Vandal-proof IR Bullet Camera

Instruction Manual

Before operating the unit, please read this manual thoroughly and retain it for future reference.

Safety Precautions

DO NOT ATTEMPT TO DISASSEMBLE THE CAMERA.

⚡ Risk of Electric Shock, Do not Open ⚠

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER NO USER-SERVICEABLE PARTS INSIDE REFER SERVICING TO QUALIFIED SERVICE PERSON

⚡

This symbol 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.

⚠

This symbol is intended to alert the user to the presence of important operation and maintenance instructions in the literature accompanying the appliance.

Warning

1 This product has patented for configuration and appearance design, and copying is not permitted.

2 If this product fails to operate normally, contact the distributor. Never disassemble or modify the product in any way. Problem caused by unauthorized user disassembly or repairs are out of warranty scope.

3 Electromagnetic fields in specific frequency may cause image interference.

4 Be sure to use only the standard adapter which is specified in the specification sheet. Using other adapter could cause fire, electric shock or damage to produce.

5   Incorrectly connecting the power supply may result in fire, electric shock or damage to produce as well.

6   Do not connect multiple cameras to a single adapter. Exceeding the capacity may cause abnormal heat generation or fire.

7   Securely plug the power cord into power receptacle. A loose connection may result in fire.

8   When installing the camera on a wall or ceiling, fasten it safely and securely. A falling camera may cause personal injury.

9   Do not place conductive objects (e.g. screwdrivers, coins, metal things, etc.) or containers filled with water on top of the camera.

10   Do not install the unit in humid, dusty, or sooty locations. Doing so may cause personal injury.

11   If any unusual smell or smoke comes from the unit, please stop using the product. In such case, please immediately disconnect the power source and contact the distributor.

12   Do not install the unit in humid, dusty, or sooty locations. Doing so may cause personal injury.

Cautions

1   Do not drop objects on the products or apply strong shock to it. Keep it away from a location subject to excessive vibration or magnetic-field interference.

2   Do not install in a location subject to high temperature (over 122°F or +50℃), low temperature （below 14°F or -20℃）, or may cause fire.

3   If want to relocate the installed products, be sure to turn off the power before moving or reinstalling it.

4   Remove the power plug from the outlet when there is a lightning storm. Neglecting to do so may cause fire or damage to the product.

5   Avoid a location which is exposed to direct sunlight, or near heat sources. Neglecting to do so may cause fire.

6   Install in a well-ventilated location.

7   Avoid aiming the camera directly towards extremely bright objects such as the sun, as this may damage the CCD image sensor.

Important Safety Instructions

1   Read these instructions

2   Keep these instructions for later use.

3   Pay attention that all warnings should be adhered to.

4   Follow all instruction.

5   Do not use this product near water.

6   Clean only with dry cloth.

7   Do not block any ventilation openings.

8   Do not install near any heat sources such as radiations, heat registers, or other product (including amplifiers) that produce heat.

9   Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

10 Only use attachment/accessories specified by the manufacturer.

11 For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system.

12 Refer all servicing to qualified service personnel. Servicing is required when the product 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 product has been exposed to rain or moisture, does not operate normally, or has been dropped.

13 Do not operate the camera beyond its temperature, humidity or power source ratings. Operating temperature: 14F-122F（-20℃-50℃）;Humidity＜85%。

14 Do not point the camera towards the sun; do not operate camera in a spotlight, highlight, or reflection environment.

15 Do not install or use the camera in the following places.

   a) In excessive heat or cold locations

   b) In damp or dusty locations   **c)** In a place exposed to rain

   d) In a place subject to vibration

   e) Near a source of electromagnetic radiation (wireless/radio or television emission)

   f) In a place exposed to fluorescent light

   g) In a place under poor lighting condition

16 The laser beam may damage CCD. Do not project the laser beam directly into the lens of the camera.

Table of Contents

Chapter 1 Overview

Instruction

This is a Vandal-proof IR Bullet camera. It saves costly installation time and provides more convenience and functions.

- Built-in IR Lens
- Easy Adjustment of Lens Focal Length
- 2 Pcs of IR LED Array
- Visible Range up to 30m/100feet in Total Darkness
- 3-Axis Vertical/Horizontal/Rotational
- Smart Mechanical Structure Design
- Full Metal Body Vandal-proof & Water Resistance IP 66

Package

Check the contents of package. The following items are included.
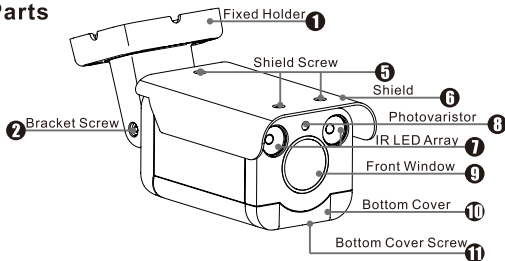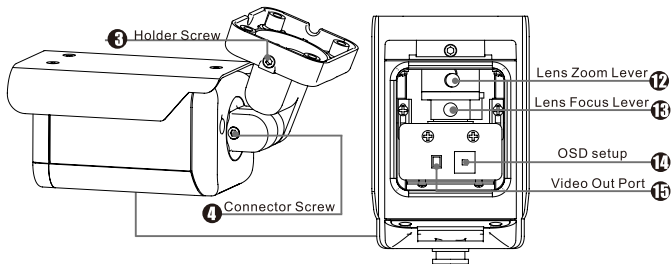One User Manual
One IR Bullet Camera
Four fixed screws with dielectrical covers
One dielectrical paper
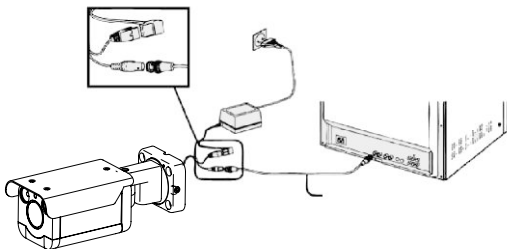One L-type screw driver

Product Parts

1   Fixed Holder — Fixing the camera to the ceiling or the wall

2   Bracket Screw —Adjusting and fixing the monitoring direction

3   Holder Screw —Adjusting and fixing the monitoring direction

4   Connector Screw —Adjusting and fixing the monitoring direction

5   Shield Screw — Fixing the Shield to the camera body

6   Shield — Protecting the camera body

7   IR LED Array — Providing assistance light source at night time

8   Photovaristor — Automatically photometry to switch the IR LEDs

9   Front Window — Through Which to Capture Imaging

10   Bottom Cover — Sealing the cabin and protect the setups inside

11   Bottom Cover Screw — Locking the cabin

12   Lens Zoom Lever — Adjusting the focal length of lens

13   Lens Focus Lever — Adjusting the focus length of lens

14   OSD setup — Setting the functions

15   Video Out Port — Connecting the CCTV multi-tester to check the image

Chapter 2 Operating Instruction

Connection

1 Connect one end of the BNC Cable to the terminals of the monitor.

2 Connect the other end of the BNC Cable to the VIDEO OUT

3 Then, plug in the power adapter into the power receptacle. The screen will be displayed when the monitor is on.

Installation

● **Before Installation**

Read the cautions before installation:

1 Make sure the installation location can support 5 times the total weight of the bullet camera.

2 Be careful not to let the cable be jammed in inappropriate places or to let the insulation covering of the cable peel off during installation. This may result in malfunction or a fire hazard.

3 Make sure that nobody is beneath the installation location, and remove the camera if anything urgent needs dealing there.
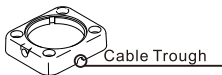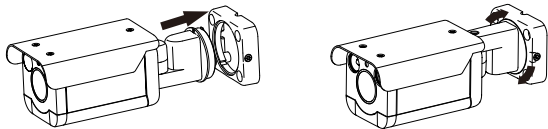
● **Installing the Camera**

Installation process is illustrated as below

Step 1: Place the dielectrial paper on the wall/ceiling, which is to protect the camera from damage by conducted current. Then fix the fixed holder to the wall/ceiling with 4 screws.
Pay attention to the cable trough. Put it in the direction of power supply if cables exit there.

Cable Trough

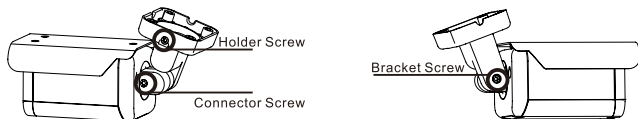**Step 2:** Attach the camera body to the fixed holder.

Step3: Fasten the camera body tightly by the gear on the locked ring, the installation is done.

● **Cautions for Installation**

1   Allow the cable to pass through the hole in the middle of the fixed holder before mounting the camera to the fixed holder.

2   If passing through the side, the cable must be put at the cable trough first before the camera is mounted.

Adjustment of Monitoring Direction

This camera is with 3-axis gimbal design.
Loose the holder screw, the bracket screw, and the connector screw, then adjust the monitoring direction according to actual need.
After one direction is set, tighten that screw to fix.
Tighten all screws when the adjustment is done.

Adjustment of Function

Loose bottom cover screw to open the bottom cover

1 Use the video out port to connect the multi-tester with the camera, and check the image on screen.

2 Set the functions by OSD setup.

3 Rotate IR Illumination adjustment to adjust the IR illumination according to the exact need in different applications.

4 Adjust the focal length with the lens zoom level and lens focus level according to need. After you get the clear image, tighten those two screws.

5 After the adjustment is done, lock the bottom cover by tightening bottom cover screw.

Chapter 3 Typical CCD Phenomena

The following effects on the monitor screen are characteristic of CCD cameras. They do not indicate any fault with the camera.

Smear

This occurs when shooting a very bright object such as electric lighting, the sun, or a strong reflection. This phenomenon is caused by an electric charge induced by infrared radiation deep in the photosensor. It appears as a vertical smear, since the CCD imaging element uses an interline transfer system.

Vertical aliasing

When you shoot vertical stripes or lines, they may appear jagged.

Blemishes

A CCD image sensor consists of an array of individual sensor elements (Pixels), A malfunctioning sensor element will cause a single pixel blemish in the picture. (This is generally not a problem.)

White speckles

While CCD image pickup device is made by an accurate technique, imperceptible speckles may rarely come up on the screen due to cosmic rays and so on. This is connected to the principle of CCD mage pickup device, not a malfunction. And the white speckles are easy to come up in the following conditions.

- Using the camera in high temperature
- When turning up the gain

Blooming

This is a phenomenon is which the light from very bright objects appears to overflow into neighboring areas in an image.

Note

If strong light enters a wide area of the screen, the screen may become dark. This is not a malfunction. If this occurs, avoid strong light or adjust the lens iris to reduce the light amount.

Chapter 4 Common Troubleshooting

If encounter troubles in use of the bullet camera, please refer to the following instructions. For more information, please consult nearby local authorized distributor.

Troubles	Solution
No Video Output	Check the power supply, or the connection among the cable, camera and monitor.
Malfunction	Check whether the camera is connected to the DC 12V power supply.
Light Image	Adjust the display contrast of the monitor; Change the location if the camera is exposed to intense light.
Dark Image	Adjust the Brightness.
The situations below are not malfunction of the camera.	
Vertical Streak	It may appear when the camera is exposed to intense light.
Fixed Image Clutter	When the camera is in high temperature environment, there may be fixed image clutter on the entire monitor screen.
Jagged Image	When shooting at a ribbon-like object, a straight line or something of similar patterns, the image displayed on the monitor may be serrated.

Chapter 5 Current Maintenance

1 In use of the camera, regularly clean the dust and dirt on the lens surface of the camera to keep good clarity of image.

2 Clean the camera with dry and soft cloth. For stubborn dirt, please wipe it with a cloth dipped in a little neutral detergent, and then dry the camera with cloth.

3 Be careful not to use volatile impregnant like thinner, alcohol, benzene or pesticide, etc. to clean the camera, for that can damage the surface coating, and even weaken the function and performance of the camera.