ 4.



3. **View Window:** Select to see the outer ( ) or inner ( ) boundary of ROI.

4. **Auto Pan:** The auto-panning function allows user to see the horizontal move automatically between the both ends of the ROI area.

5. **Speed:** Select the speed of the auto-panning function.

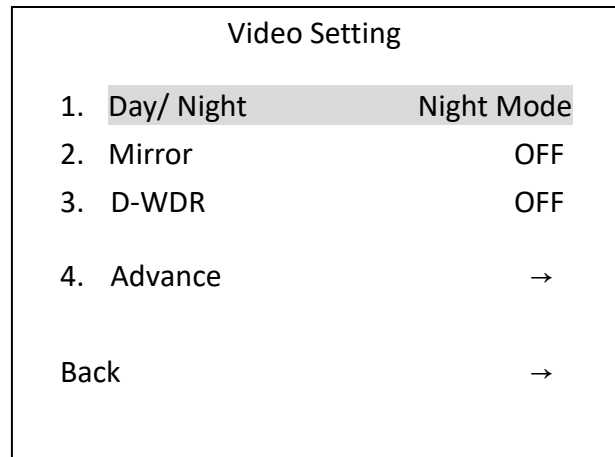
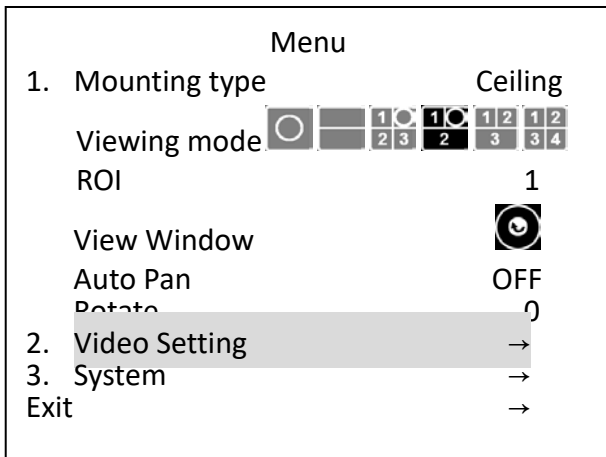
6. **Rotate:** Rotate the ROI area to see your desired direction of view.

### NOTE:

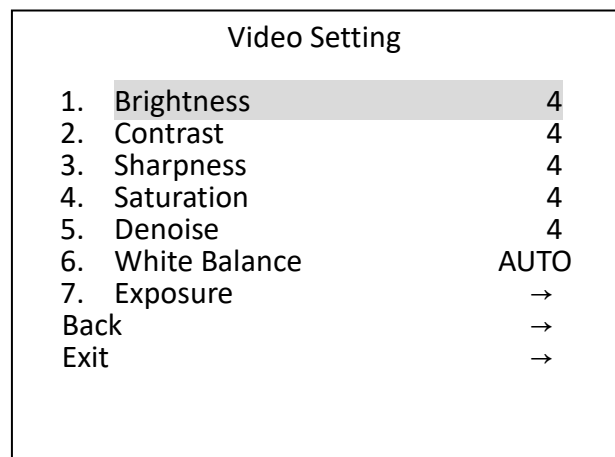
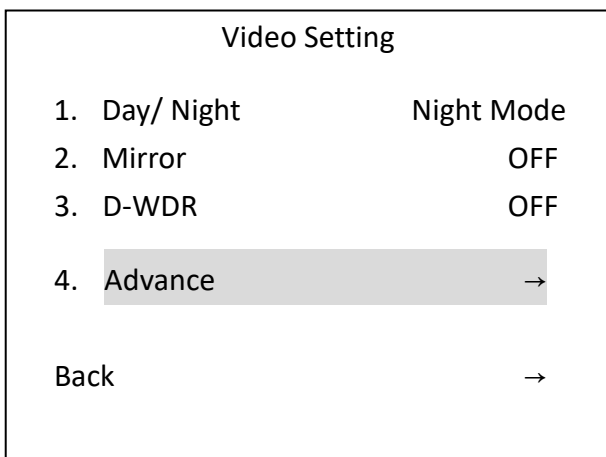
When the product is installed on a wall or ceiling, the device should be firmly fixed.

## 4.3 Video Setting

Configure the details of the video settings setup for your camera.



1. **Day/ Night:** There are three parameters available for day/night mode configuration. It can be set as **Automatic**, **Day Mode** or **Night Mode**.
  - (1) **Automatic:** The camera is capable of automatically switching from black and white mode (night) and color mode (day) regarding to the lightening conditions. It is the default mode.
  - (2) **Day (Color):** You can switch it to Day mode in normal lighting conditions.
  - (3) **Night (B/W):** You can switch the IR cut filter into Black and White mode to increase then lens sensitivity in low light conditions
2. **Mirror:**
  - (1) **OFF:** The default of mirror function is off.
  - (2) **H:** The video will flips 180 degrees in horizontal direction.
  - (3) **V:** The video will flips 180 degrees in vertical direction.
  - (4) **HV:** The video will flips 180 degrees both in horizontal and vertical direction.
3. **D-WDR:** The wide dynamic range (WDR) function helps the camera provide clear images even under back light circumstances. When there are both very bright and very dark areas simultaneously in the field of view, WDR balances the brightness level of the whole image and provide clear images with details.
4. **Advance:** Configure the details of the advanced video settings for your camera.



- (1) **Brightness:** An adjustable setting to compensate for backlit scenes.
- (2) **Contrast:** Contrast is the degree of difference between the darker and lighter parts of the image.

- (3) **Sharpness:** Set the value to automatically adjust the sharpness of the image to get a clear image. The greater the value is, the stronger the effect will be.
- (4) **Saturation:** Saturation indicates the brightness of the color. The higher the saturation, the brighter the color is.
- (5) **Denoise:** The Denoise (noise reduction) function is the process of removing noise from signals. The greater the value is, the less the noise will be in the low illumination environment.
- (6) **White Balance:** White balance is the white rendition function of the camera to adjust the color temperature according to the environment automatically. White balance is the process of removing unnatural shades of color, so that objects which appear white in reality are rendered white in the images. Select your options from **Auto** and **Push Lock**.
- Auto:** This mode is typically used for outdoor applications or where variable lighting conditions exist.
- PushLock:** Select PushLock o to calibrate the white balance for the current scene. This mode is typically used for scenes with constant lighting conditions.
- (7) **Exposure:** AE mode defines the priority of iris, shutter and gain while the camera adjusting the brightness of the live view. You can change the mode on Exposure submenu.

Exposure		
1.	Exposure Mode	Auto
2.	Max Gain	24dB
3.	Brightness Threshold	4
4.	High Light Compensation	OFF
	Back	→
	Exit	→

- I. **Exposure Mode:**

**Auto:** Automatic exposure mode.

**Indoor:** The optimum exposure setting is pre-programmed for the indoor environment.

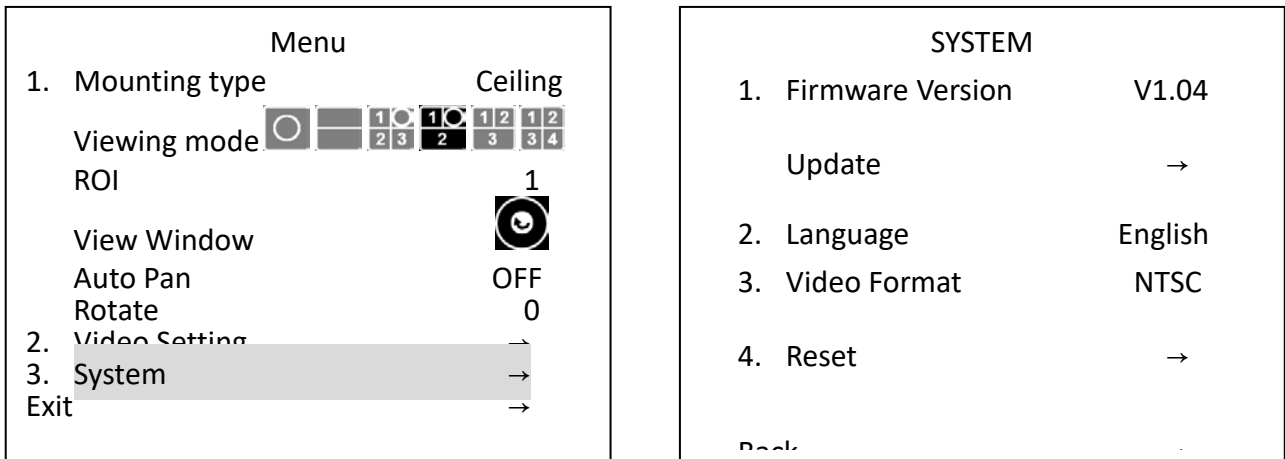
**Outdoor:** The optimum exposure setting is pre-programmed for the outdoor environment.
- II. **Max Gain:** The value of gain indicates the amplification degree of the original image signal.
- III. **Brightness Threshold:** Set the brightness value of exposure.
- iv. **Highlight Compensation:** Highlight compensation is a feature that came out of necessity due to overexposure from strong light sources like headlights, torch light or spotlights. The default value is off.

#### NOTE:

The highlight compensation and brightness threshold are connected. Before you configure the brightness threshold, please enable the highlight compensation first.

# 4.4 System

Displays all the information about your device.



1. **Firmware Version and Update:** Shows the firmware version here.
2. **Language:** The OSD display language is English.
3. **Video Format:** The video system is NTSC/ PAL (by region).
4. **Reset:** Enter the submenu to reload the factory default setting. Select **Yes** to continue.

## 4.4.1 Updating System Firmware

If the system firmware of the camera needs to be upgraded, please take the following steps to safely process it.

**NOTE:**

Before carrying out the following procedures, please ensure the SD card is working and the file of the system firmware is intact.

1. Copy the file of **UPDATE.BIN** to the **SD card** directory.
2. Insert the SD card into the camera.
3. Enter the **Update** submenu of the System page.
4. The Power LED will fast blinking red while this update process is running, please do not power off the camera.
5. The Power LED will become solid red when this update process is finished, then remove the SD card from the camera.
6. Verify the version of the system software.

**NOTE:**

- You must perform Steps 1 on a PC.
- Ensure you are using the correct UPDATE.BIN file in Step 1, otherwise the camera will not work properly.
- If the power of the camera is suddenly lost in step 4, please remove the SD card first and turn on the

camera next to test its operation. If the camera remains working normally, please go back to step 3; otherwise, please inform your technical support.

- Make sure that the SD card is inserted in a correct position in step 2, or the camera will suffer permanent physical damage.
- Do not interrupt the process when the unit is updating, or it will crash.

## **5. Using a Web Brower**

This section provides instructions for remotely accessing the camera using a Web browser, such as the Microsoft Internet Explorer.

### **NOTE:**

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Your DVR must be configured with a network connection to provide this access.

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### **5.1 Connecting to the Camera**

Start your Web browser (for example, the Microsoft Internet Explorer) and then follow these steps to connect to the DVR:

1. Click on the URL entry box near the top of the Web browser window.
2. Enter the URL (address) of the DVR into the URL block, and press the Enter button to enter the login page. Prepare the administrative User Name and Password respectively. Also, you can login with any User name and password that has accessing permission for remote accessing.
3. Enter the user name. Then fill in the password. Both the user name and password must be correct.
4. Enter the home page of the DVR.
5. Select the fisheye camera then press the right button into the camera OSD menu.

### **5.2 Browsing Images from the Camera**

After your PC was successfully connected to the DVR, the live images from the DVR will be displayed on the home page.

The operation of Web browser is same as in the local DVR.

## 6. Specifications

Model	TSD-52F0013P0A HD-TVI Analog 360° Wide Angle View Camera	
Camera	Lens	Fixed wide angle lens.
	Image Sensor	3MP 1/3" progressive COMS sensor.
Image	Resolution	1920x1080.
	Angle of View	360°
	Frame Rate	25fps/ 30fps
	Signal System	PAL/ NTSC
	Viewing Type	Ceiling: 1P/ 2P/ 1O3R/ 1O1R1P/ 2R1P/ 4R. Wall: 1O/ 1P.
	Video Settings	Brightness/ Contrast/ Sharpness/ Saturation/ Denoise/ Mirror/ D-WDR/ Exposure/ White Balance
Indicator	Power LED	Yes
	Status LED	Solid red: power on. Blinking red: firmware upgrading.
Day & Night	IR LED	Yes
	IR Cut Filter	Yes
	Light Sensor	Yes
	Modes	Auto/ Day/ Night
UTC	Protocol	Supports Pelco C protocol
General	Power Supply	12VDC, 1.5A
	Power Consumption	Max 3.2W
	Operating Condition	0°C~40°C (32°F~104°F)
	Coaxial Cable	3C/ 5C cable Transmission Distance: Up to 500 meters.
	Firmware	Via micro SD card <b>(for firmware upgrade only).</b>
	Language	English
	Dimension	77x33.5mm without bracket / 97x48.3mm with bracket
	Package Weight	345 grams
	Accessories	Quick Installation Guide. Mounting hardware kit. Mount.

**\*\*Design and specifications are subject to change without notice.**





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