HIKVISION

High-definition Vandal-proof Dome Camera

User Manual

UD.6L0201D0076A01

www.hikvision.com

Thank you for purchasing our product. If there are any questions, or requests, please do not hesitate to contact the dealer.

This manual applies to the following modes:

Model	Description
DS-2CC5281P (N)-VP	600TVL 1/3”CCD Day/Night vari-focal weather-proof vandal-proof dome camera
DS-2CC5281P (N)-AVPIR2	600TVL 1/3”CCD IR vari-focal weather-proof vandal-proof dome camera
DS-2CC52A1P (N)-VP	700TVL 1/3”CCD Day/Night vari-focal weather-proof vandal-proof dome camera
DS-2CC52A1P (N)-AVPIR2	700TVL 1/3”CCD IR vari-focal weather-proof vandal-proof dome camera

This manual may contain several technical incorrect places or printing errors, and the content is subject to change without notice. The updates will be added to the new version of this manual. We will readily improve or update the products or procedures described in the manual.

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Regulatory Information

FCC Information

FCC compliance: This equipment has been tested and found to comply with the limits for 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.

FCC Conditions

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.

2. This device must accept any interference received, including interference that may cause undesired operation.

EU Conformity Statement

CE

This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the Low Voltage Directive 2006/95/EC, the EMC Directive 2004/108/EC.

2002/96/EC (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: www.recyclethis.info.

2006/66/EC (battery directive): This product contains a battery that cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). For proper recycling, return the battery to your supplier or to a designated collection point. For more information see: www.recyclethis.info.

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1 Introduction

1.1 Product Features

This series of camera adopts high-sensitive sensor and advanced circuit board design technology. It possesses of high resolution, low distortion, and low noise features, etc. It is extremely suitable for surveillance system and image process system.

The main features are as follows:

- Adopt high-performance SONY CCD, up to 700TVL resolution, providing high definition and clear image
- OSD menu, which enables user to configure the detailed parameters
- Support Digital Wide Dynamic Range (D-WDR) for backlighting surveillance
- Auto-white balance with high color rendition
- High Signal Noise Ratio (SNR), which brings clear and high-quality image
- Auto electronic shutter control to adapt to the different surveillance environments
- Auto gain control, adaptive brightness
- Auto-iris
- Support up to 8 configurable privacy masks to ensure your privacy

- Advanced 3-axis design allows this dome camera to be adjusted 0-355° horizontally and 0-75° vertically to meet different mounting requirements

1.2 Overview

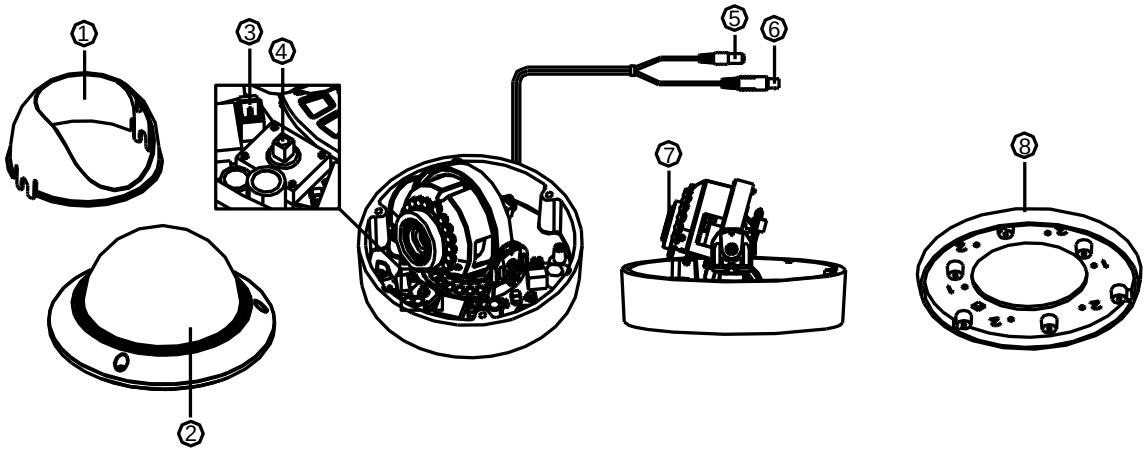

Figure 1-1 Overview

1 Black Liner	5 Power Cable
2 Lower Dome	6 Video Cable
3 AUX Interface	7 Lens
4 Menu Button	8 Adapter Ring

2 Installation

Before you start:

Please make sure that the device in the package is in good condition and all the assembly parts are included.

This series of camera support ceiling mounting, ceiling mounting with a gang box, wall mounting and side conduit mounting.

2.1 Ceiling Mounting

Note:

Please make sure that the ceiling is strong enough to withstand three times the weight of the camera.

Steps:

1. Attach the drill template (supplied) to the place where you want to fix the camera.
2. Drill 3 screw holes and one cable hole (if you want to route the cable through the mounting base) according to the drill template.

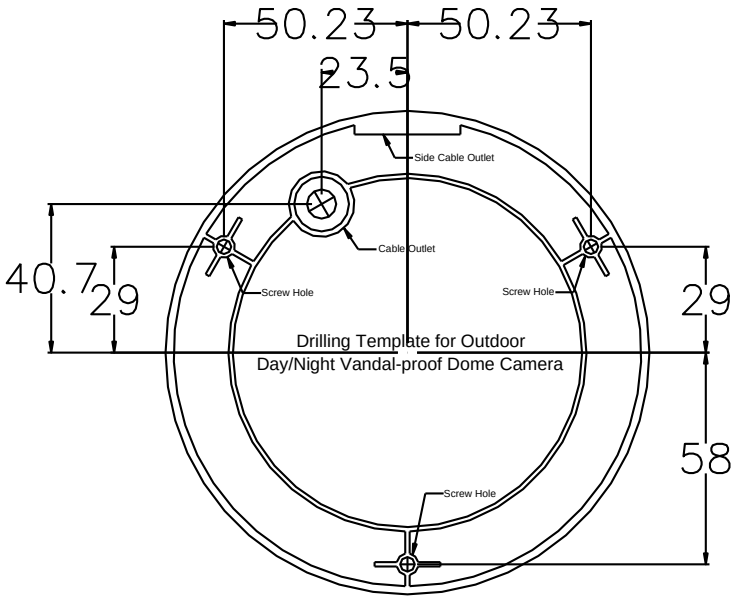

Figure 2-1 The Drill Template

3. Loosen the screws with the supplied L-shape screwdriver to open the lower dome.
4. Remove the black liner.

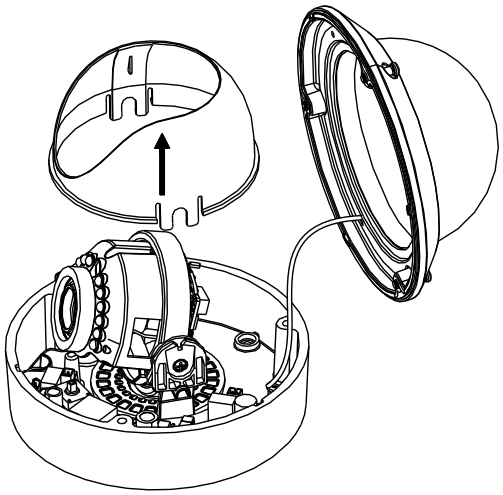

Figure 2-2 Remove the Black Liner

Note:

If you want to install the camera to the cement ceiling, you need to screw 3 expansion screws into the 3 drilled holes first.

5. Route the cables and connect the power supply and output the video on a monitor.
6. Secure the dome camera to the ceiling with 3 self-tapping screws. Refer to Figure 2-3.

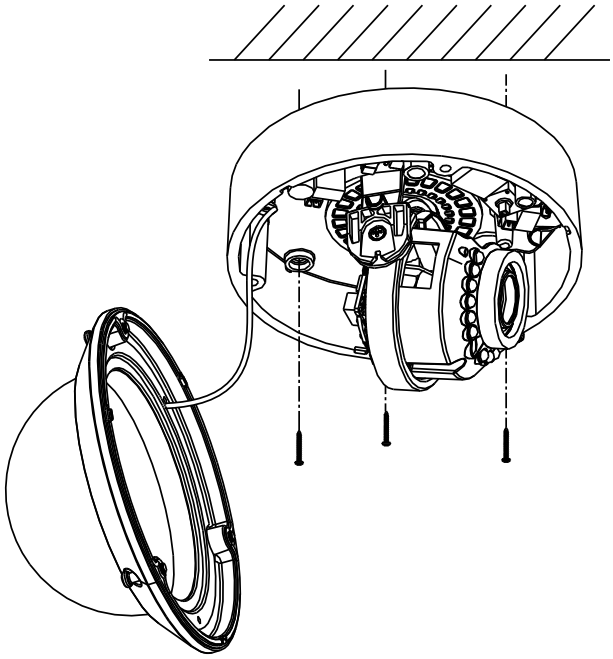

Figure 2-3 Secure the Camera to the Ceiling

7. Adjust the Lens.
   1). View the camera image via the monitor.
   2). Loosen the lock screw besides the lens
   3). Rotate the panning table to adjust the panning position of the camera. 0 to 355° is adjustable.

4). Rotate the tilting table to adjust the tilting position of the camera. 0 to 75° is adjustable.

5). Rotate the lens to adjust the azimuth angle of the image. 0 to 355° is adjustable.

6). Tighten the lock screw.

7). Move the focus lever and zoom lever to adjust the focus and the zoom.

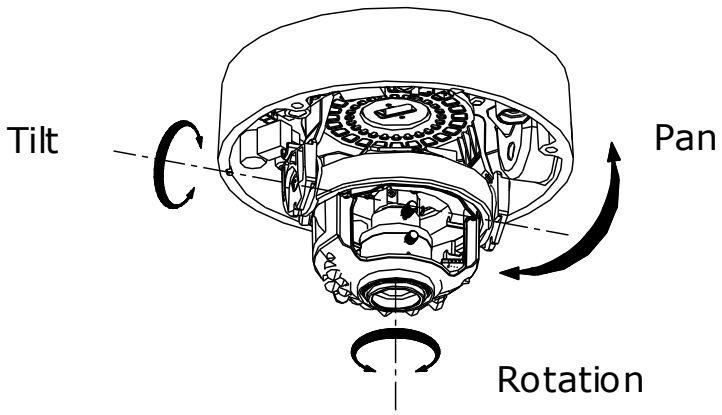

Figure 2-4 Lens Adjustment

8. Attach the black liner back to the camera.
9. Attach the lower dome back to the camera and secure it with the screws.

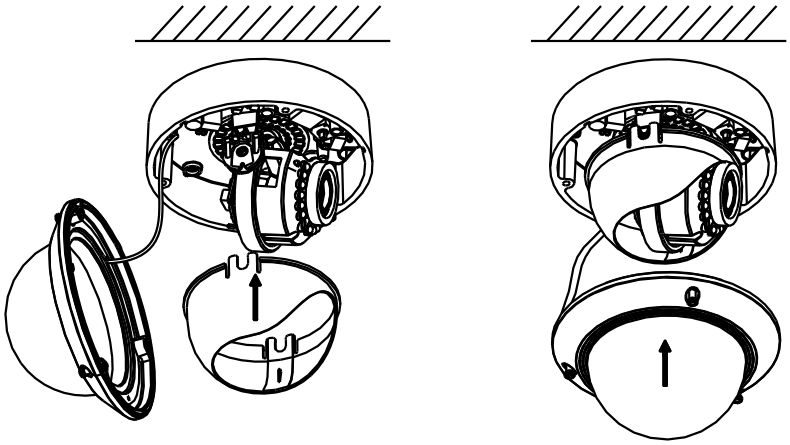

Figure 2-5 Install the Black Liner and the Lower Dome

10. Remove the protection film softly to complete the installation.

Note:

Remove the protection film after the installation is completed in case of the image problem caused by the scrape of the lower dome.

2.2 Ceiling Mounting with a gang box

Steps:

1. Secure the adapter ring to the gang box.

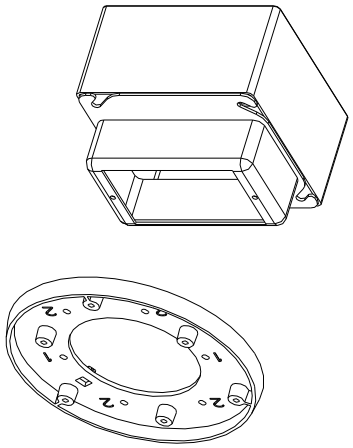

Figure 2-6 Secure the Adapter Ring

2. Loosen the screws to open the lower dome.
3. Remove the black liner.

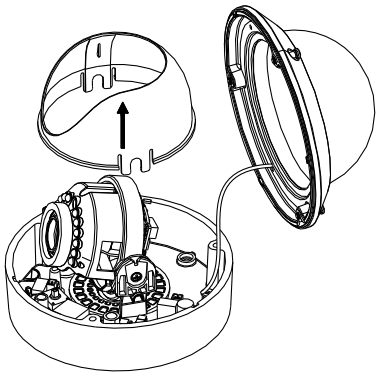

Figure 2-7 Remove the Black Liner

4. Route the cables and connect the power supply and output the video on a monitor
5. Secure the camera to the adapter ring with the screws.

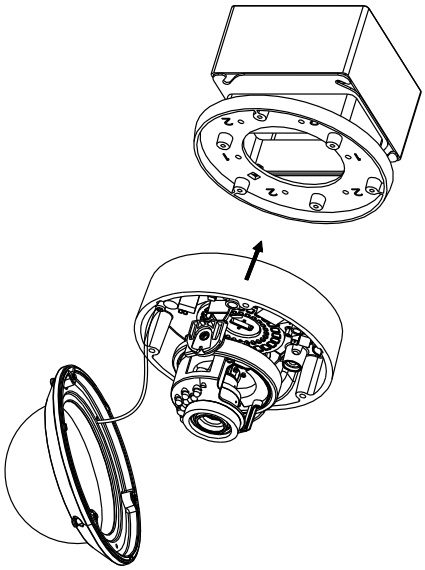

Figure 2-8 Install the Camera

6. Adjust the lens.
   1). View the camera image via the monitor.
   2). Loosen the lock screw besides the lens
   3). Rotate the panning table to adjust the panning position of the camera. 0 to 355° is adjustable.
   4). Rotate the tilting table to adjust the tilting position of the camera. 0 to 75° is adjustable.
   5). Rotate the lens to adjust the azimuth angle of the image. 0 to 355° is adjustable.
   6). Tighten the lock screw.
   7). Move the focus lever and zoom lever to adjust the focus and the zoom.
7. Attach the black liner back to the camera.

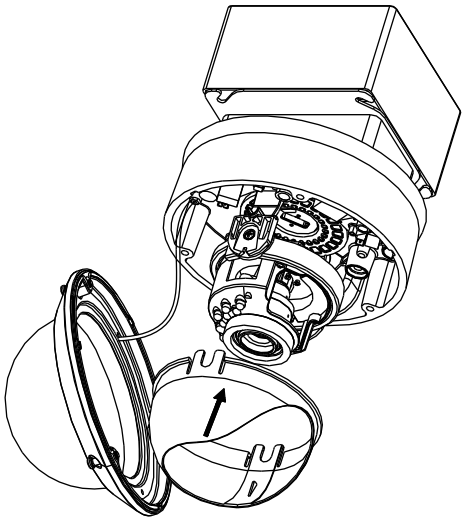

Figure 2-9 Attach the Black Liner

8. Attach the lower dome back to the camera and secure it with the screws.

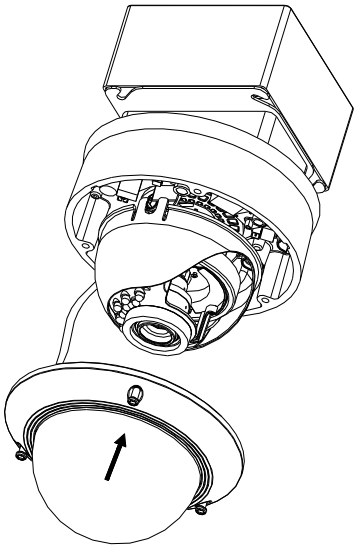

Figure 2-10 Install the Lower Dome

9. Remove the protection film softly to complete the installation.

Note:

Remove the protection film after the installation is completed in case of the image problem caused by the scrape of the lower dome.

2.3 Wall Mounting

Note:

Please make sure that the wall is strong enough to withstand three times the weight of the camera.

Steps:

1. Drill four expansion screw holes on the wall.
2. Secure the mount to the wall with the expansion screws.
3. Insert the adapter ring to the mount.

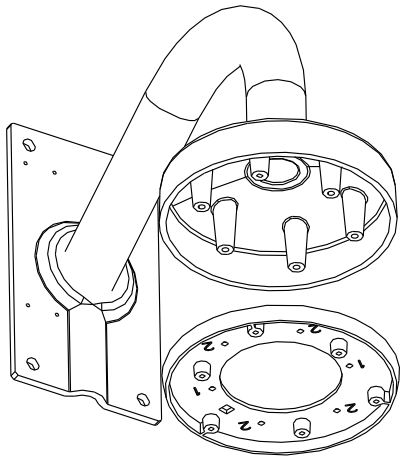

Figure 2-11 Install the Mount and the Adapter Ring

4. Loosen the screws to open the lower dome.
5. Remove the black liner.
6. Secure the camera to the adapter ring.

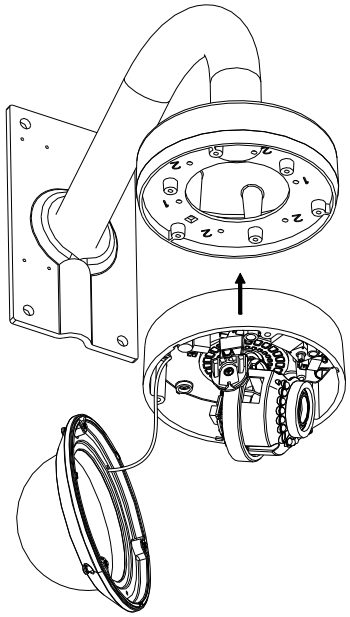

Figure 2-12 Install the Camera

7. Route the cables and connect the power supply and output the video on a monitor.
8. Adjust the Lens.
   1). View the camera image via the monitor.
   2). Loosen the lock screw besides the lens
   3). Rotate the panning table to adjust the panning position of the camera. 0 to 355° is adjustable.
   4). Rotate the tilting table to adjust the tilting position of the camera. 0 to 75° is adjustable.
   5). Rotate the lens to adjust the azimuth angle of the image. 0 to 355° is adjustable.
   6). Tighten the lock screw.

7). Move the focus lever and zoom lever to adjust the focus and the zoom.

9. Attach the black liner back to the camera.

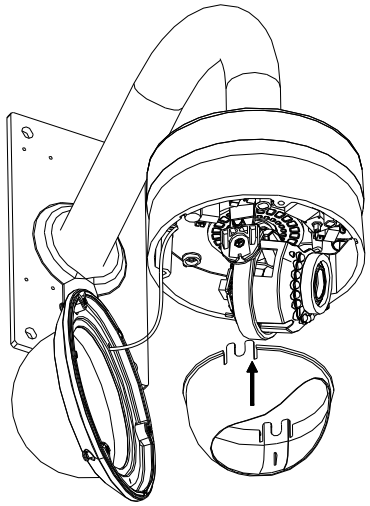

Figure 2-13 Install the Black Liner

10. Attach the lower dome back to the camera and secure it with the screws.

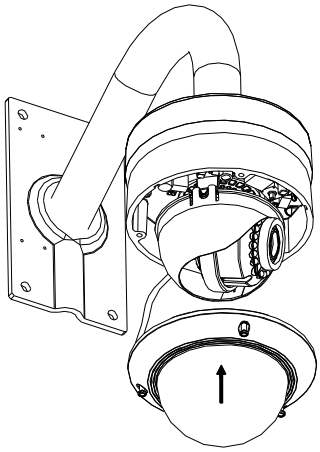

Figure 2-14 Install the Lower Dome

11. Remove the protection film softly to complete the installation.

Note:

Remove the protection film after the installation is completed in case of the image problem caused by the scrape of the lower dome.

2.4 Side Conduit Cabling

There are two cabling methods selectable for this series of camera. One is to route the cable through the ceiling, and the other is to route the cable though the side conduit.

Steps:

1. Unscrew the water-proof plug shown below.

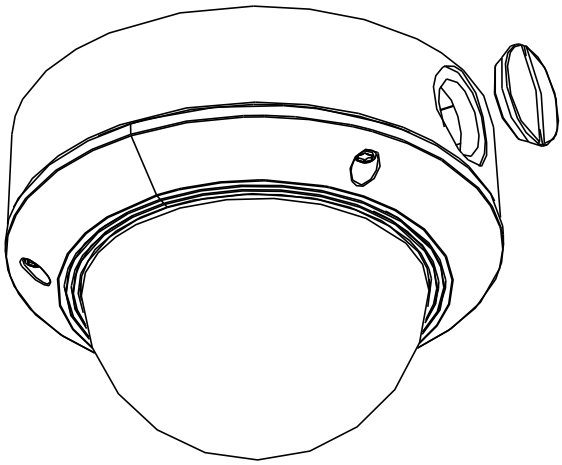

Figure 2-15 Unscrew the Water-proof Plug

2. Route the power/video cables through the water-proof plug to the conduit.

3. Connect the corresponding power/video cables.
4. Screw the conduit to the water-proof plug to complete the installation.

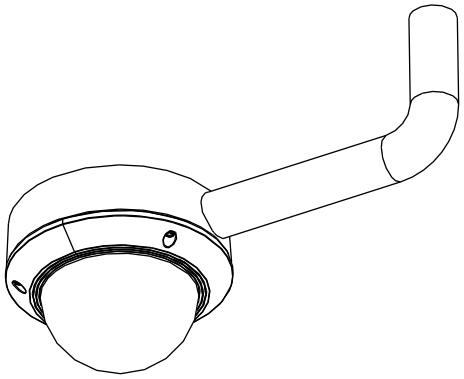

Figure 2-16 Connect the Conduit to the Camera

2.5 Wiring

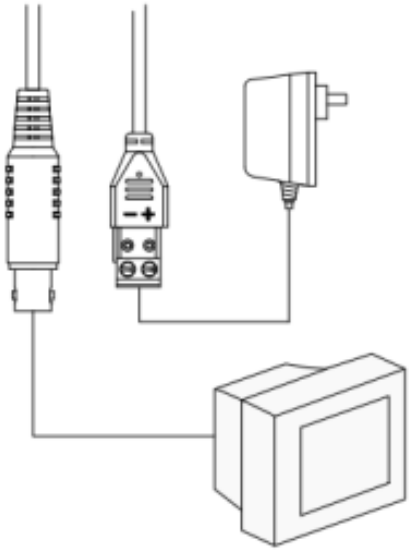

Figure 2-17 The Power/Video Cable (Two-pins Power Interface)

Notes:

- Please make sure that the power adapter can match with the camera.
- The standard power supply of the camera is 12V DC or 24V AC (Please refer to technical specifications for more details).

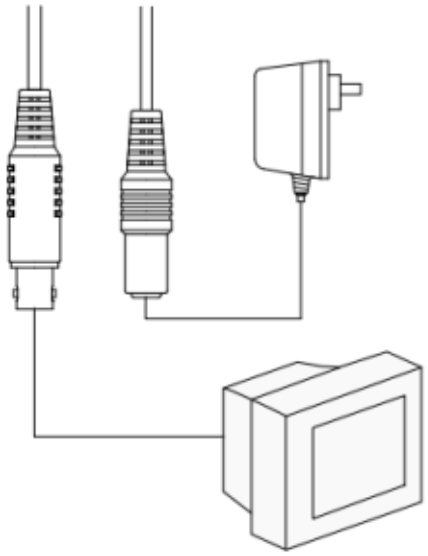

Figure 2-18 The Power/Video Cable

Notes:

- Please make sure that the power adapter can match with the camera.
- The standard power supply of the camera is 12V DC (Please refer to technical specifications for more details).

3 Menu Operations

3.1 Menu Description

This series of camera supports OSD menu operation, and the menu is listed below:

Main Menu	**LENS**	AUTO, MANUAL
	SHUTTER/AGC	AUTO, MANUAL
	WHITE BAL	ATW, PUSH, PUSH LOCK, USER1, USER2, ANTI CR, MANUAL
	BACKLIGHT	BLC,HLC, OFF
	PICT ADJUST	MIRROR, BRIGHTNESS, CONTRAST, SHARPNESS, HUE, GAIN
	ATR	LUMINANCE, CONTRAST
	MOTION DET	DETECT SENSE, BLOCK DISP, MONITOR AREA, AREA SEL
	PRIVACY	AREA SEL, COLOR, TRANSP, MOSAIC
	DAY/NIGHT	AUTO, COLOR, B/W, EXT 1/EXT2
	NR	Y LEVEL
	CAMERA ID	
	SYNC	INT
	LANGUAGE	English/Chinese/Japanese/Fre

		nch/Russian/ Portuguese/ Spanish/ German
	CAMERA RESET	
	EXIT/SAVE ALL	

3.2 Lens Settings

Move the cursor to LENS, and then set the menu button left/right to select **MANUAL** or **AUTO**.

- Selecting MANUAL mode, the iris is set at the maximum value, and it is not configurable.
- Selecting AUTO mode, press the menu button to enter the AUTO IRIS submenu.

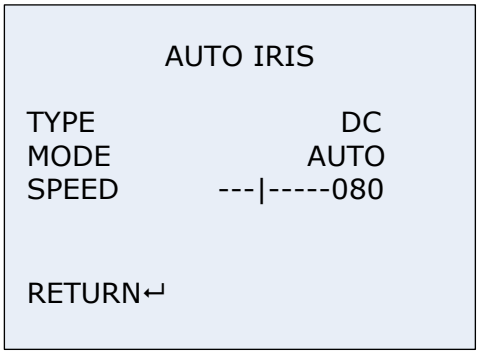

Figure 3-1 AUTO IRIS

AUTO IRIS function can automatically adjust the iris according to the changing light conditions.

TYPE: It supports Direct Current Driven (**DC**). There is a drive circuit in the camera which can directly output DC control voltage to control electronic motor.

MODE: AUTO, **OPEN**, and **CLOSE** are selectable for iris mode. Selecting auto means the iris is adjusted automatically; selecting open means the iris is fully open; and selecting close mean the iris is totally closed.

SPEED: Adjust the iris speed. The higher the value is, the faster the speed of the auto iris is. The value ranges from 0 to 255.

Note:

It is recommended that you adjust the iris speed only when the iris vibrates.

3.3 Shutter/AGC Setting

SHUTTER/AGC allows you to adjust the way the system balances **SHUTTER** and **AGC** settings in different light conditions. You can set the different shutter and AGC value according to the luminance level of the situation.

You can choose **MANUAL** or **AUTO** mode for the shutter and AGC.

Note:

On the lens setting interface, if you choose lens type as **AUTO**, the **AUTO IRIS** can also be adjusted to change the brightness of the image; otherwise only shutter and AGC are adjustable.

In the **AUTO SETUP** submenu (Figure 3-2), you can adjust the **BRIGHTNESS** value. The system will automatically adjust the **SHUTTER**, **AGC** and **AUTO IRIS** settings according to the **BRIGHTNESS** value. And the system can define and recognize the luminance level automatically.

In **HIGH LUMINANCE** condition, the **SHUTTER** speed and **AUTO IRIS** level is modified automatically according to the **BRIGHTNESS** value.

MODE	**SHUT+AUTO IRIS** and **AUTO IRIS** are available when the **LENS** type is **AUTO IRIS**. When the **LENS** type is Manual, the iris is fixed and only **SHUT** option is provided.
BRIGHTNESS	The value ranges from 0 to 255.

In **LOW LUMINANCE** condition, the **AGC** can be adjusted automatically according to the **BRIGHTNESS** value.

MODE	Only **AGC** is available.
BRIGHTNESS	×1.00, ×0.75, ×0.50 and ×0.25 are selectable.

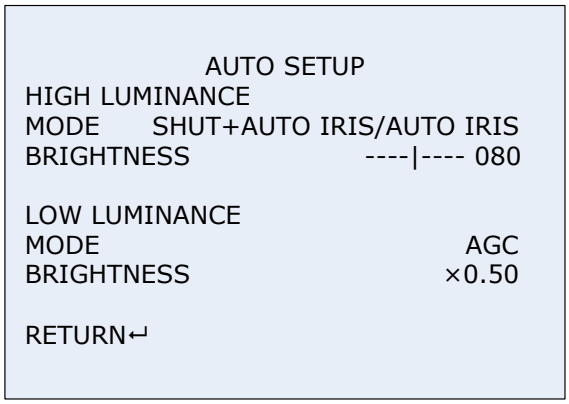

Figure 3-2 AUTO SETUP

In the **MANUAL SETUP** submenu, it only supports **SHUT+AGC**. You can adjust the **SHUTTER** speed and **AGC** value to maintain the brightness level of the camera.

SHUTTER Manually set the shutter speed. 1/50, 1/120, 1/250, 1/500, 1/1k, 1/2k, 1/4k, and 1/10k are selectable for PAL standard.

1/60, 1/100, 1/250, 1/500, 1/1k, 1/4k, and 1/10k are selectable for NTSC standard.

AGC 6.00, 12.00, 18.00, 24.00, 30.00, 36.00, 42.00, and 44.80 are selectable for the AGC value.

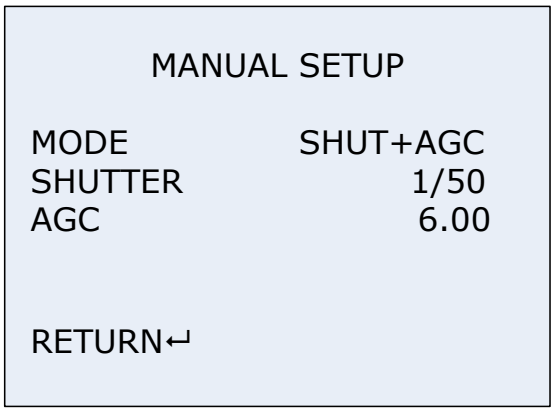

Figure 3-3 MANUAL SETUP

3.4 White Balance Setting

Move the cursor to the **White Balance**, and select **ATW**, **PUSH**, **PUSH LOCK**, **USER1**, **USER2**, **ANTI CR** and **MANUAL** by setting the menu button to left/right.

- ATW(Auto Tracking White Balance)

In ATW mode, white balance is continuously being adjusted in real-time according to the color temperature of the scene illumination.

SPEED	The speed can be set from 0 to 255.
DELAY CNT	It's the response time when the color temperature changes.
ATW FRAME	It's used to adjust the image size of the ATW image.
ENVIRONMENT	INDOOR and OUTDOOR are selectable.

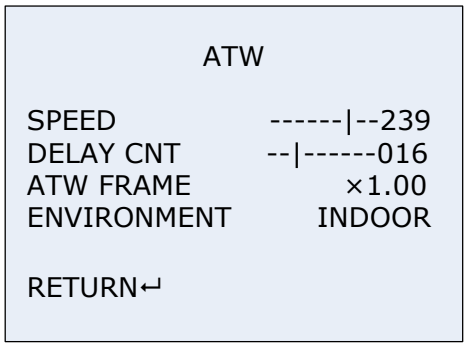

Figure 3-4 ATW

- USER 1/USER2

USER 1 is the indoor mode and it is suitable for the indoor environment. B-Gain and R-Gain are adjustable.

USER 2 is suitable for the fluorescent light environment. B-Gain and R-Gain are adjustable.

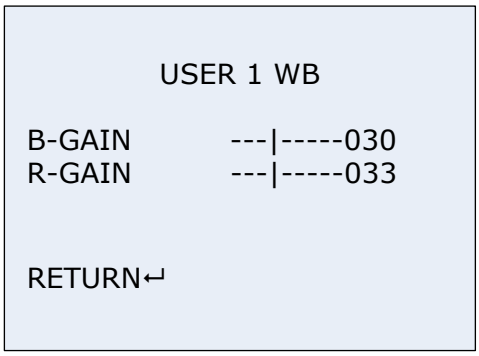

Figure 3-5 USER 1 WB

- MANUAL

Selecting **MANUAL** and pressing the button to enter the **MANUAL WB** submenu. Customize the **LEVEL** value on your demand.

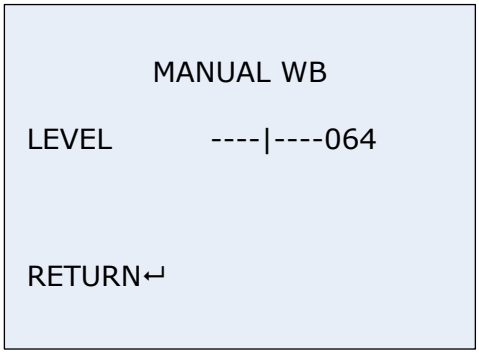

Figure 3-6 MANUAL WB

- PUSH

In the **PUSH** mode, the viewed image retains color balance automatically. The color in the image balances according to the color temperature.

- PUSH LOCK

In the **PUSH LOCK** mode, you can select a scene, and manually adjust the white balance, and then lock the color temperature. It is suitable for the environment which the color temperature slightly changes.

- ANTI CR (Anti Color Rolling)

In **ANTI CR** mode, the system suppresses the color rolling under the fluorescent light environment.

3.5 Backlight Setting

Move the cursor to the **BLC** and select **OFF, BLC** or **HLC** by pressing left/right button.

- **BLC (Backlight Compensation)**

If there's a strong backlight, the object in front of the backlight appears silhouetted or dark. **BLC** can correct the exposure of the subject. But the backlight environment is overexposed.

- **HLC(Highlight Compensation)**

HLC masks strong light sources that usually flare across a scene. This makes it possible to see the detail of the image that would normally be hidden.

3.6 Picture Adjust Setting

Move the cursor to **PICT ADJUST**. Press the confirm button to enter the **PICT ADJUST** submenu. **MIRROR**, **BRIGHTNESS**, **CONTRAST**, **SHARPNESS**, **HUE**, and **GAIN** are adjustable.

- MIRROR

If you turn the **MIRROR** function on, the image will be flipped horizontally. It looks like the image in the mirror.

- BRIGHTNESS

The brightness is adjustable from 0 to 255.

- CONTRAST

This feature enhances the difference in color and light between parts of an image. The value ranges from 0 to 255.

- SHARPNESS

SHARPNESS describes the clarity of detail in the image. The value ranges from 0 to 255.

- HUE

Adjust this feature to change the color of the image. The value ranges from 0 to 255.

- GAIN

Adjust this feature to change the depth of the color. The value ranges from 0 to 255.

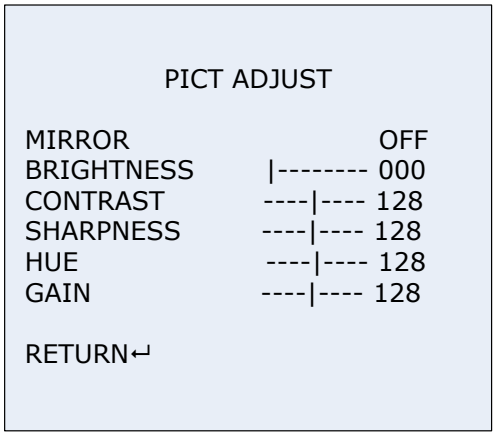

Figure 3-7 PICT ADJUST

3.7 ATR Setting

ATR is the digital dynamic range function which can adjust the brightness and contrast level of the image, and balance the brightness level of the whole image.

Move the cursor to **ATR**. Set the button left/right to select **ON** or **OFF**. After you set it to **ON**, you can press the menu button to enter the **ATR** submenu.

LUMINANCE MID, HIGH, and LOW are selectable, standing for middle, high and low luminance respectively.

CONTRAST MID, HIGH, LOW, MIDLOW and MIDHIGH are selectable.

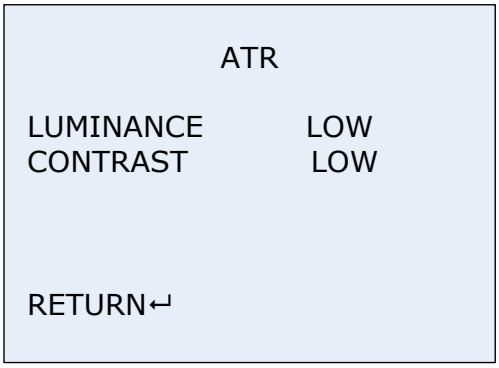

Figure 3-8 ATR

3.8 Motion Detection Setting

There are two kinds of **MOTION DET** panes: **BLOCK DISP** and **MONITOR AREA**. Two panes can take effect simultaneously.

BLOCK DISP

Steps:

1. Move the cursor to **MOTION DET**, and select **ON** and press the menu button to enter the submenu.
2. Position the cursor on **DETECT SENSE**, and set the menu button left/right to adjust the sensitivity level. 0 to 127 are selectable.
3. Position the cursor on **BLOCK DISP**, and set the menu button left/right to select **ENABLE**.
4. Press the menu button to enter the setup interface of the detection panes.
5. Select **ON** to enable **BLOCK DISP**.
6. Move the cursor to **MONITOR AREA** and select **ON**.

7. Return to the **MAIN MENU** and click **SAVE ALL**.
8. You can find the **BLOCK DISP** take effect after you exit the main menu.

MONITOR AREA

Steps:

1. Move the cursor to **MOTION DET**, select **ON** and press the menu button to enter the submenu.
2. Position the cursor on **DETECT SENSE,** and set the menu button left/right to adjust the sensitivity level.
3. Position the cursor on **MONITOR AREA**. Select **OFF** to disable area motion detection. Select **ON** to enable area motion detection.
4. Position the cursor on **AREA SEL** to select one area. There are four areas available.
5. Set the values of **TOP**, **BOTTOM**, **LEFT** and **RIGHT**. The size and position of the area is defined by these values. And after you set all this value, you can see a frame on the image.
6. Return to the **MAIN MENU** and click **SAVE ALL**.
7. You can find the **MONITOR AREA** frame take effect after you exit the main menu.

Note:

The **MONITOR AREA** frame takes effect only when the **BLOCK DISP** panes are included in the **MONITOR AREA** frame.

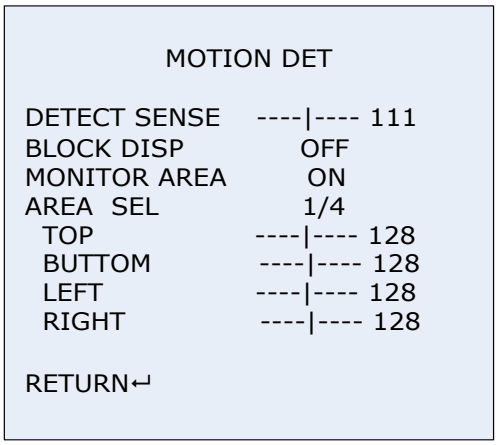

Figure 3-9 MOTION DET

3.9 Privacy Mask Setting

This feature allows you to cover certain areas which you don't want them to be viewed or recorded. Up to 8 privacy areas are configurable.

Steps:

1. Move the cursor to **PRIVACY**, and press menu button to enter the **PRIVACY** submenu.
2. Select one privacy area in **AREA SEL**.
3. Set the values of **TOP**, **BOTTOM**, **LEFT** and **RIGHT**. The size and the position of the area can be defined by these values.
4. Select the color and the transparency values for the privacy area. Turn the **MOSAIC** on if you want to mosaic the privacy areas.
5. Repeat the steps 1 to step 4 to configure other privacy areas.

AREA SEL There are 8 areas available.

COLOR There are 8 colors available.

TRANSP 1.00, 0.75, 0.50, and 0.00 are selectable.

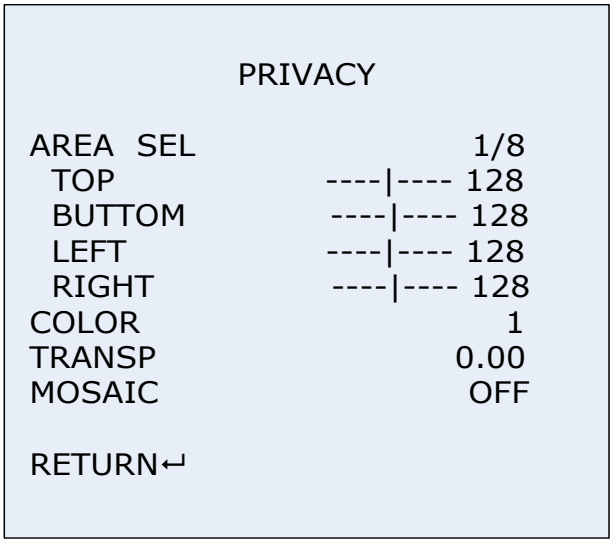

Figure 3-10 PRIVACY

Note:

When the motion detection is on, up to 4 privacy areas are configurable.

3.10 Day/Night Setting

Move the cursor to **DAY/NIGHT**, and select **AUTO**, **COLOR**, **EXT 1/EXT 2** or **B/W** by setting the menu button to left/right.

COLOR mode is used for normal lighting conditions.

B/W mode can increase the sensitivity in low light conditions.

AUTO Mode Setting

In **AUTO** mode, the day mode and the night mode can switch automatically.

Steps:

1. After moving the cursor to **DAY/NIGHT**, set the menu button left/right to select **AUTO**.
2. Press menu button to enter the submenu.

BURST	Burst is an analog video, composite video signal generated by a video-signal generator used to keep the chrominance subcarrier synchronized in a color television signal. Select ON or OFF to enable or disable the color burst function.
DELAYCNT	The value ranges from 0 to 255. This value is the delay time before the day/night mode switches.
DAY→NIGHT	The value ranges from 0 to 255. The day mode switches to the night mode when the light condition reaches to the value you select.
NIGHT→DAY	The value ranges from 0 to 255. The night mode switches to the day mode when the light condition reaches to the value you select.

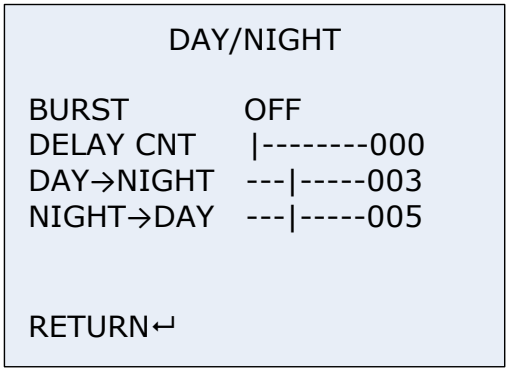

Figure 3-11 DAY/NIGHT

B/W Mode Setting

BURST: In the **B/W** submenu, select **ON** or **OFF** to enable or disable the color burst function.

IR OPTIMIZER: The camera will calculate the image brightness by the DSP, and suppress the IR brightness if the image is overexposed caused by the IR LED.

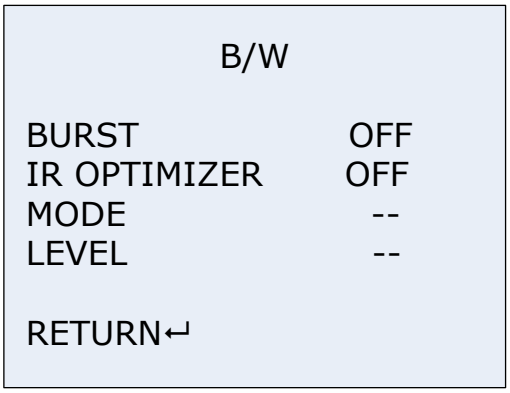

Figure 3-12 B/W

Notes:

There is no external triggered output for this series of dome camera:

- For the dome cameras which don't support IR, the EXT 1/EXT 2 is not supported.
- For the dome cameras which support IR, if you select EXT 1/EXT 2, the day mode switches to the night mode automatically at the same time the IR LED turns on.

3.11 NR Setting

Noise Reduction is used to reduce the noise in the video signal.

Move the cursor to **NR**, and press confirm to enter the **NR** submenu.

Y LEVEL The value ranges from 0 to 15.

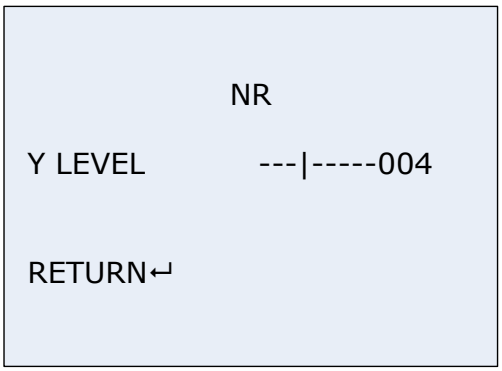

Figure 3-13 NR

3.12 Camera ID Setting

On **Camera ID** submenu, you can customize the camera ID. It also allows you to adjust the camera ID position on the monitor screen. This series of camera supports up to 52 characters.

- Select OFF to disable the Camera ID.
- Select ON to enable the Camera ID.

Customizing the camera ID

Steps:

1. Set it to **ON**, and press the menu button to enter the submenu.
2. Set the menu button up/down/left/right to position the cursor on the character you want.
3. Press menu button to confirm your selection. The selected character displays on the screen.
4. Repeat the steps 1 ~step 3 to select other characters.

Modifying the camera ID

Steps:

1. Position the cursor on one of the arrows←→↑↓.
2. Press the menu button to position the cursor on the character that needs to be modified.
3. Select one of the other characters to replace it.

Clearing the camera ID

Steps:

1. Position the cursor on **CLR**.
2. Press the menu button to clear the characters.

Positioning the camera ID

Steps:

1. Move the cursor to **POS**, and press the menu button to enter the position setting interface.
2. Set the menu button up/down/left/right to position the camera ID.
3. Press the button to save the position and exit.

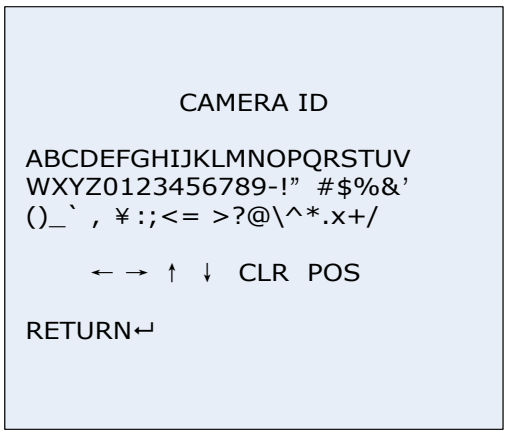

Figure 3-14 CAMERA ID

3.13 SYNC Setting

Both internal and line lock synchronization are available.

Note:

Only the camera which supports AC 24 V power has line lock synchronization.

- If 12V DC power supply is applied, **SYNC** mode is internal synchronization and it is not adjustable.
- If 24V AC power supply is applied, you can select either internal or line lock synchronization.

Note:

Internal synchronization is the default SYNC method. Set the menu button to right for about 2 seconds, you can switch the SYNC mode to line-lock from the SYNC settings. Perform the same operation to switch it to internal synchronization from the line-lock.

3.14 Language Setting

This series of camera supports multi-language. English (default), Chinese, Japanese, French, Russian, Portuguese, Spanish, and German are selectable.

Steps:

1. Move the cursor to **LANGUAGE**.
2. Set the menu button left/right to select the language you need.

3.15 Camera Reset Setting

Move the cursor to **CAMERA RESET**, and press the menu button to reset all camera settings to the default.

3.16 Defective Pixel Correct Settings

The CCD sensor of the lens may appear defective pixels. You can trigger the defective pixel correction function to correct and compensate the defective pixels.

Note:

The defective pixel correct function may not be displayed on the menu; you can enable the function by following the steps below.

Steps:

1. Exit the OSD menu to the live view screen.
1. Switch and hold the menu button to the left for 2 seconds until you see the message of "COVER-UP LENS/CLOSE IRIS".
2. Cover the lens or close the iris to prevent the light from entering the lens.
3. Press the menu button to confirm. You will be able to see the bright dot detects on the grainy screen.
4. After the process, the bright dot defects will disappear and you can see "SUCCESS" on the screen.
5. Press the menu button to exit.

Note: An ERROR may occur because that the lens was not fully covered. Please repeat above steps to try again.

3.17 Save All/Exit

Move the cursor to the **Exit**, and press the menu button to exit the settings without saving.

Move the cursor to **SAVE ALL**, and press menu button to save the settings and exit.

Glossary

Note:

The glossary gives brief explanations to the basic operation principle or the basic function of the camera. However, it doesn't mean the listed functions are all supported by this series of camera. Please take the actual function in the corresponding specification as the standard.

Definition:

Definition is the degree to distinguish the edge between two parts clearly.

Contrast:

Contrast is the color difference between the brightest and darkest parts.

Saturation:

Saturation is the degree of color purity. The color is purer, the image is brighter.

DAY/NIGHT Auto Switch:

The cameras deliver color images during the day. And as light diminishes at night, the cameras switch to night mode and deliver black and white images with high quality.

AGC:

AGC is a control circuit that automatically changes the gain of a receiver or other piece of equipment, so that the desired output

signal remains essentially. When under low illumination, AGC will regulate the gain and amplification of the video signal.

S/N ratio:

It is the ratio of Signal voltage and noise voltage. The ratio is larger, the effect of noise is less, and the image is clearer.

White Balance:

White balance is the white rendition function of the camera to adjust the color temperature according to the environment automatically.

BLC:

If you focus on an object against strong backlight, the object will be too dark to be seen clearly. The BLC (Backlight Compensation) function can compensate light to the object in the front to make it clear, but this causes the over-exposure of the background where the light is strong.

SMART IR:

The SMART IR adopts the smart image processing technique to automatically adjust the brightness curve by detecting multi-zone brightness, and so as to prevent the over exposure of central point existed in short IR distance conditions.

Motion Detection:

In the user-defined motion detection surveillance area, the moving object can be detected and trigger alarm. The sensitive level can be customized according to the environment.

Privacy Mask:

This function allows you to block or mask certain area of a scene, thus prevent the personal privacy from recording or live viewing.

OSD (On-Screen Display):

OSD is the texts superimposed on a screen. It can show the menu on the screen.

Synchronous System:

Synchronization of the camera usually contains power synchronization and internal synchronization. Internal synchronization is realized by the synchronous signal which is generated by the inside crystal oscillator.

ICR Auto Switch:

The filter will filter infrared light during the daytime and change to normal filter at night to ensure a high sensitivity and clear image.

WDR (Wide Dynamic Range):

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.

EIS (Electronic Image Stabilization):

Electronic image stabilization function can reduce certain ranges of vibration which is caused by the external environment.

3D Digital Noise Reduction:

Comparing with the general 2D digital noise reduction, the 3D digital noise reduction function processes the noise initiated by

CCD besides processing the noise in the separated Y video signal and C video signal.

HLC (High Light Compensation):

The HLC is capable of detecting and reversing the bright spots in the picture (such as headlights) to black so as to achieve optimum picture quality.

Digital Zoom:

Digital zoom helps to crop the entire image, and then digitally enlarge the size of a portion of image that is needed to zoom in on.

Troubleshooting

Problem 1:

Why does the camera restart intermittently? And the problem is much more serious when infrared lights of IR camera are turned on at night.

Possible Reasons:

The main and common reason is power supply shortage. This problem may happen to the IR camera especially at night, because the infrared lights are turned on at night and increase the power consumption.

To Solve the Problem:

You need to ensure that the power supply matches with ±10% of the nominal voltage. And the power consumption of power adapter should meet the demand of the camera.

Problem 2:

The camera can never be focused by adjusting the focus-stick on the lens. And there is also no use adjusting the back focus.

Possible Reasons:

The camera needs the lens with CS lens mount. When you install a lens with C lens mount, the camera will never be focused.

To Solve the Problem:

You can change a lens with CS lens mount to the camera.

Or you can use a C/CS adapter ring between the camera and the lens with C lens mount.

Problem 3:

The camera is installed with an auto-iris lens. You adjust the focus to get a clear image in the daytime, but the image is defocused at night.

Possible Reasons:

In the daytime, the illumination is high, so the iris is adjusted to a small size automatically. The DOF (depth of field) is long. But at night, the iris is adjusted to a large size automatically, so the DOF is shortened. The focus you adjusted in the daytime now locates out of the DOF, so the image is defocused at night.

To Solve the Problem:

When you adjust the focus for a camera with an auto-iris lens, you need to set the lens type to AES (auto electronic shutter) mode. Under AES mode, the iris is adjusted to the largest size automatically. Then you can adjust the focus to get a clear image. At last, you need to set the lens type back to AI (auto iris) mode.

Or you can adjust the focus in low illumination condition, such as at night.

Problem 4:

A camera with OSD menu and an auto-iris lens displays black video, but the OSD menu can be called and displayed.

Possible Reasons:

Auto-iris lens connector is loose contact.

Or the iris driven mode of the camera does not match with the mode of auto-iris lens.

To Solve the Problem:

Check the auto-iris lens connector to ensure good contact.

Set the iris driven mode of the camera the same as the mode of lens. The modes can be VD (video drive) or DD (direct drive). DD mode is commonly used.

Technical Maintenance

Lens Maintenance

The lens surface is plated an anti-reflection coating. The dust, oil and finger print, etc. will cause scratch, mildewed and performance degraded. Please refer to the following method to clean the lens.

- Handling dust

Use oil free soft brush or blowing dust ball to clean the dust.

- Handling oil

Steps:

1. Wipe off the water-drop or oil by soft cloth and dry the lens.
2. Use oil free cotton cloth or lens clean paper to wipe the lens from center to outside with alcohol or detergent.
3. Change the cloth to wipe the lens until the lens is clean.

Bubble Maintenance of Domes

The bubble is of transparent plastic. The dust, oil and finger print, etc. will cause scratch or image blur. Please refer to the following method to clean the bubble.

- Handling dust

Use oil free soft brush or blowing dust ball to clean the dust.

- Handling oil

Steps:

1. Wipe off the water-drop or oil by soft cloth and dry the bubble.
2. Use oil free cotton cloth or bubble clean paper to wipe the bubble from center to outside with alcohol or detergent.
3. Change the cloth to wipe the bubble until the bubble is clean.

Glass Maintenance of IR Camera

Steps:

1. Wipe off the dust, water-drop or oil by soft cloth and dry the glass.
2. Use oil free cotton cloth or glass clean paper to wipe the glass from center to outside with alcohol or detergent.
3. Change the cloth to wipe the glass until the glass is clean.

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