

**IR Waterproof Fixed-focal Fixed HDCVI Camera  
User's Manual**

**Delta-Opti, 2016**

**Version 1.0.0**

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## **Welcome**

Thank you for purchasing our HDCVI camera!

This user's manual is designed to be a reference tool for your system.

Please read the following safeguard and warnings carefully before you use this series product!

Please keep this user's manual well for future reference!

# Important Safeguards and Warnings

## 1 . Electrical safety

All installation and operation here should conform to your local electrical safety codes.

We assume no liability or responsibility for all the fires or electrical shock caused by improper handling or installation.

## 2 . Transportation security

Heavy stress, violent vibration or water splash are not allowed during transportation, storage and installation.

## 3 . Installation

Do not apply power to the camera before completing installation.

Always follow the instruction guide the manufacturer recommended.

## 4 . Qualified engineers needed

All the examination and repair work should be done by the qualified service engineers.

We are not liable for any problems caused by unauthorized modifications or attempted repair.

## 5 . Environment

This series HDCVI camera should be installed in a cool, dry place away from direct sunlight or strong light, inflammable, explosive substances and etc.

This series camera shall work on the specified working temperature. Please keep it away from the electromagnetic radiation object and environment.

Please keep the sound ventilation.

Do not allow the water and other liquid falling into the camera.

## 6. Accessories

Be sure to use all the accessories recommended by manufacturer.

Before installation, please open the package and check all the components are included.

Contact your local retailer ASAP if something is broken in your package.

## 7. Daily Maintenance

Please shut down the device and then unplug the power cable before you begin daily maintenance work.

Please shut down the device and then unplug the power cable before you begin daily maintenance work.

Use the dry soft cloth to clean the device. If there is too much dust, please use the water to dilute the mild detergent first and then use it to clean the device. Finally use the dry cloth to clean the device.

Please put the dustproof cap to protect the CMOS component when you do not use the camera.

## **Applicable Models**

This manual can be applied to the models of HAC-HFWXXXXB, HAC-HFWXXXXD and HAC-HFWXXXXE.

Note:

“XXXX” are the 4 numbers in the model, such as 2120.

# 1 General Introduction

## 1.1 Overview

This series HDCVI camera conforms to the HDCVI standard. It supports video signal high-speed long distance transmission without any delay. It can be controlled by the DVR conforming to the HDCVI.

## 1.2 Features

- High-performance CMOS image sensor, megapixel definition.
- Support HD video, control signal coaxial transmission.
- 720P series support 75-3 coaxial cable transmission without any loss. The distance is over 500m. 1080P series support 75-3 coaxial cable transmission without any loss. The distance is over 300m.
- High speed, long distance real-time transmission.
- Support HDCVI HD and analog SD switch output.
- Support 3D noise reduction, excellent low illumination performance.
- Support ICR switch to realize surveillance both in the daytime and at night.
- Support OSD menu adjustment parameters.
- Support intelligent IR function.
- Support DC12V power supplying.
- Support IP66 protection level.
- Can be applied to the environments with darker light or no illumination like road, warehouse, underground parking lot, bar, pipeline and etc.

## 2 Framework and Dimensions

Please refer to the following figure for dimension information of HAC-HFWXXXXB. The unit is mm. See Figure 2-1.

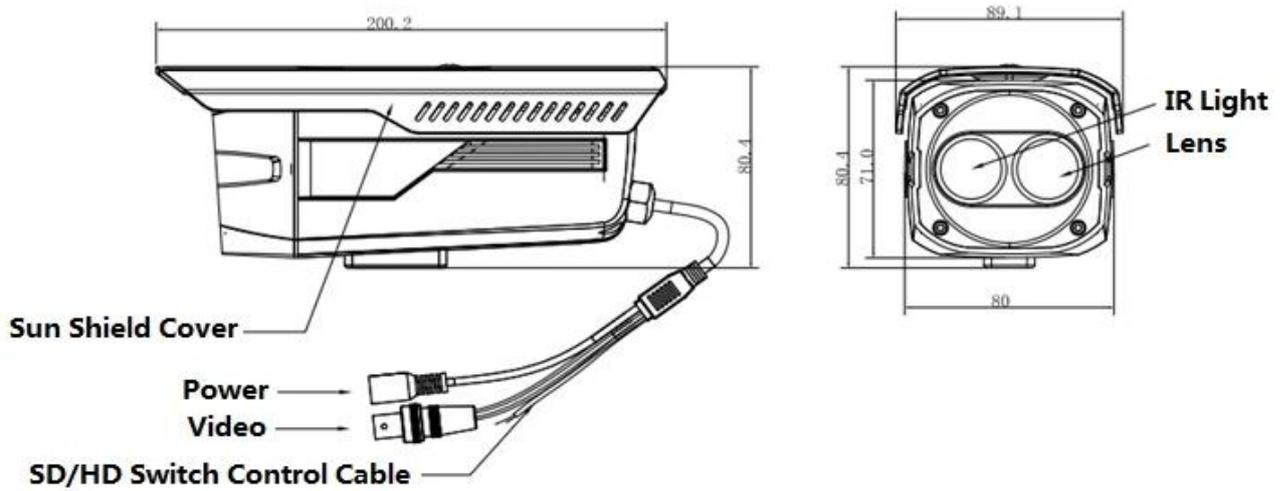


Figure 2-1

Please refer to the following figure for dimension information of HAC-HFWXXXXD. The unit is mm. See Figure 2-2.

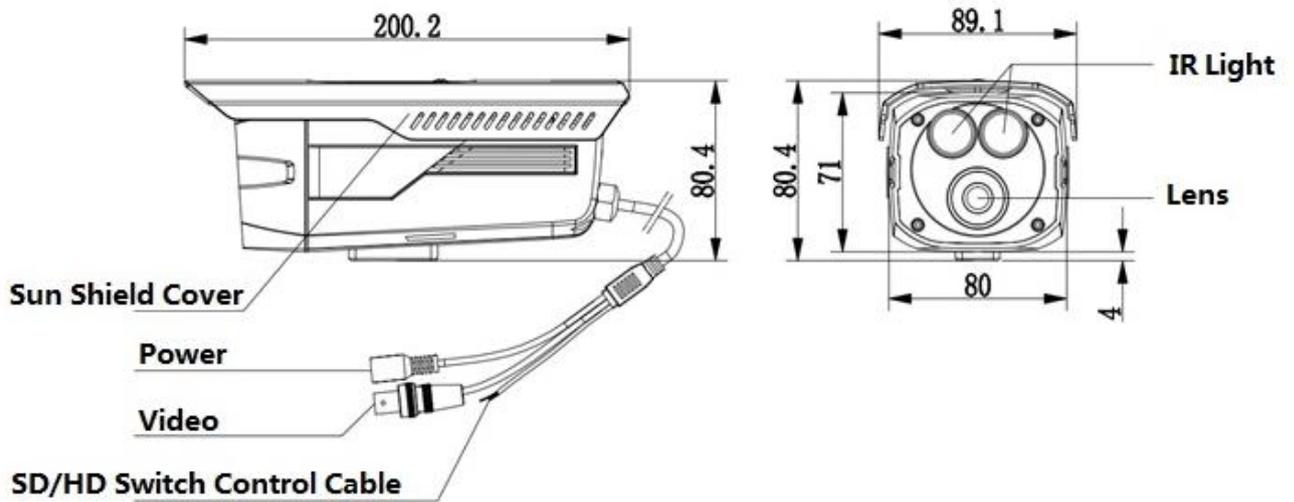


Figure 2-2

Please refer to the following for dimension information of HAC-HFWXXXXE. The unit is mm. See Figure 2-3.

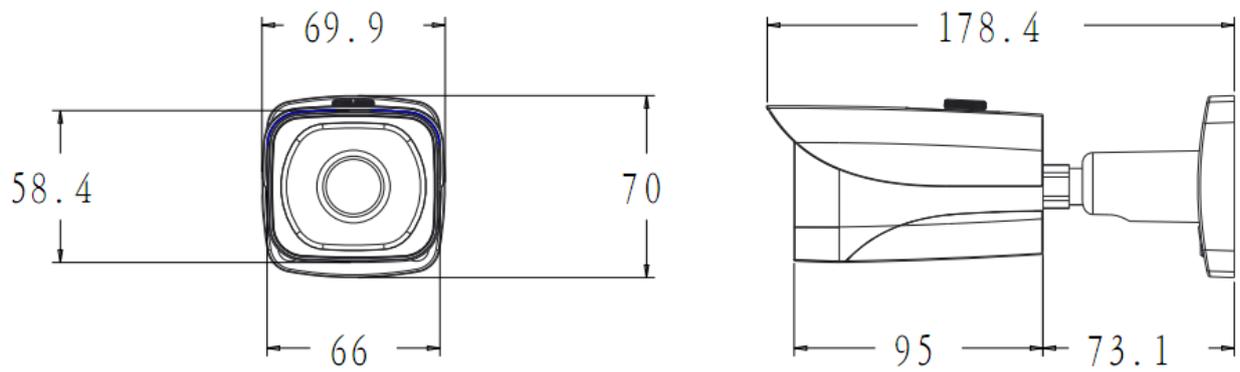


Figure 2-3

Please refer to the following figure for structure information. See Figure 2-4.

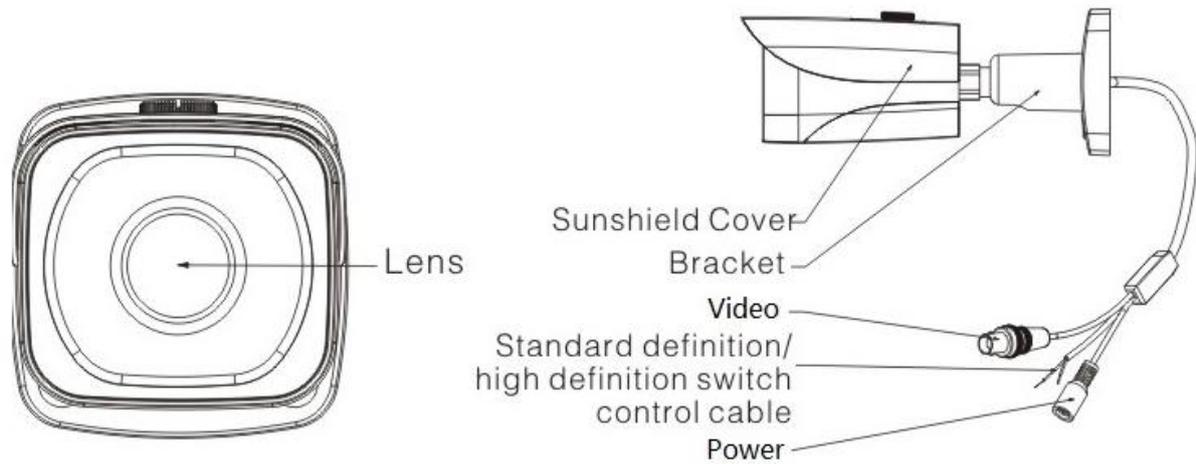


Figure 2-4

Please refer to the following sheet for detailed information.

SN	Name	Function
1	Lens	It is to receive the optical signal from the environments.
2	Sunshield Cover	/
3	Bracket	Support camera body and rotate to adjust monitor angle.
4	Power input port	Connect to the DC 12V power to input the power.
5	Video output port	BNC port is to output HDCVI/CVBS standard definition video signal. You can connect to the devices such as the DVR or the NVS conforming to the HDCVI specifications.
6	Standard definition/high definition switch control cable	When the standard definition/high definition switch control cable is short circuit, system outputs standard definition video. Otherwise, when the circuit is open, system outputs the high definition video.

**Note:**

- When SD/HD switch control cable is in short circuit, it can realize the switch from HD video output to SD video output. On the contrary, the control cable will be switched back to HD video output in the open circuit.
- Some models have photosensitive components; please refer to the actual object for more

## 3 Installation

### Important

Please make sure the installation surface can min support the 3X weight of the camera and the bracket.

### Step 1 Install camera bracket

- Please install the expansion bolt if you want to install in the cement wall (Please make sure the installation holes of the expansion bolts are the same with the bracket.) Then you can install the bracket. See Figure 3-1.
- If you want to install in the wood surface, please skip the first step and then use the self-tapping screws to install the bracket directly.

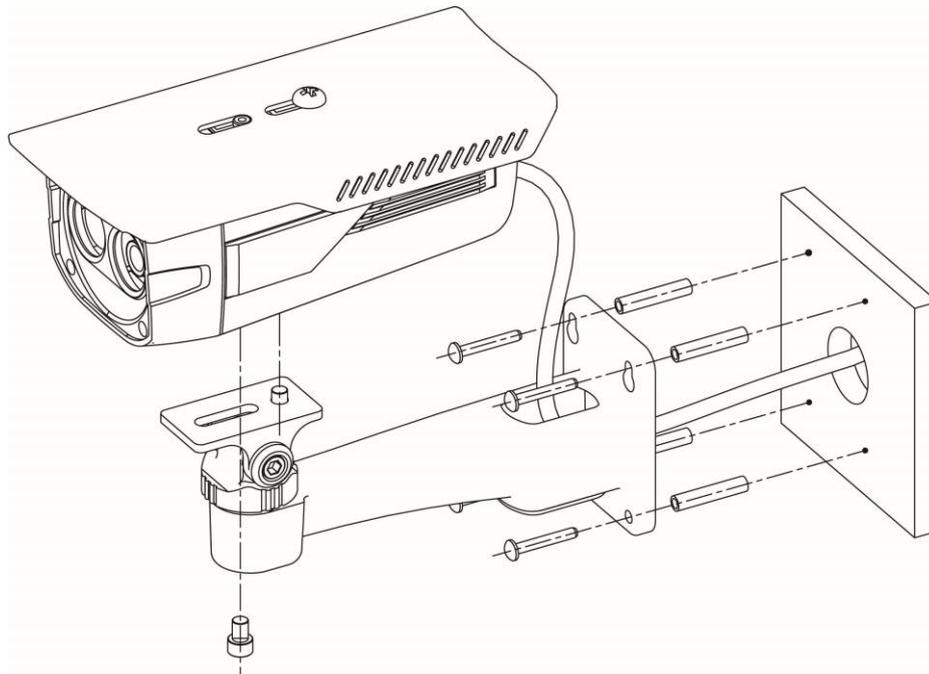


Figure 3-1

### Step 2 Install the camera

Use the installation pedestal on the bottom of the camera and use screws to install the camera on the bracket.

### Step 3

Adjust the camera to a location which needs to be monitored, tighten the screw on the bracket and fix the camera.

### Note:

The installation figure above is an example of HAC-HFWXXXXB, which is the same as HAC-HFWXXXXD.

### Important

- Before the installation, please make sure the installation surface can sustain at least 3X weight of the bracket and the camera.

Please refer to the steps listed below for installation information of HAC-HFWXXXXE.

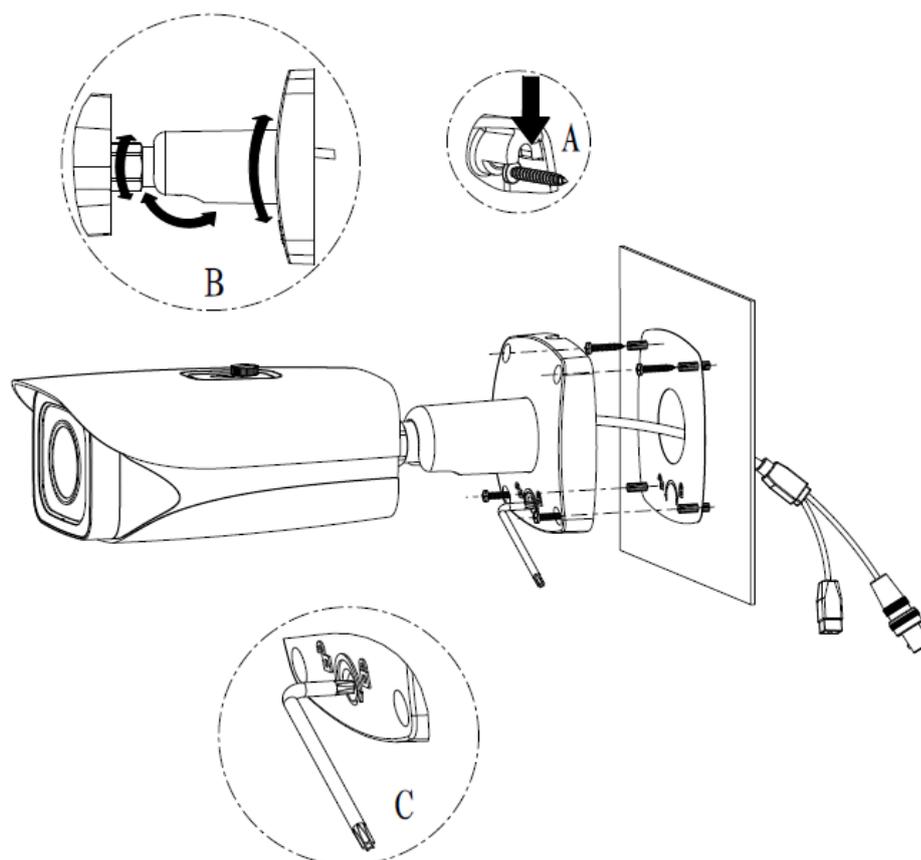


Figure 3-2

### **Step 1**

Install the camera bracket according to your installation mode.

**Before you install the bracket, please pull the cable through the cable exit of the installation surface or pull the cable through the cable exit of the bracket.**

- Please install the expansion bolt if you want to install in the cement wall (Please make sure the installation holes of the expansion bolts are the same with the bracket.) Then you can install the bracket. See Figure 3-2.
- If you want to install in the wood surface, please skip the first step and then use the self-tapping screws to install the bracket directly.

### **Step 2**

Put the two self-tapping screws to the two expansion blots at the top left and the top right. Secure the bracket on the self-tapping screws. See (A) in Figure 3-2.

### **Important**

The screw depth shall reserve 8mm-10mm to secure the bracket.

### **Step 3**

Refer to Figure 3-2 to fix other two self-tapping screws and the secure. Now the camera is fixed on the installation surface.

**Step 4**

Use the L wrench (provided) to loosen the adjusting screw to make the camera can monitor the corresponding surveillance zone. Use the L wrench to adjust the adjusting screw to fix the camera firmly. Please refer to (B) and (C) in Figure 3-2.

**Step 5**

Connect the video output port of the device cable to the rear-end encode device such as DVR or NVS. Then connect the power port of the device cable to the corresponding power supplying source.

## 4 Menu

### 4.1 HDCVI Series DVR Settings

This HDCVI camera series can adjust OSD menu via coaxial control. After connected the camera to the HDCVI series DVR, from Main Menu->Setting->System->PTZ, you need to select the channel number for access and set control mode as HDCVI and the protocol as DH-SD1. Click “Save” button to save current setup. See Figure 4-1.

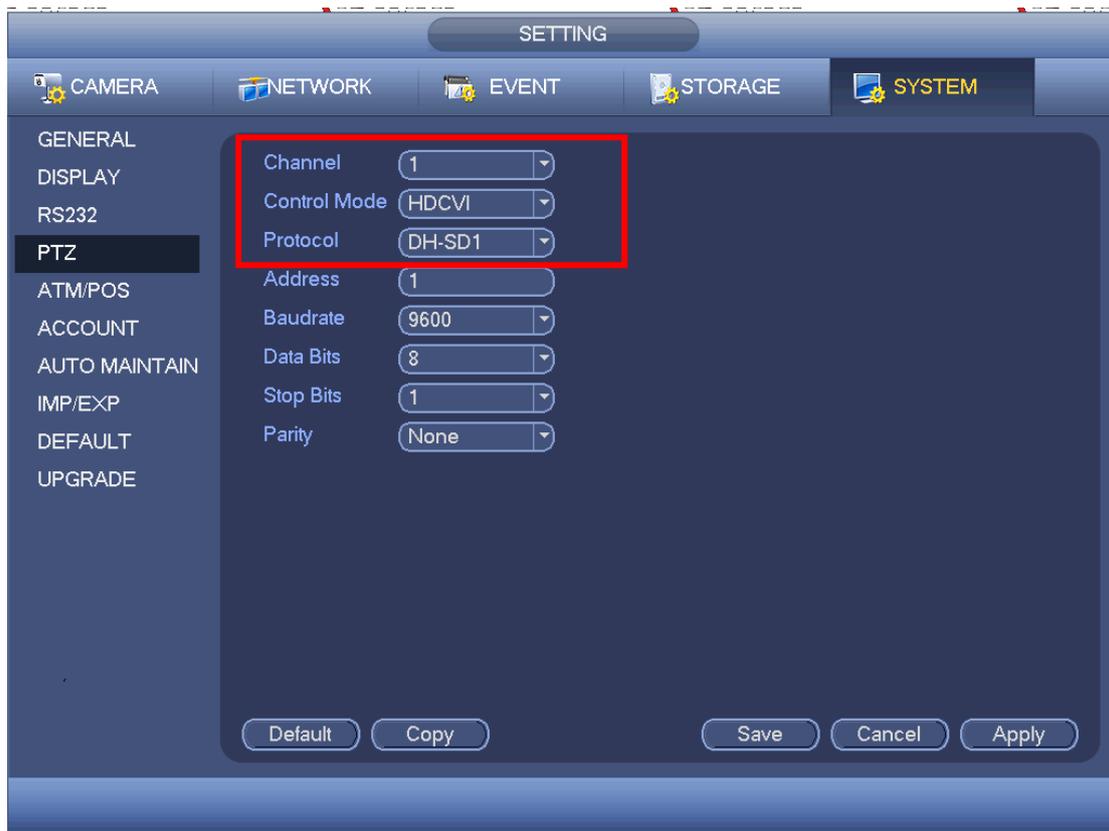


Figure 4-1

### 4.2 Menu Operation

Click the right mouse button and select “PTZ Control”, then you will see the “PTZ Setup” menu, which is as shown in Figure 4-2 and Figure 4-3.

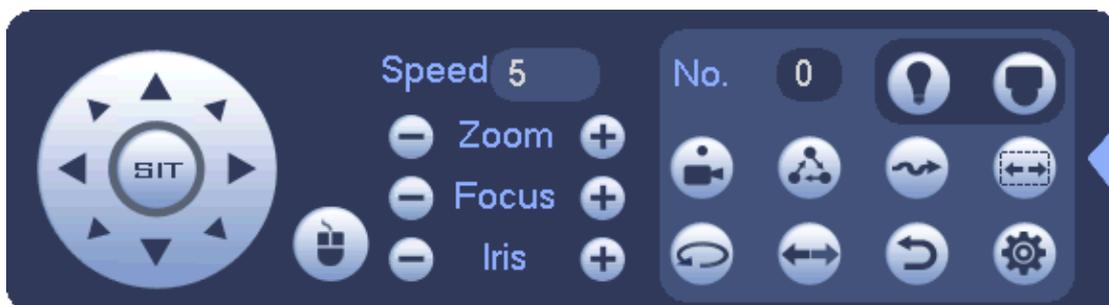


Figure 4-2



Figure 4-3

See Sheet 4-1 for the details of button functions.

Button	Function
Iris +	Open menu or confirm
+ Enter	Open menu
▲, ▼	Select menu item
◀, ▶	Select menu value

Sheet 4-1

The main menu interface is shown in Figure 4-4.

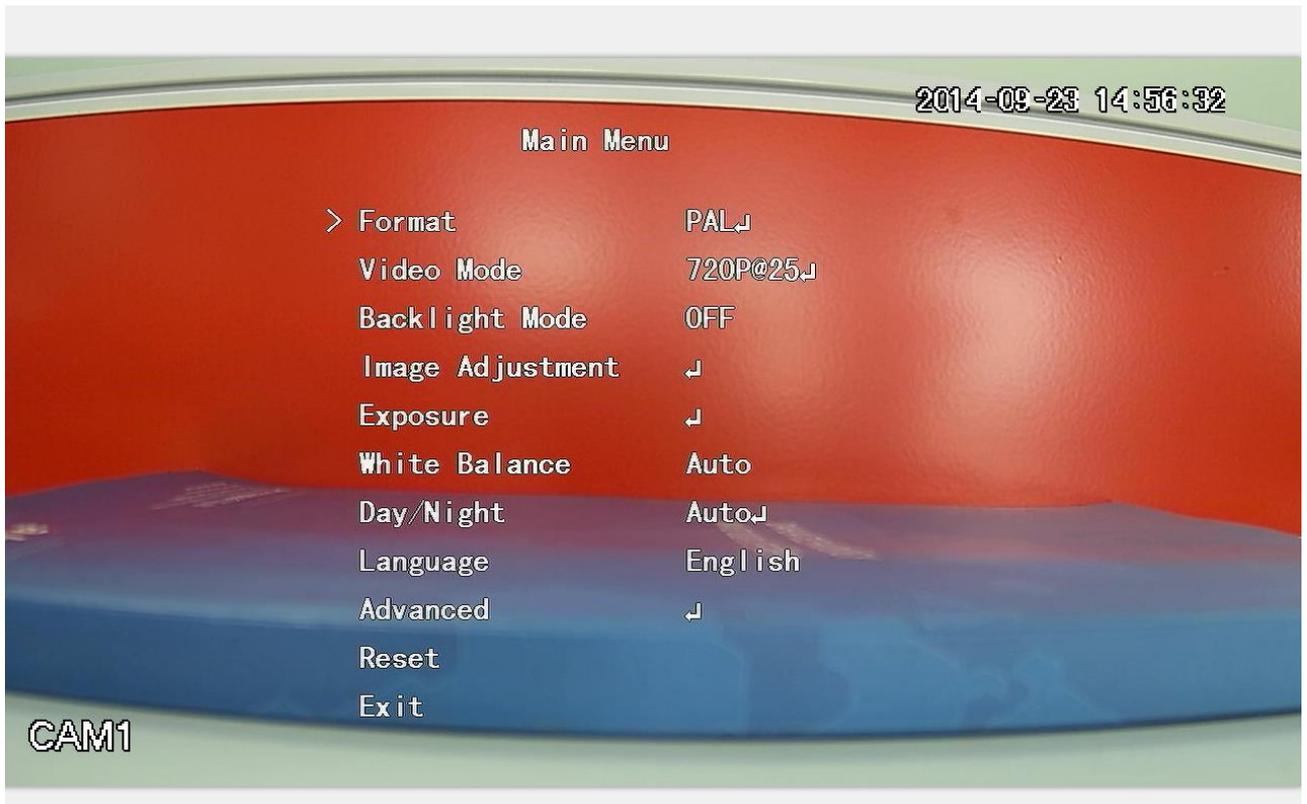


Figure 4-4

If there is "↵", click iris "+" or the "Confirm" button in "Menu Operation" interface to go to the 2nd menu. Click "Return" button to go back to the previous menu interface.

Note:

The operation interface above is the example of HCVRHG-AF series, different rear-end devices have different operation interfaces; please refer to corresponding HCVR manual for exact operation.

There is slight difference on menu between different products, please refer to the device for exact menu.

# Appendix I Maintenance

Attention:

Please maintain the device according to the following instructions in order to ensure the image effect and long-term stable operation of the device.

## **Maintenance for lens and mirror surface**

The lens and mirror surface are covered with antireflection coating, so it may produce hazardous substance and lead to performance reduction or scratch, dimness etc when it is stained with dust, grease, fingerprint and so on, please refer to the following methods to deal with once dirt is found:

Stained with dirt

Use oil-free soft brush or hair dries to remove it gently.

Stained with grease or fingerprint

Use soft cloth to wipe the water drop or oil gently to make it dry, then use oil-free cotton cloth or paper soaked with alcohol or detergent to wipe from the lens center to outward. It is ok to change the cloth and wipe several times if it is not clean enough.

## **Camera Body Maintenance**

Use a soft dry cloth to clean the camera body when it is dirty, in case the dirt is hard to remove, use a clean dry cloth soaked with mild detergent and wipe gently, make it dry later. Don't use volatile solvent like alcohol, benzene, thinner and etc or strong detergent with abrasiveness, otherwise it will damage the surface coating or reduce the working performance of the device.

## **Maintenance for Dome Cover**

Dome cover is an optical device, please don't touch or wipe cover surface directly during installation and use, please refer to the following methods to deal with once dirt is found:

Stained with dirt

Use oil-free soft brush or hair dries to remove it gently.

Stained with grease or fingerprint

Use soft cloth to wipe the water drop or oil gently to make it dry, then use oil-free cotton cloth or paper soaked with alcohol or detergent to wipe from the lens center to outward. It is ok to change the cloth and wipe several times if it is not clean enough.

## Appendix II Toxic or Hazardous Materials or Elements

Component Name	Toxic or Hazardous Materials or Elements					
	Pb	Hg	Cd	Cr VI	PBB	PBDE
Circuit Board Component	○	○	○	○	○	○
Device Construction Material	○	○	○	○	○	○
Wire and Cable	○	○	○	○	○	○
Packing Components	○	○	○	○	○	○
Accessories	○	○	○	○	○	○

O: Indicates that the concentration of the hazardous substance in all homogeneous materials in the parts is below the relevant threshold of the SJ/T11363-2006 standard.

X: Indicates that the concentration of the hazardous substance of at least one of all homogeneous materials in the parts is above the relevant threshold of the SJ/T11363-2006 standard. During the environmental-friendly use period (EFUP) period, the toxic or hazardous substance or elements contained in products will not leak or mutate so that the use of these (substances or elements) will not result in any severe environmental pollution, any bodily injury or damage to any assets. The consumer is not authorized to process such kind of substances or elements, please return to the corresponding local authorities to process according to your local government statutes.

### Note

- **This manual is for reference only. Slight difference may be found in the user interface.**
- **All the designs and software here are subject to change without prior written notice.**
- **All trademarks and registered trademarks are the properties of their respective owners.**
- **If there is any uncertainty or controversy, please refer to the final explanation of us.**
- **Please visit our website or contact your local service engineer for more information.**