

# REVO Wireless Network Video Recorder

# 4 and 8 Channel WiFi Kits

# Product Manual

Web Site for Remote Viewing: WWW.REVOWIRELESS.COM
App (Android and iOS): REVO Wireless
Default User Name: admin

Default Password: 123456

Visit us at: WWW.REVOAMERICA.COM
Online Support: https://support.revoamerica.com

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Introduction

Thank you for purchasing our products. If you have any questions or requests, please feel free to contact us.

Statement

• We have tried to ensure the integrity and accuracy of the contents of the manual. If it appears technically

inaccurate, or product features and operations do not match, if there are print errors, please contact us.

• Products and manuals will be updated in real time without prior notice.

• The contents of this manual only provide users with reference guidance, they do not guarantee to be exactly

the same with the physical product.

• The parts, components and accessories mentioned in this manual are for illustrative purposes only and do not

represent the configuration of the purchase model. Please refer to the packing list for details.

Special statement

When using the video surveillance equipment, please strictly observe the applicable legal and regulatory

requirements for the use and maintenance of the monitoring interface. The usage of this video surveillance equipment

for the purpose of snooping on other people's privacy is illegal.

About default

Device factory default Administrator account: admin.

The Admin's default factory password is 123456.

Device factory default IPv4 address: 192.168.1.114.

When the hard disk video is recorded fully, the factory defaults to overwrite the oldest video data.

Device default enables the boot wizard.

App Name: REVO Wireless

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# 1. Product features overview

## 1. 1 Product introduction

The RW4 and RW8 series NVRs are REVO's new generation of NVR (Network Video Recorder) products, which supports wireless WIFI network video access, supports maximum 1080P wireless real-time video preview, video encoding and playback operation. Using a number of high-tech, such as video and audio code technology, embedded system technology, storage technology, network technology, wireless network technology. The NVR can be widely used in homes, shops, offices, villas and other areas of security. No wiring, easy to install.

### 1. 2 Product parameters

Wireless NVR Specification			
RW4NVR1, RW8NVR1			
, 1920x1080			
1920x1080p			
-10°C+55°C			
10%90%RH			
258mm×210mm×42mm			
≤5W			

	Lens	4/6mm
	OSD	Date Time & Title
	White Balance	Auto
	Day&Night	IR cut filter with auto switch
	3D-DNR	Auto
	Mirror/Flip	On / Off
		Dual-stream:
	smart stream	1920x1080@15fps
		640x480@15fps
		> 39.1 Db
	Interface	RJ45 / WIFI 802.11b/g/n
	Anti-thunder Level	Standard IEC61000-4-5
	Working	
	Temperature/Humidi	
	ty	-10°C to +50°C / 30% to 80% RH
	Working	
General	Temperature/Humidi	
Specification	ty	-20°C to +60°C / 20% to 90% RH
	Power Input	DC12V-1A
	Power consumption	≤6W
	Size	66*180mm
	Weight	500g
	Level of Protection	IP66

## 1.3 Functional features

- H.265, 4ch real-time D1, 1080P wireless NVR;
- Built-in high-performance and high-stability wireless Wi-Fi routing module, supports 802.11b/g/n protocol, 150Mbps;
- Can automatically access the Wi-Fi network camera through the network cable;
- Video preview / recording / playback / backup;
- User-friendly (wireless simple matching, setup wizard, commonly used function menu;
- Support ONVIF, N1 and IPC Access protocol;
- Supported network service functions: P2P, DHCP, DDNS, PPPoE, E-Mail, FTP and so on;
- Support a variety of alarm triggering (video loss, motion detection, etc.) and alerts (E-Mail / FTP, etc.);
- Support Android / Apple mobile (or tablet) remote (LAN and Internet) access and control;
- Support PC (client or browser) remote (LAN and Internet) access and control;
- Support IPC configuration (coding control, image adjustment, OSD display, etc.);

- Match with the IPC to support video motion detection;
- Collaborate with IPC to support video masking;
- Support user rights management;

# 2. Operation explanation

# 2.1 The front panel explanation



Figure 1

1. POW: Power indicator light

4. HDD: Hard disk indicator light

# 2.2 Rear Panel Interface explanation

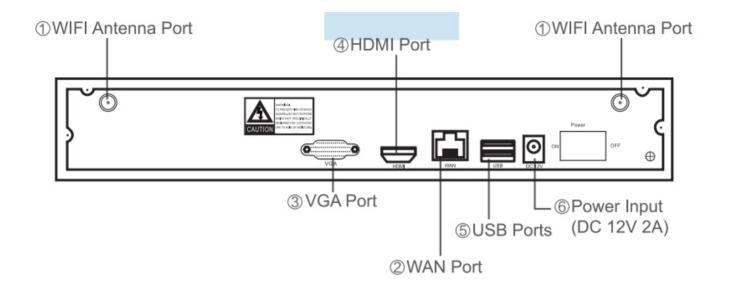


Figure 2

# 2.3 Mouse operation instructions

Mouse key bit	Action	effect	Example
	Click once	Select the target	1, option button, drop down box, list box, check box, radio button
Left key	Click twice	Window zoom	1, switch between a single interface and the multi-interface in previewing 2, add device
	Drag	Set the area	1, set the motion detection area 2, select the electronic amplification area
Middle key	Scroll Change the content		1, change the contents of the drop-down box 2, When zoom previewing, switch channel interface orderly
Right key Click once		Logout	1, close the interface 2, showing the shortcut menu in the main interface

# 2.4 Input method instructions



Figure 3

Name	Key instructions	Function instructions
Number	0~9	Input number 0~9
Character	-/*#@	Special Characters
Capital / lower case	caps	Letter case switch
Backspace	<b>←</b>	Remove the character before cursor
Letters	a-z, A-Z	Letters

# 2.5 OPTIONAL - IR Remote Operation Instructions (Contact REVO for purchase.)



Figure 4

POWER	Power button		
DEV	Device key: Press the DEV key, then press the number keys to enter the same device number with the host and press the "ENTER" key to save the settings. The control of the device will take effect.		
0-9	number keys		
MENU Menu key; Clears all areas when setting the motion detection area			
ESC Exit key			
In the menu mode, select up; in PTZ mode, control the dom camera to rotate up			
▼	In the menu mode, select down; in PTZ mode, control the dome camera to rotate downward		
<b>A</b>	In the menu mode, select the left; in PTZ mode, control the dome camera to rotate to the left		
<b>A</b>	In the menu mode, select the right; in PTZ mode, control the		

	dome camera to rotate to the right	
ENTER	OK key.	
PLAY	Video playback key	
FN	Auxiliary key	
REC	Recording key	
VIEW	Multi-screen key	

## **Explanation**

• If there are multiple devices in the same place, the remote control first needs to select a device according to the device number, so each device should be defined a unique device number, otherwise the remote control operation may also take effect to multiple devices which have the same equipment number at the same time.

# 2.6 Interface specification

# 2.6.1 Interface elements specification

Name	Operation	Operation function	Example
Button	click on the left	Save or cancel	Application, confirmation, cancellation
Dutton	mouse	Open the sub-interface	Edit, set
Edit box	click on the left	Modify	Change Password
	mouse		g:
Drop down	click on the left	Select	Choose a language
box	mouse		
List box	click on the left	View	Channel information
Check box	click on the left	Choose or cancel	Boot wizard display
Check Son	mouse	Choose of suncer	Door William display
Text	No	Instructions	Title, name

# 2.6.2 Commonly used buttons instructions

Name	Icon	Explanation
OK	Ok	Save the operation and take effect, close the operation interface.
Cancel	Cancel	Cancel the operation just made
Apply	Apply	Save the operation and take effect, do not close the user interface.

Copy to Copy to Copy the settings of this channel to other or all channels.

## 2.7 Menu explanation

**System setup:** Regular setup, video setup, network setup, system management

**Right-click menu:** screen selection, video playback, video backup, PTZ control, color adjustment, output volume, manual recording, system setups, setup wizard, camera add, system logout

# 3. Installation and connection

#### 3.1 Installation Notice

Note the following when installing:

- 1, In order to extend the life of the machine, the device should be kept away from water, high temperature, dusty environment, and placed in a well ventilated area.
- 2, Please use the SATA hard drive, USB device, mouse device bought from proper channels.
- 3, Before use, please ensure that the NVR power source is grounded correctly.
- 4, The power supply voltage cannot exceed the power supply of the normal operating voltage range.

# 3.2 Preparation before installation

#### 1, Determine the installation location of the NVR

It is recommended that the NVR be placed in the center of the monitoring area, and the installation position of the IPC (wireless camera) and NVR should avoid any obstacles as much as possible. When the 4-channel video is connected at the same time and there is no obstacles between the NVR and the IPC, the IPC should be placed in a spherical coverage area with a radius of 60 m with the NVR at the center. The radius is reduced to 30 meters when there is one wall between the NVR and the IPC. When there are two walls, it is reduced to a 15 meters radius (Coverage affected by the physical properties of the obstacles and the surrounding environment. This data is for reference only)

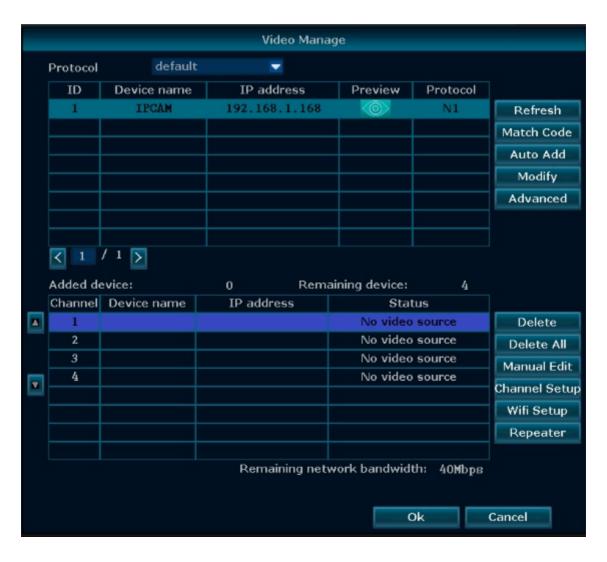
#### 1, Connection steps

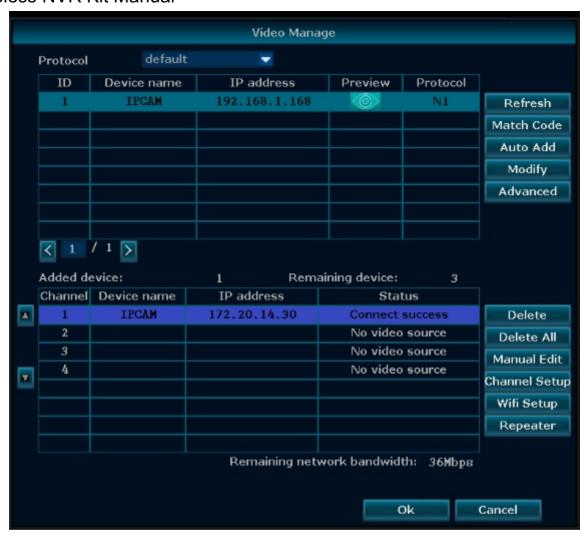
1. Connecting the NVR with the mouse and the display firstly, turn on the power of the NVR and the IPC, then

connect the NVR to the IPC with the cable. Right click on the mouse -> click on adding camera-> delete all channels (Note: if one or more channels, can click the channel(s) and click delete to delete the specified channel(s)) -> code matching -> "start code matching?" Click Yes -> Show "on the code matching" -> NVR monitor screen shows that the success of the code matching (note: more than one camera can match at the same time). If notified the code matching fails, click "Refresh". If there is no indication that any network cable is bad, please re-connect to the code matching operation. -> disconnect the network cable to see if the screen is normal, the screen normal means that the wireless camera was added successfully -> when all the wireless camera added to the NVR means that the preparatory work is completed. (Figure 5.1, Figure 5.2, Figure 5.3, Figure 5.4)

#### 2. Make sure the wireless NVR kit is working properly

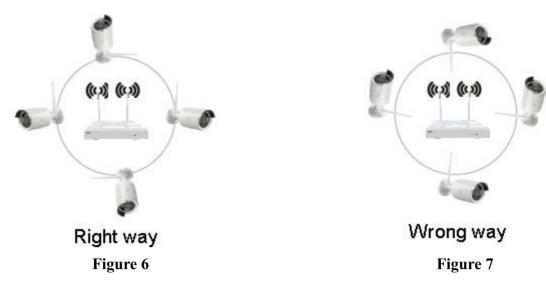
Power the NVR and connect to monitor, all the IPC are installed around the NVR (Note: need to connect the antennas on every IPC), power all the IPC, when all the IPC video show on the NVR monitor, that means the kit is working properly and can be installed to a predetermined location.





## 3.3 Camera Placement

- 1, Place within the effective coverage range of the wireless signal, install wireless camera;
- 2. Power the wireless camera for 1 minute or so, you can see the video in the NVR monitor;
- 3. If it does not show the image, this may be indicating that the distance is too far or there is too much interference so you will need to shorten the distance.



Point NVR and IPC antennas straight up (skyward) and parallel with each other for best performance. If not the same height, IPC antenna should be tangent with the sphere of the NVR spherical center (Figure 6). Do not let the antenna point directly to NVR (Figure 7)

# 4. System function introduction

# 4.1 Starting up / login / logout / restart / close screen output / shutdown

## 4.1.1 Starting up

#### Note:

- Make sure that the access voltage matches the requirements of the NVR and that the NVR is well grounded.
- When power supply is abnormal, it will cause the hard disk video recorder to not work, or even damage the NVR, it is recommended to use a stable power supply for power.



Before starting up, make sure that the display or monitor is connected to the video output of the device.

#### Specific starting up steps are as follows:

- 1, Plug in the power, the front panel power indicator is red.
- 2. Turn on the rear panel power switch or tap the front panel power "On" key. The device will start, as shown in the following figure:



# **4.1.2 Login**

When the system is powered on and started, after waiting for the system to initialize, the system will automatically pop up the login interface. As shown below. The user needs to complete the login before proceeding.

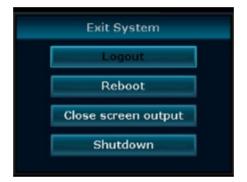


Steps:

- 1. Using the left mouse button click the user name edit box, and enter the local login user name, the default factory settings for the user name is admin.
- 2. Using the left mouse button click the password edit box, and enter the local login password, the default factory settings password is empty, that means you do not need to fill it out.
- 3. Use the left mouse button to click "OK" to complete the login.
  - Explanation
- Password can be composed of numbers, characters, operators and points, \*, #, the length cannot exceed 10 characters.

## 4.1.3 Logout

If a user needs to log out, you can right-click shortcut menu, select exit system. Click the Logout button as shown below.



If the user needs to log off automatically, in the system settings -> General settings, you can set up the automatic logout state. The system will automatically log off the system in 1 minute without the operation. When reoperation, you need to re-enter the user name and password.

## 4.1.4 Restart

If the user needs to restart the machine when using, right-click shortcut menu, select the exit system, click the system to complete the restart.

# 4.1.5 Close the screen output

If the user needs to close the screen output when using, right-click shortcut menu, select the exit system, click to close the screen output to complete.

### 4.1.6 Shut down

If you need to shut down the system, you can right-click the shortcut menu, choose to exit the system. Click to close the system to complete.

#### 4.2 Boot wizard

After the successful login, the system will automatically open the "Setup Wizard" interface, guide the user to set the basic settings, so that the device can work properly.

#### **Steps:**

1, Set the wizard. You can set whether to turn on the boot wizard. Set the interface as shown below, after the operation is complete, left click on the next button.

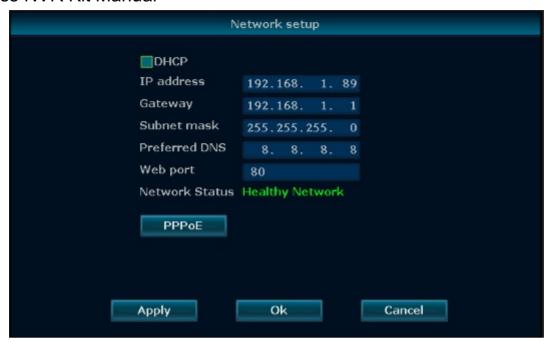


2, General setup. Can set the system city, time, language, key type, the status of the remote control, remote control code. The interface is shown below. After the operation is complete, click the Next button.



3, Network settings. You can choose to automatically obtain IP address, manually set the IP address, gateway, mask, PPPoE and other operations. Operation interface as shown below, after the operation is complete, click the next step to continue the wizard setup, if you want to return to the third step, select the last step.





4, Four: hard disk setup. Can display the current list of hard disk, including the model, capacity, usage, status, formatting status. If you want to format the hard disk, you can select the corresponding hard disk, then click the format button. Wait a moment, then you can format the selected hard disk, the hard disk format status will also be displayed as "formatted." Operation interface as shown below. After the completion of the operation, click Finish to complete all of the above setups. If you want to return to step five, then select the last step, if you click cancel, the above setups will not take effect.

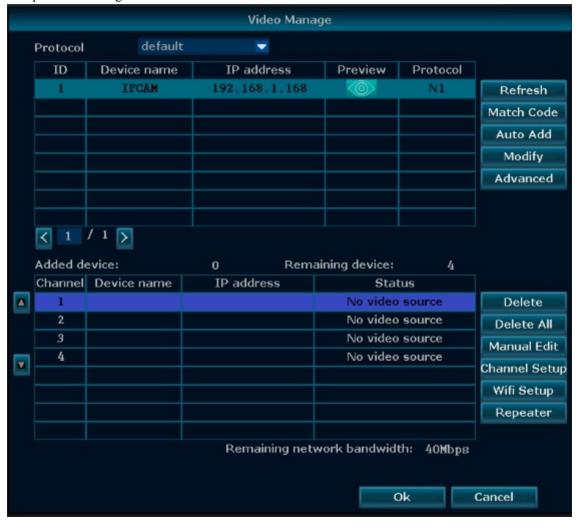


# 4.3 Video management

#### 4.3.1 Search for device

Function instructions: Used to search all IPC devices in the same network segment.

**Steps:** Right-click the system main interface, in the pop-up menu, click the "camera adding" sub-menu, select "video management", enter the video management interface, and click the "refresh" button to complete the search IPC device operation The figure looks like this:



## 4.3.2 Add device

Function instructions: Used to add the searched IPC device.

Operation steps:

1. Code matching instructions:

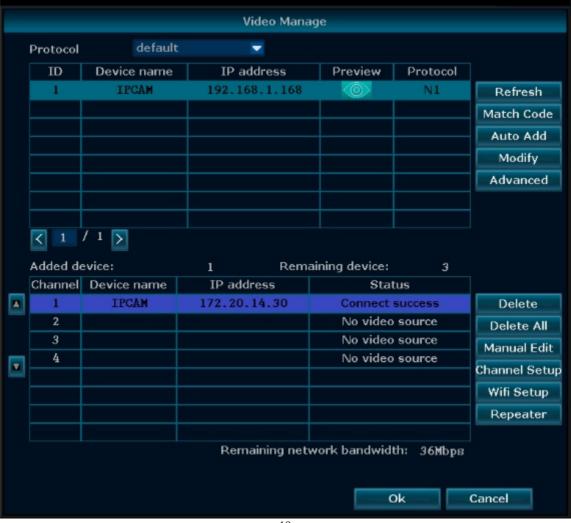
Step 1: Delete the old camera from the camera list in the "Video Manage" window; there are 2 tables in this window: one on top (discovered devices) and one at the bottom (camera registration). You must delete a camera from the camera registration table (bottom table) in the "Video Manage" window before you can add a camera.

To delete a channel, single left click the mouse button on the channel you want to delete in the camera registration table to select it; this will highlight the channel. With the channel highlighted, click the "Delete" button to the right of the table.

#### Step 2: Pairing

Pairing Process (do this with the camera near the NVR):

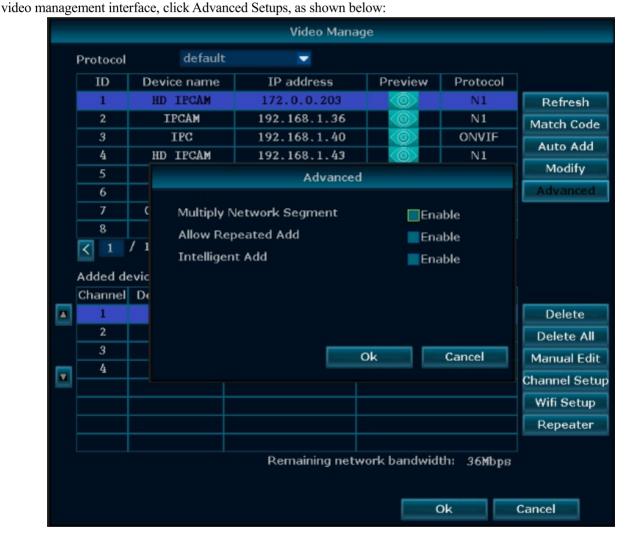
- 1. Power up the camera and give it 1<sup>2</sup> minutes to boot up.
- 2. Press and hold the "Set" button on the cable located underneath the cap on the cable coming out of the camera until the LED on the cable begins flashing quickly.
- 3. From the Live camera screen, click the right mouse button to bring up the menu and click "Button Pair".
- 4. The NVR and camera will pair. Once it is finished the video will appear on screen at which point they may power off the camera and mount it.



## 4.3.3 Advanced setups

**Function setup:** Support multi-network segment search, allowing repeated adding, smart adding.

Steps: Right-click the system main interface, in the pop-up right-click menu, select "Video Management". In the open





Using the Multi-Network Segment search function, the system can search for cameras even if they are not in the same network segment with the NVR.

Using the Allow Repeated Add feature, the system will allow you to repeat adding the same camera to multiple channels.

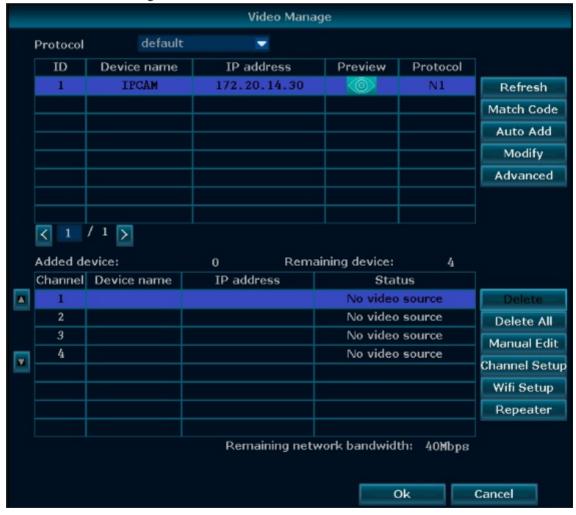
With the Intelligent Add feature, when the system detects the IP address of the IP camera is abnormal (including IP conflicts or IPC is not in the same network segment as the NVR), it will allocate a new legal IP address to the IP camera.

#### 4.3.4. Delete device

Function explanation: Used to delete an added device.

#### Steps:

- 1, Right click on the main interface of the system, in the pop-up right-click menu selecting "Video Management". After entering the video management interface, click to select any of the IPC device information which has been added;
- 2, Click the "Delete Channel" button to delete the selected single IPC device, and the system will automatically disconnect the device's monitoring screen. As shown below:



Explanation

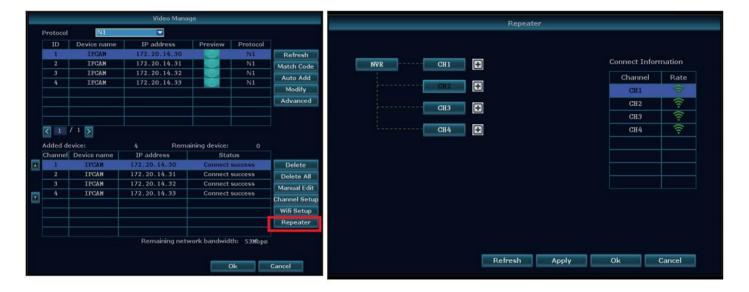
Click "delete all" button to fast delete all the added IPC devices.

## 4.3.5 Repeater setup

Function description: Set up an IPC for long distance by connecting it to another IPC to send the video to the NVR thereby increasing the wireless transmission distance and extending the covering range of the wireless kit.

Steps:

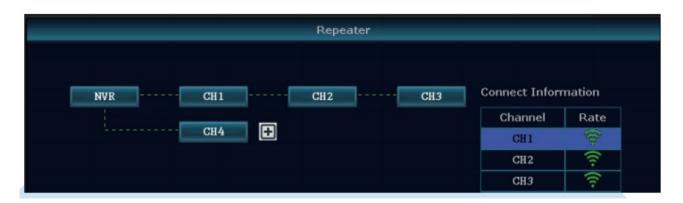
1, Right click on NVR'S GUI, left click "video management"→ then left click "repeater"



2, Add repeater: As picture shown below, click icon + besides channel 3, choose other channel.



3, As the picture shows below, IPC3 is connected to the NVR through IPC2 and IPC1. IPC2 is connected to the NVR through IPC1. IPC1 and IPC4 are connected to the NVR directly.



4, Click "Apply" and then click "refresh" to check if the setup is successful.



### 4.3.6. Edit Channel

Functional explanation: Edit IPC device channel protocol, IP address, port, user name and password, stream type.

#### Operational steps:

- 1, Right click on the main interface of the system, in the pop-up menu right-click "Video Management", in the open video management interface, click to select any of the IPC device which has been added;
- 2, Click the Edit Channel button to set the corresponding information in the Edit Channel Connection Parameters interface. As shown below:

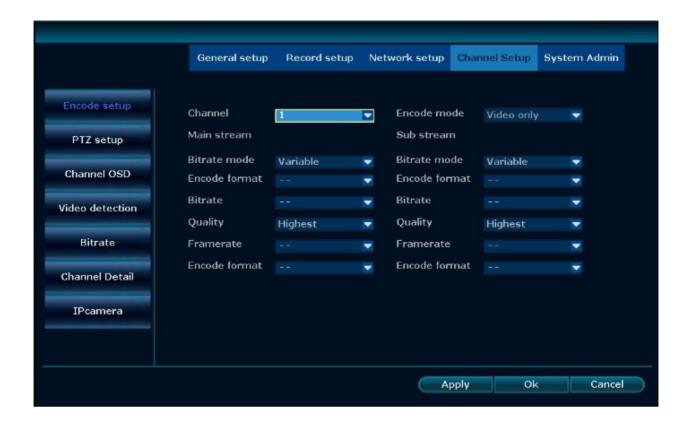


# 4.3.7. Encoding setup

**Functional explanation:** Check information such as IPC device stream, resolution, bit rate, frame rate, one frame interval, H.265 coding level and so on.

#### **Operational steps:**

- 1, Right click on the main interface of the system, in the pop-up menu right-click "Video Management". Enter the video management interface, click to select any of the IPC device which has been added;
- 2, Left click on the channel setup, in the IPC stream setup interface to check the corresponding information of the channel. As shown below:





- Stream selection has the main stream, sub-stream optional. In the case of better network conditions, device self-adaptation choose the main stream, to get a more high-quality screen. In the case of poor network conditions, the device self-adaptation will select the secondary stream, to ensure the fluency of the monitor.
- Resolution has 720 \* 576,960 \* 576, 1280 \* 720 and other grades can choose, the higher the resolution, the better quality.

#### 4.3.8 Stream value

Functional explanation: Check the stream values for IPC devices in each channel.

**Steps:** Right click the main interface, in the shortcut menu, select the system setup, and then select the channel setup-> stream value. As shown below:



## 4.3.9 Channel details

**Functional explanation:** Check the device name, resolution, stream value, video frame rate, and software version of the IPC device in each channel.

#### Steps:

1. Right click the main interface, in the shortcut menu, select the system setup and then select the channel setup -> channel details. As shown below:



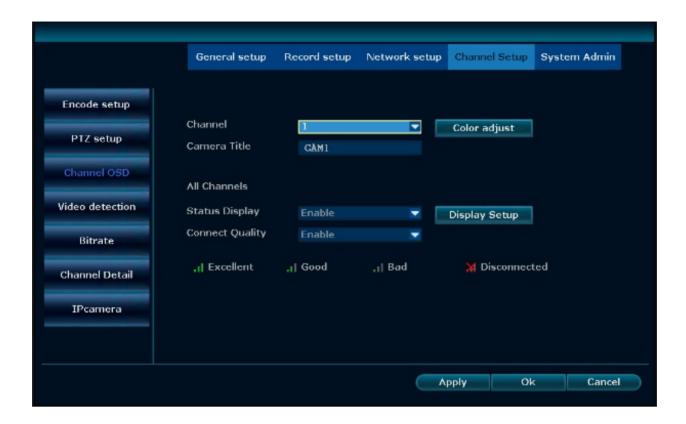
2. Click Refresh, you can search the camera in current channel and you can check the channel name of the device, resolution, stream value, video frame rate, software version details.

# 4.3.10 Channel OSD

**Functional explanation:** You can adjust the color of the IPC device in each channel and change the currently displayed channel name. Enable the status display and the communication quality, the icon of the communication situation is displayed in the multi-screen of the main interface. Display setup can adjust the specific location of the icon. According to the corresponding icon to determine the current camera connection and communication quality.

#### Steps:

1, Right click the main interface, in the shortcut menu, select the system setup, and select the channel setup -> channel OSD. As shown below:

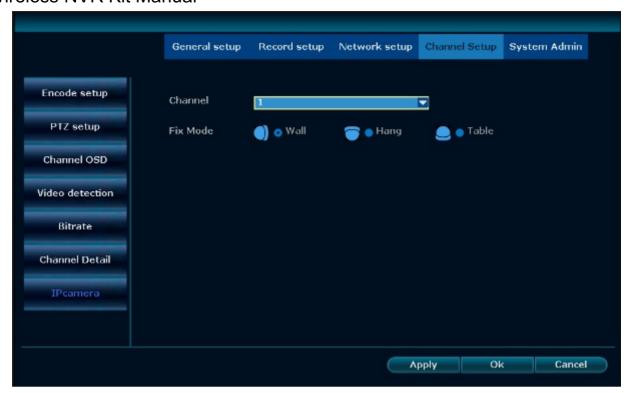


- 2, Select the color adjustment, enter the color adjustment interface. Can adjust chroma, brightness, saturation, contrast, and bright and soft.
- 3, Select the display setup, enter the location of communication icon adjustment. Can select position and magnification.

### 4.3.11 Camera

**Functional explanation:** You can set the panorama camera installation mode Steps:

1, Right Click the main interface, in the shortcut menu, select the system setup, and select the channel setup -> camera. As shown below:



- 2, Select the corresponding channel, the installation mode can choose wall, hanging, desktop Explanation
- The installation mode can be selected only when the panorama camera is connected
- Currently can support the Panoramic cameras which support the N1 protocol

# 4.4 Network setup

## 4.4.1. Network setup

**Explanation:** If the device is used for network monitoring, the network must be set up for normal use. Factory default IP address: 192.168.1.114.

#### Steps:

1, Right click the main interface, in the shortcut menu, select the system setup, and then select the network setup. The basic setup for the network setup is shown below:



- 2, Set the network parameters. In the network setup of the "network setup" modify the device's IP address, subnet mask, gateway and other information. You can check the automatic access to IP. Check the P2P and displays the ID for remote monitoring.
- 3, After setup, click the "Apply" button to save the setup, or click the "OK" button to save the setup and exit the settings interface.

#### **Detailed function list:**

Function name	Function description	Remarks
VD 11	Used to set the IP address of the device, if	When you cancel the Automatically
IP address	you set the IP address manually, you can	getting IP checking box button, you
	manually enter the IP address.	can manually set the IP.
	When this function is checked, the ID	
Cloud (P2P)	number is displayed and which is used for	
	remote monitoring	
Subnet mask	Used to set the subnet mask for this device.	
Gateway	Used to set the gateway address of the	
	device.	
Physical address	Used to set the hardware address of the	Need to avoid the same physical
	device.	address of the device in Lan.
Web port	In the network, used to send video and other	Web pages, PC clients and mobile
	control signals, the default is 80.	phones all use this port.

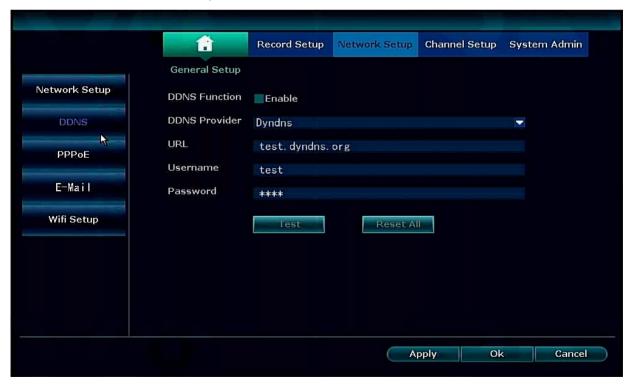
Automatically get IP	When this function is checked, the IP address of the device is set to be acquired automatically. Otherwise, it will be set manually.	When using the DHCP function, you cannot manually modify parameters such as IP.
Network diagnostic information	If the turning on function is checked, the network diagnostics function is enabled	Support for diagnostic types include: network card exception, network parameter configuration exception, IPC connection error diagnosis
Network status	Notify the current network status	If the ID number is not online, it can be operated according to the notifying information.

## 4.4.2. Dynamic domain name

**Function explanation:** If the device does not have a fixed access address, using DDNS (dynamic domain name resolution) to access the device through the domain name, you can effectively solve the trouble brought by dynamic IP to access the equipment.

### Steps:

1, Right click the main interface, in the shortcut menu, select the system setup, and then select the network setup -> dynamic domain name. As shown below:



- 2, Check to turn on the DDNS check box.
- 3, Fill in the domain name, user name and password information.
- 4, Click the "Apply" button to save the setups.

Explanation

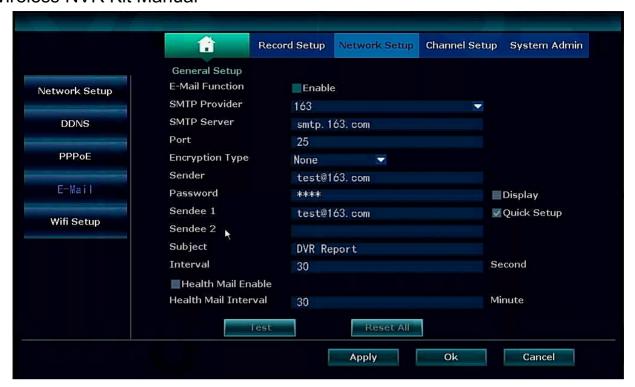
The NVR currently supports 3322, changeip, no-ip, dyndns, oray. If the check box is unchecked, the dynamic domain name information will not be edited.

# 4.4.3. (Intentionally Left Blank)

### 4.4.4. E-Mail

**Function explanation:** For the alarm and video test results to inform the user by mail. **Steps:** 

1, Right click the main interface, in the shortcut menu, select the system setup, and then select the network setup -> E-Mail. As shown below:



- 1, Check the E-Mail function to open the check box.
- 2, Fill in the SMTP server, port, user name, sender, recipient and other information.
- 3, Click the "test" button. After the test successfully made, click "Apply" to save the setup.

#### Detailed function list:

Function name	Function explanation	
SMTP server	The input format is smtp.mailbox server name .com, for example smtp.126.com	
User name	Mailbox full user name, For example 123456@126.com	
Password	Email Password	
Encryption type	The default can choose to not select, if the test fails, then modify to SSL	
Sender	The sender's full email address, need to be consistent with the user name, for example 123456@126.com	
Recipient	The recipient's full email address can be used to receive mail from the sender's address	
interval	The time interval for receiving mail	
Health mail interval	The time interval for sending messages when the device is running normally	

### Explanation

After the E-Mail setup is completed, you need to set the alarm setup and video detection to send mail. The health mail interval will only take effect after checking the turn on checking box.

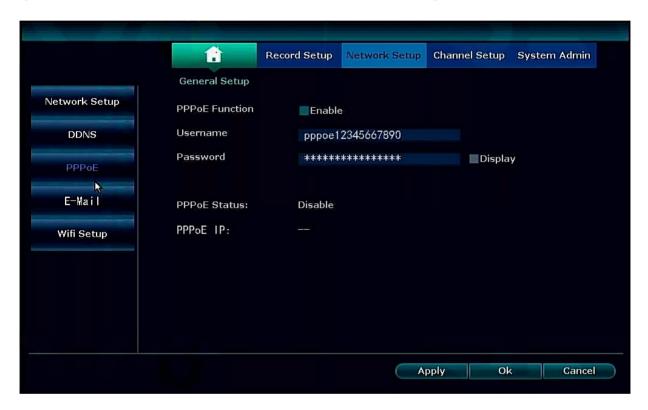
If the E-Mail function does not work properly, please make sure that the mailbox is enabled for the SMTP service and the e-mail account security settings allow usage with the recorder.

### 4.4.5. PPPoE

Function explanation: Support dial-up Internet access.

#### Steps:

1, Right click the main interface, in the shortcut menu, select the network setup -> PPPoE. As shown below:



2, Check the Enable box, in the edit box, enter the user name and password provided by ISP.

#### Explanation

A check in the box means PPPoE dial-up Internet access is enabled. No check means the service is disabled.

## 4.4.7. Wireless setup

#### Steps:

1. Right click the main interface, in the shortcut menu, select the network setup -> wireless setup. As shown below:



Click Reset to restore the information of the wireless module to the factory setup.

### 4.5 PTZ setup

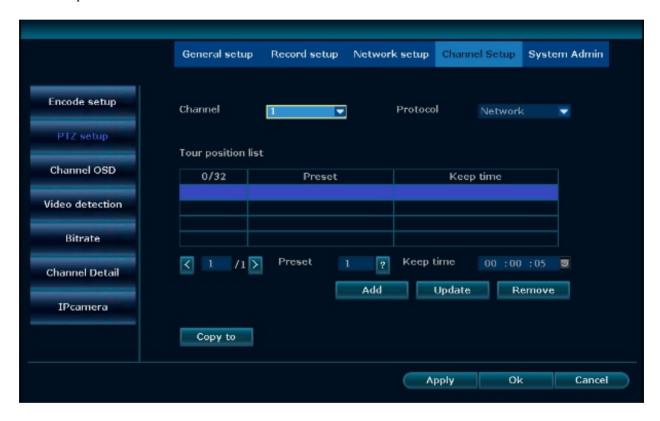
## 4.5.1 PTZ parameter setup

### **Operation prerequisites:**

Before the user controls the IP channel or the PTZ, please make sure that the network between the PTZ decoder and the NVR is connected normally in advance and that the device PTZ decoder parameters are configured.

### Steps:

1, Right click the main interface, in the shortcut menu, select the system setup, and then select the PTZ setup in the channel setup. As shown below:



The corresponding operation is explained below:

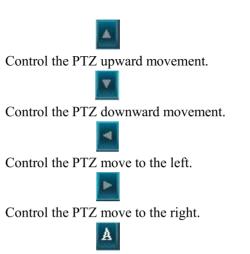
Operation object	Function
Channel	Select the target channel which need to be set.
Protocol	The selection must be consistent with the PTZ protocol.
Device address	Enter the address of the specified decoder.
Baud rate	Select the baud rate which matching the connected PTZ.
Copy to	In the right selecting box of the "copy to" button, select the target channel, click the "copy set to" button, the system will apply the current channel setup information to other target video channel.

# 4.5.2 PTZ control operation

- 1, In the main interface, double-click the preview interface which need to be set
- 2, Right-click in the preview interface and select PTZ control in the shortcut menu, as shown in the following figure



### Operation explanation:



Control PTZ automatic circular motion

- + : Adjust the zoom +, focal length +, aperture +.
- : Adjust the magnification -, the focal length -, the aperture -.

# 4.5.3 PTZ automatic cruise setup

#### Steps:

- 1, Right click in the main interface, in the shortcut menu, select the system setup, and then select the PTZ setup in the channel setup.
- 2, Click on the right side of the preset "?" button to enter the control interface, set the preset point.
- 3, Select the preset position and set the direction.
- 4, Right-click to return to the setup interface, set to hold time.
- 5, Click the New button to complete a preset point of the setup.
- 6, Repeat the above steps 2-5 by setting the other preset points.
- 7, After setup, check the cruise and start checking boxes and change the pan / tilt speed as needed. As shown below:



8, Right click to return to the setup interface and click the Apply button to save the setups.

Explanation

Preset position is the cruise point of the cruise patrol.

- Hold time is the time the dome camera stays at this preset point.
- Cruising speed is the rotating speed of the dome camera from one to another point.

## 4.6 Recording

### 4.6.1 Manual recording

**Functional explanation:** With the manual recording function, the user can quickly turn the video on or off. **Steps:** 

1, Right click in the main interface, select the manual menu in the shortcut menu. As shown below:



- 2, Check the channel you want to record.
- 3, To enable manual recording for all channels, click the "Open All" button.
- 4, To turn off manual recording for all channels, click the "Close all" button.
- 5, After selecting, click "OK" button to complete the manual recording configuration.

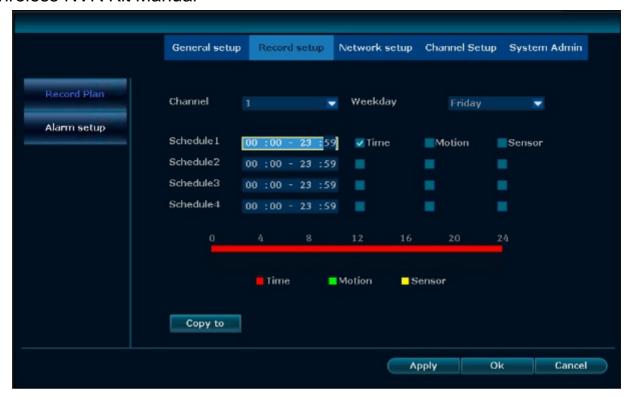


Recording priority: Alarm recording> Mobile recording> Manual recording> Timed recording

## 4.6.2 Timed recording

**Function description:** Set the timer recording function, the system will record in the time period set by the user. **Steps:** 

- 1, Right click on the main interface, select and click System Setup in the shortcut menu.
- 2, Click the recording setup, click the recording plan. As shown below:



- 3, Use the drop-down box to select the channel and week which need to set the timed recording.
- 4, Set the time period for the scheduled recording, check the time check box.
- 5, If the other channels are the same as the channel recording schedule setup, click "Copy to" and check the other channels or all to copy the setup of the channel to other channels.
- 6, Click the "Apply" button to save the setups.



- Time video can be set to a total of four video time periods the user can set according to their own needs. If you need 24 hours recording, you only need to set the time period 1 from zero to 24 o'clock, other time periods do not need to be set.
- The time period set by the user will be displayed in color bar. User can visually see whether the set time period meets their own needs.

## 4.6.3 Motion detection recording

**Function explanation:** Set the motion detection video, the system will record when detecting the movement of objects.

- 1. Right click on the main interface and select System Setup from the shortcut menu.
- 2. On the System Setup screen, click Video Setup and select the recording schedule.
- 3. Select the channel and the week that needs motion detection.
- 4. Check the motion checking box.
- 5. Set the motion detection area and sensitivity, the specific steps are as follows:

In the Channel Setup interface, select and click "Video Detection".

Select the channel you want to set and sensitivity.

Detection Type Select "Motion".

Click the "Apply" button to save the setup.



- If you need to set motion detection for other channels, repeat the above steps.
- The default sensitivity for video detection is "higher".

## 4.6.4 Alarm recording

Function explanation: Turn on the alarm recording function, the system will record when detecting the alarm input.

#### Steps:

- 1, Right click on the main interface and select System Setup in the shortcut menu.
- 2, In the "System Setup" interface, select the alarm setup for the recording schedule. As shown below:



3, Select the alarm type, alarm serial number and alarm area, trigger the type of alarm, click "Add". Waiting 30 seconds, there will prompt "add success".

- 4, After adding successfully, you can set the alarm continuity, video channels and video alarm mode.
- 5. Select the channel that needs to trigger the recording.
- 6, For the alarm recording plan configuration, refer to "4.6.2 Recording Plan Configuration Method of Timed Recording", and check the "Alarm" checking box.
- 7, Click the "OK" button to save the alarm recording setup.



- If you need to set the alarm input of other network cameras, please repeat the above steps.
- If the other alarm inputs are consistent with this alarm input setup, select the channel and click the "Copy to" button.

## 4.7 Video playback

### 4.7.1 Fast playback

**Function explanation:** Open the fast playback function, the user can quickly retrieve the latest video data. **Steps:** 

- 1, Right-click on the main interface and select Video Playback in the shortcut menu.
- 3, In the sub-menu, the user can click to select 5 minutes, 10 minutes, 30 minutes playback time and select any playback channel based on needs As shown below:



# Explanation

• Before making video playback, make sure that the device is properly connected to the hard disk and turned on the recording function.

### 4.7.2 Regular playback

**Function explanation:** Open the regular playback function, the user can retrieve video data according to the record video type and time.

#### Steps:

- 1, Right-click on the main interface and select Video Playback from the shortcut menu.
- 2, In the sub-menu, select the manual search, enter the "video playback" interface. As shown below:



- 3, Check the channel which needs to be retrieved and the recording mode.
- 4, Set the search period and click the "Search" button.
- 5, Waiting about 30 seconds, in the retrieved video, drag the play bar to the point that you want to play
- 6, Click the Video Playback button. The playback interface progress bar is shown below:

Figure: video playback instructions

Button	Description	Button	Description	Button	Description
Ш	Pause		Start	<b>*</b>	Speed



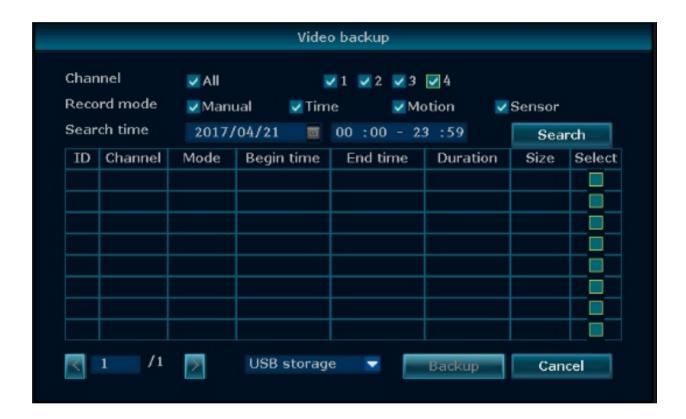
• The playback progress can be controlled by the below playback time bar.

• Support 2 times / 4 times / 8 times / 16 times the speed of playback.

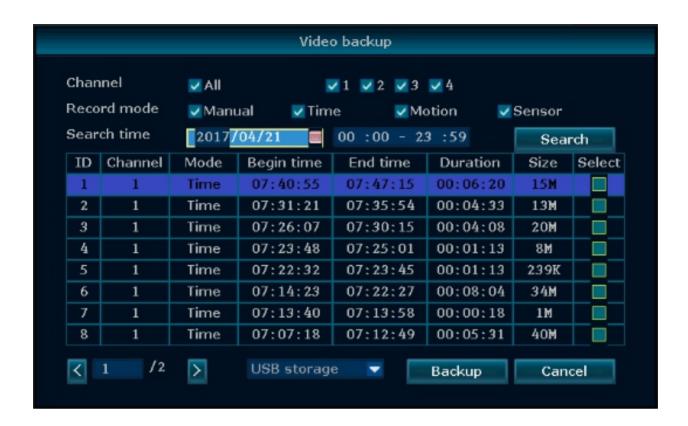
## 4.8 Video backup

Function explanation: Recording files can be backed up to USB flash disk for storage.

- 1, Insert the USB flash disk into the USB port of the device.
- 2, Right click the main interface, select "video backup" in the shortcut menu, and enter the "video backup" interface. As shown below:



- 3, Check the channel you want to retrieve and select the recording mode.
- 4, Set the search period and click the "Search" button.
- 5, Wait for about 30 seconds, then system search the video data according to the requirement.
- 6, In the list box, use the left mouse button to select the video you want to backup, click the "video backup" button. As shown below:





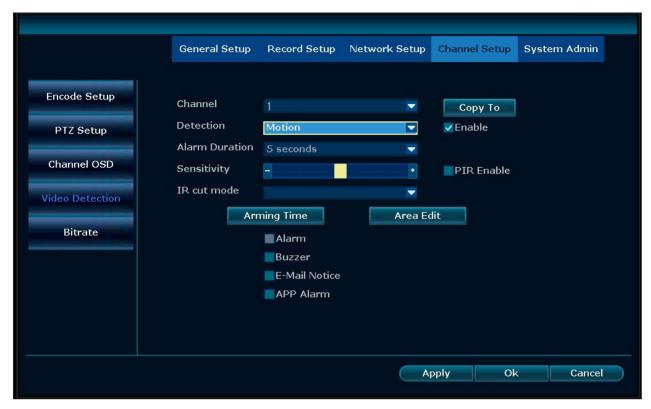
- After the search is complete, the user can see the start time, end time, duration and storage size of the video data.
- To ensure successful video backup, make sure the USB flash disk has enough storage space.

## 4.9 Alarm

### 4.9.1 Motion detection alarm

**Function description:** When an object is detected in the selected screen, the device will trigger an alarm. **Steps:** 

- 1, Right click the main interface, select "System Setup" in the shortcut menu, enter to the "System Setup" interface.
- 2, Select Channel Setup -> Video Detection. As shown below:



- 3, Select motion for the type of detection, check to turn on the check box.
- 4, Set the motion detection sensitivity.
- 5, Select the alarm duration, check the motion detection processing method, select the arming time and alarm area
- 6, Click the "Apply" button to save the setup.

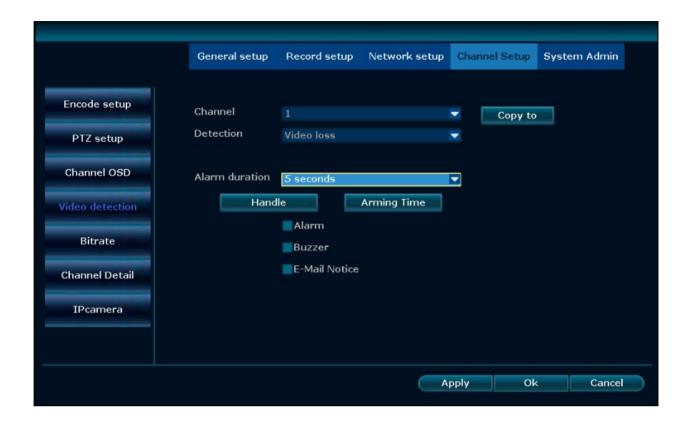


- Sensitivity selection has five grades: highest, higher, moderate, lower, lowest. The higher the sensitivity, the more the moving objects are likely to be detected.
- Mobile detection processing methods are alarm, buzzer, E-Mail notification, and mobile phone APP alarm.
- If you choose the alarm for the motion detection processing mode, you need to select the work mode as "normally open" in the video setup -> alarm setup.
- Check the mobile phone APP alarm, you can send motion detection alarm information to the REVO Wireless mobile app.

### 4.9.2 Video loss alarm

**Function explanation:** Alarm/Alert if you lose the video signal of a channel.

- 1, Right click the main interface, select "System Setup" in the shortcut menu, and enter the "System Setup" interface.
- 2, Select Channel Setup -> Video Detection.
- 3, Select "Video Loss" as Detection Type. As shown below:



- 4, Set the alarm duration period, check the motion detection processing methods and arming time
- 5, Click the "Apply" button to save the setup.



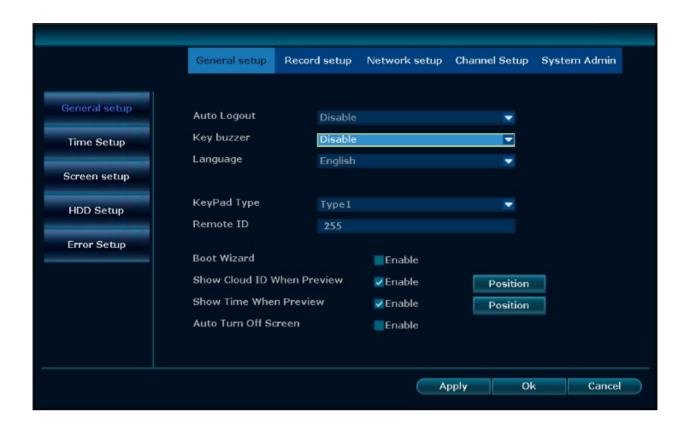
• If the other channel setup are the same as the channel, select the channel and click "Copy to".

## 4.10 General Setups

# 4.10.1 General Setups

Function explanation: Make setups for frequently used functions.

- 1, Right click the main interface, select "System Setup" in the shortcut menu, and enter the "System Setup" interface.
- 2, Select General Setup -> General Setup. As shown below:



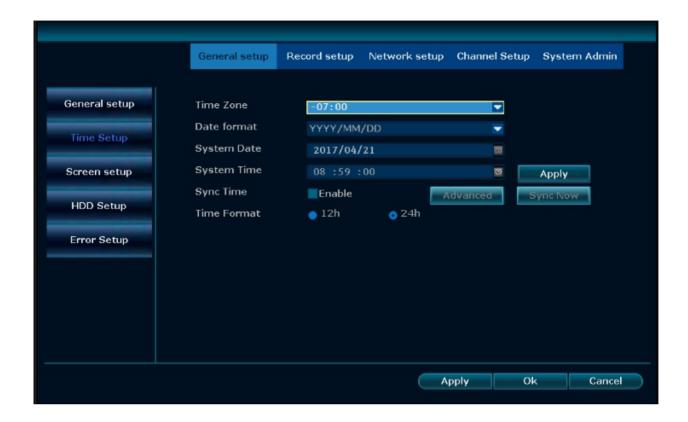
The operation is explained in the table below:

Operational target	Explanation
Automatic logout	Select whether the system is automatically logged off without operation.
Button sound	Select whether to turn on the button sound of the control panel.
Language selection	Select the language of the different countries as needed.
Remote control switch	Select whether to allow remote control using.
Boot wizard	Select whether to enable the wizard when starting up.
Show the Cloud ID	Select whether to display the Cloud ID and online status in the preview
when previewing	interface.

## **4.10.2** Time setup

Function explanation: Set the system time zone, date, time and daylight saving time.

**Steps:** Right click the main interface, select the system setup -> General Setup -> time setup. As shown below:



# 4.10.3 Screen setup

Function explanation: Set the screen parameters.

**Steps:** Right click the main interface, select the system setup -> General Setup -> screen setup.



The operation is explained in the table below:

Operational target	Explanation
Monitor adjustment	Set the hue, brightness, saturation, and contrast of the graphics
OSD transparency	You can modify the transparency of the interface.
VGA Resolution	Select the resolution that will adapt to the screen.
Auto Switch	Sequence channel to next channel automatically



- Skip Video Loss means that no image will appear on the screen if the screen is not displayed when cruising.
- 1 screen, 4 screens means the cruise number of automatic cruising.

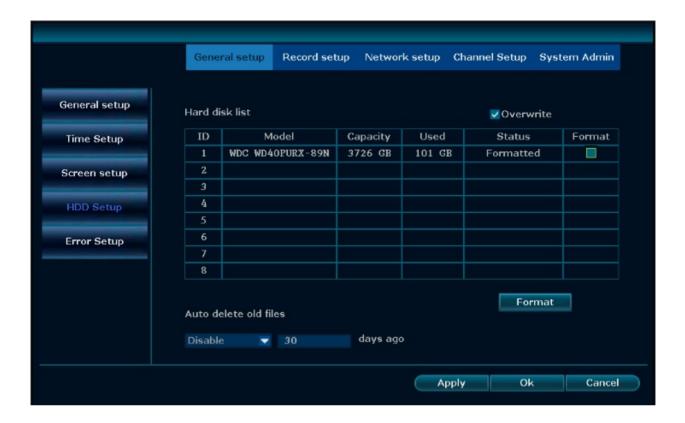
## 4.10.4 Hard disk setup

Function explanation: Can format the hard disk and other operations.

Steps:

51

- 1, Right click the main interface, select and click "system setup", enter the "system setup interface".
- 2, Select General Setup -> Hard Drive Setup. As shown below:



- 3, You can see all the information the device connected to the hard disk, including model, capacity, status, formatting status.
- 4, Select to check for automatic coverage as needed.
- 5, To format the hard disk, left-click to select the hard disk and click the Format button.
- 6, To delete the old file automatically, select "User-defined" in the drop-down box and fill in the number of days.
- 7, Click the "Apply" button to save the setups.

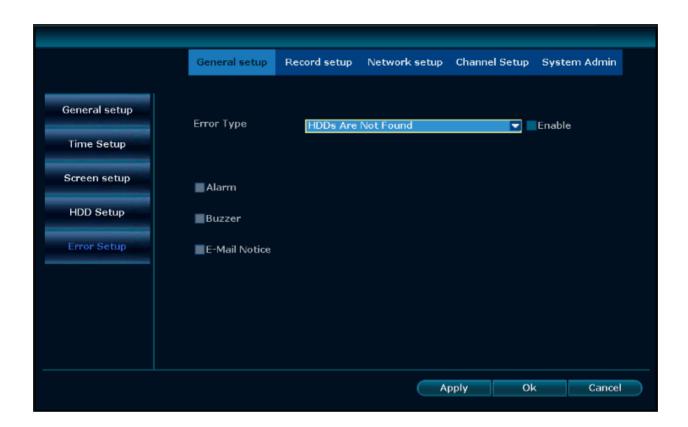
# Explanation

- Check the automatic coverage means that the hard disk will automatically overwrite the oldest video data when the video is recorded fully.
- Clicking the format button will pop up "all data will be lost after formatting the hard disk! Click "OK" button to start formatting the hard disk when seeing whether to confirm continuing the "dialog box.
- Automatically delete the old file. Customer define the video can be deleted after how many days. The day's setup is set with the numeric keypad. The maximum is 255 days. If you select off then cannot be set.

### 4.10.5 Error Setup

**Function description:** You can set the alarm mode for the system's exception type **Steps:** 

- 1, Right click the main interface, select and click "system setup", enter the "system setup interface".
- 2, Select the General Setup -> Error Setup. As shown below:



- 3, Select the exception type, click "Open", and select the alarm mode.
- 4, Click "Apply" to save the setup.

## 4.11 Equipment maintenance and management

## 4.11.1 System message

#### **Version Information**

Function explanation: The user can check the device name, device model, device serial number, hardware version, software version, build time and other information.

#### Steps:

Right click the main interface, select the system setup in the shortcut menu, and then select the system management - > version information. As shown below:





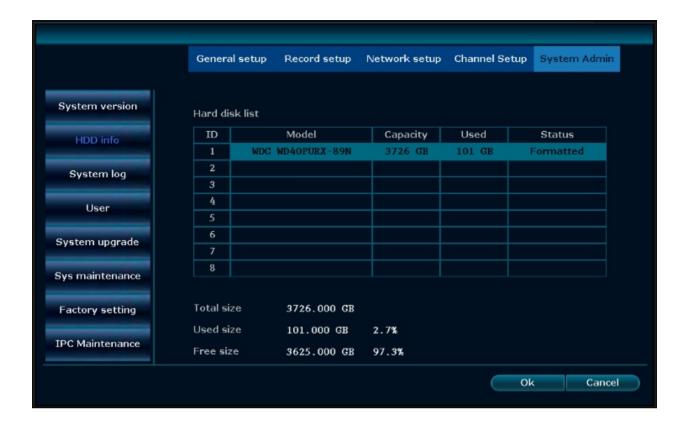
• Version information for our late maintenance has a very important significance, the user needs to provide the appropriate version information when in need of maintenance.

#### Hard disk information

Function explanation: The user can check all the hard disk models the device has accessed, capacity, usage, status, total capacity, total consumption and total margin and other information.

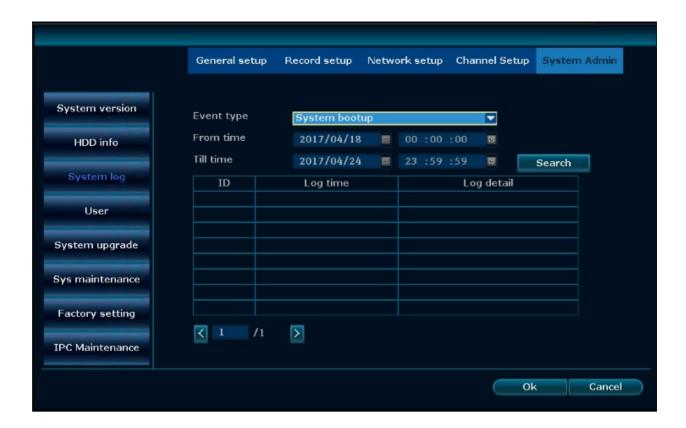
#### Steps:

Right click the main interface, select the system setup in the shortcut menu, and then select the system management - > hard disk information. As shown below:



### Log information:

Function explanation: The user can check the corresponding log information according to the time type, start time and end time. As shown below:



#### Steps:

- 1. Right click the main interface, elect the system setup in the shortcut menu, and then select the system management
- -> log information.
- 2. Select the time type in the drop-down menu.
- 3. Set the start time and end time, click the "search" button, you can view the corresponding log information.

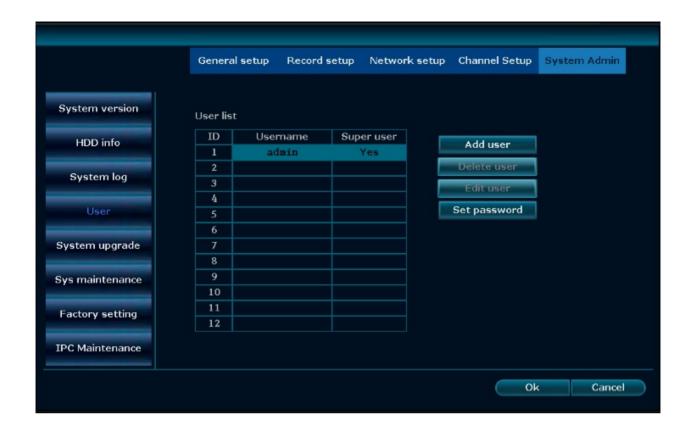


- Click on the next page to read the log.
- Log stored in the hard disk, the log information will be lost after the hard disk formatted.
- The time type is available: system start-up, system shutdown, system configuration revision, video, alarm, device warning and all.

## 4.11.2 User Management

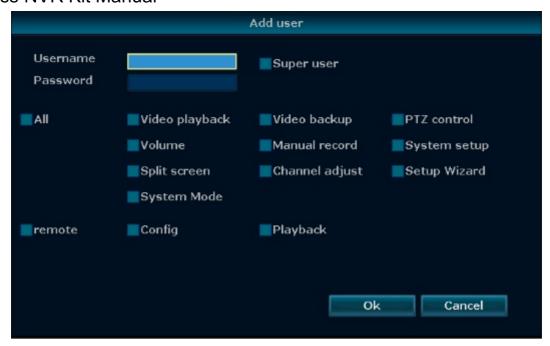


- The default administrator name is admin and the password is empty.
- Administrators can add, remove, and edit user rights.



#### Add the user

- 1, Right click the main interface, in the shortcut menu, select the system setup, and then select the system management -> user management.
- 2, Click the "New User" button to enter the "New User" interface. As shown below:



- 3, Enter the new user name and password.
- 4, Select the authority the user has, the super user default has all the permissions.
- 5, Click the OK button to see the newly added user in the user list.

#### Permission explanation:

Video playback: You can retrieve and playback the recording data stored in the hard disk.

Video backup: You can back up the video data that stored in the hard disk by USB flash disk.

PTZ control: Control the direction of the movement, PTZ cruise.

Output volume: Controls the audio output volume size.

Manual recording: You can manually open the video at any time.

System setup: Contains general setup, video setup, network setup, channel setup and system management.

Split screen selection: Single screen and multi-screen switch.

Channel adjustment: You can adjust the brightness, hue, saturation, and contrast of the screen.

Setup Wizard: Start-up and guide user to make basic setups.

System mode: Set the system mode.

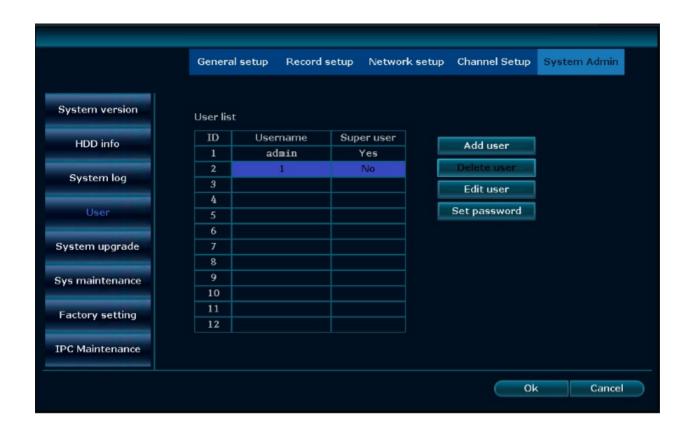
Remote viewing: Can be previewed remotely.

Configuration: Configure device parameters when logging on remotely.

Remote video playback: You can play back video data remotely.

#### Delete users

- 1, Right click the main interface, in the shortcut menu, select the system setup, and then select the system management -> user management.
- 2, Left click to select the user name, click the "delete user" button. As shown below:



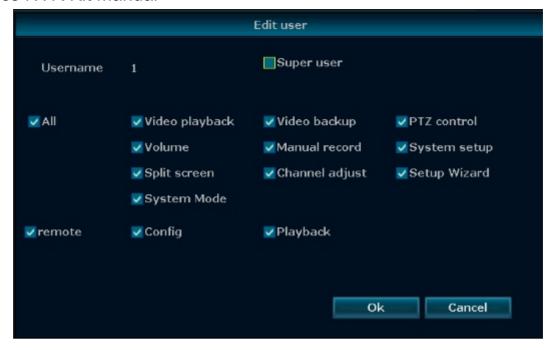
3, In the delete prompt box, click "OK". You can see the user is deleted in the user list.



• Super users cannot be deleted.

#### Edit user

- 1, Right click the main interface, in the shortcut menu, select the system setup, and then select the system management -> user management.
- 2, Left click and select user name and click the "Edit User" button. Go to the Edit User interface. As shown below:



- 3, Re-edit the user's permissions.
- 4, Click the "OK" button to save the settings.



Super users cannot be edited.

### **Change Password**

- 1, Right click the main interface, in the shortcut menu, select the system setup, and then select the system management -> user management.
- 2, Left click and select the user name and click the "Change Password" button. Access to the modified password interface. As shown below:



- 3, Fill in the old password and set a new password.
- 4, Click the "OK" button to save the setup.

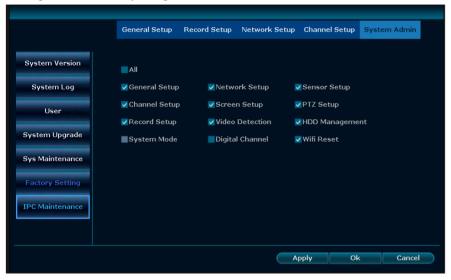


- Super user factory default password is empty.
- The current login non-super user, can only modify the current user password, cannot create, delete, edit the user.

### 4.11.3 Restore to the factory setting

#### Steps:

1, Right click the main interface, in the shortcut menu, select the system setup, and then select the system management -> factory setup. As shown below:

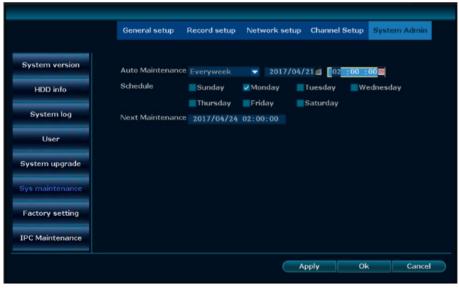


- 2, Check the option that needs to restore factory setups and click the "Apply" button
- 3, Select the "OK" button in the prompt interface.

## 4.11.4 System maintenance

### Steps:

1, Right click the main interface, in the shortcut menu, select the system setups, and then select the system management -> system maintenance, as shown below:



- 2, Automatic maintenance select turning on.
- 3, Select the specific time, check the time period.

4. Click OK.

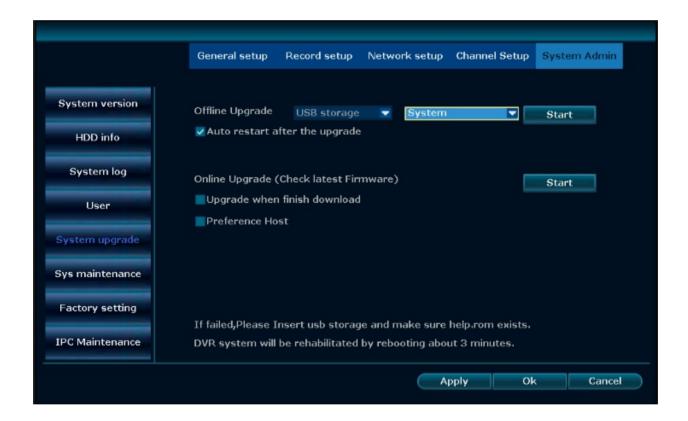
### 4.11.5 Software upgrade

**Function explanation:** Software upgrades are used for user firmware upgrades.

Steps:

Method one:

1, Right click the main interface, in the shortcut menu, select the system setup, and then select the system management -> software upgrades. As shown below:



- 2, Put the prepared firmware to the USB flash disk root directory and insert the USB flash disk into the USB port.
- 3, Click the USB storage device System Start.
- 4, In the progress bar you can see the progress of the system upgrade, wait for the system upgrade to complete, the device will then restart.

#### Method 2:

- 1, Right click the main interface, using fast network to see if the network status is normal, if not normal, please complete the network configuration as described above.
- 2, Right click the main interface, in the shortcut menu, select the system setup, and then select the system management -> software upgrades.
- 3, Find online upgrade, check the "automatically upgrade after downloading", click to start.
- 4, If there is a new version, the system will automatically download the firmware, self-upgrade. In the progress bar

you can see the progress of the system upgrade, wait for the system upgrade to complete, the device will restart.

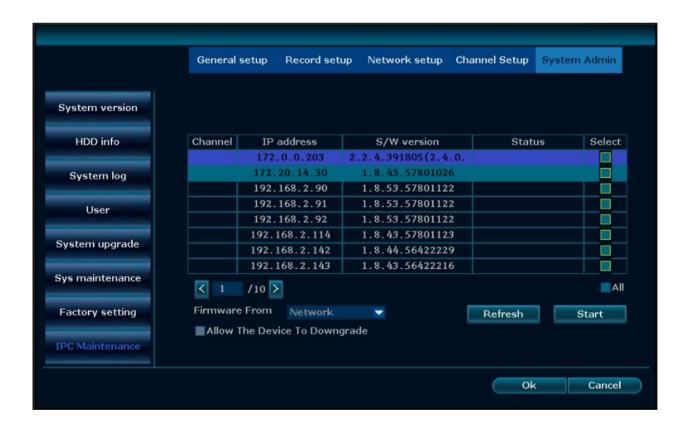


- Before using USB flash disk connect to the USB port to do the system upgrade, please ensure that the upgrade file placed in the root directory of the U disk.
- The type of software upgrade has system, boot screen and resources.
- Do not power off when upgrading, otherwise it will cause the unit cannot start.
- Select the online upgrade, please ensure that the device has been successfully connected.
- Online upgrade can be customized server address, port, and network path.

### 4.11.6 IPC Maintenance

**Function explanation:** IPC maintenance using for firmware upgrades of IPC. Steps:

1, Right click the main interface, in the shortcut menu, select the system setup, and then select the system management -> IPC maintenance, as shown below. Click to refresh, you can search the current camera in the LAN. The searchable camera will show the current channel it is in, the IP address port, and the current software version.



2, Put the prepared IPC firmware into the USB flash disk, insert it in to the USB Port behind the recorder. Check the

selection. Click to start.

3, In the progress bar you can see the progress of the system upgrading, wait until the upgrade is complete, the camera will then restart.



• IPC upgrade only for specific protocol IPC, if you cannot search for upgrades, it means this camera does not support this feature.

# 5. WEB Access

### 5.1 Introduction

Product embedded WEB server, support remote WEB access. After the device is connected to the network, the user enters the IP address of the device in the browser address field to realize remote WEB access.



• Support IE, Chrome, Firefox and other browser access.

### 5.2 LAN access

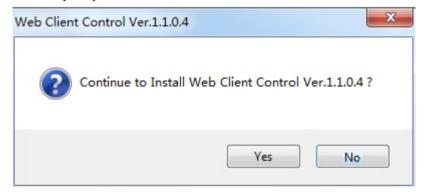
## 5.2.1 Log in

Specific steps are as follows:

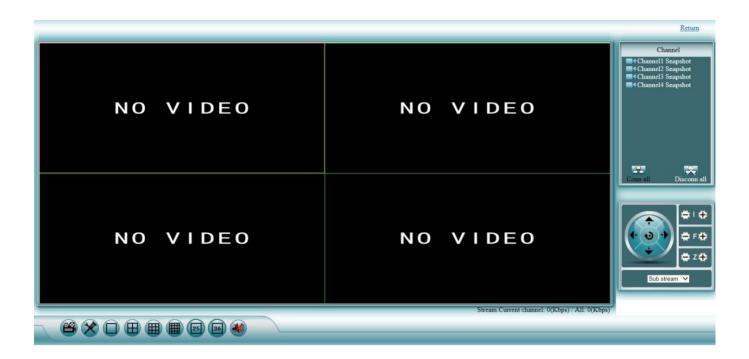
- 1, Open the browser.
- 2, Enter the IP address of the NVR in the browser address bar: http:// IP address. For example, enter http://192.1.1.28. Go to the "login" interface, shown below:



- 3, Enter the user name and password correctly.
- 4, Click "Login" to enter the preview interface. As shown below:
- 5, The first time you follow the prompts to download and run the WebClient.exe control. As shown below:



6, Log in again to preview the interface normally. As shown below:

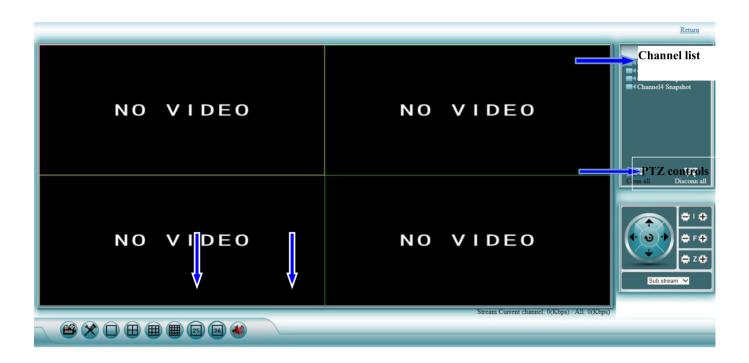




- IP address can be checked in the system setup -> network setup.
- Support multiple users log in at different PC terminals.
- If the web page port number is modified (default is 80), when input IP address in the browser, you need to enter the port number after the address, such as 192.168.1.28:102.
- If you cannot load the software for the first time, you need to see the following setups for the browser: Tools -> Internet Options -> Security -> User defined level-> Active X controls and plugins are all selected to be enabled, and finally click "OK".

### 5.2.2 Preview

After login is successful, it will go to the preview interface, as shown below:



### **Configuration** Sound on / off

### Explanation

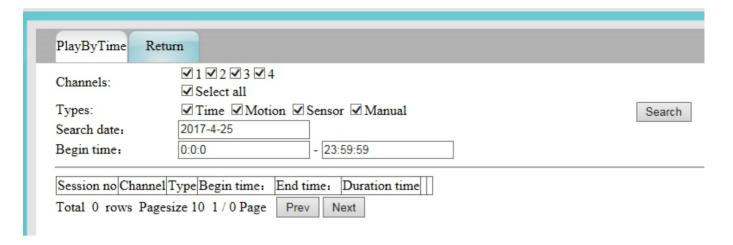
- Screen segmentation support 1, 4, 9, 16, 25, 36 screen segmentation.
- Support the main stream, sub-stream selection.

# 5.2.3 Playback

Specific steps:



- 1, Click the playback icon in the preview interface.
- 2, Enter the playback interface, as shown below:



- 3, Set the search time and type, channel, click the "Search" button.
- 4, Select the playback channel to play back the recording data normally.

Explanation

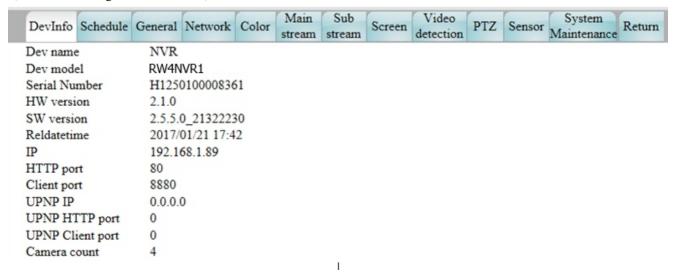
• When a non-super user logs in, please make sure that the user has remote playback permission. You can check and give users a remote video playback permission in the System Setup -> System Administration -> User Management -> Edit User.

## 5.2.4 Configuration

Specific steps:



- 1, Click the configuration icon in the preview interface
- 2, Enter the configuration interface, as shown below:





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- For the specific configuration functions, please refer to the system function introduction in this text.
- When a non-super user logs in, please make sure that the user has remote configuration rights. You can view and assign the user to remote configuration rights in System Management -> User Management -> Edit User.

### 5.3 Revo wireless cloud access

## 5.3.1 Revo wireless Cloud ID login

### Steps:

- 1, Open the browser.
- 2, Input https://www.revowireless.com. As shown below:



- 3, Enter the device ID, user name, and password correctly.
- 4, Click the Login button to enter the preview interface. As shown below:

# Explanation

- Device ID can be set by the system setup -> network setup, check P2P check box to obtain.
- Must be online to enable remote login.

## 5.3.2 Username login

Function explanation: User name login can resolve accessibility limitations since Cloud ID login can only manage single device.

#### Steps:

- 1, Open the browser.
- 2, Enter https://www.revowireless.com. Select "User name login", as shown below:



3, The first time, you can register according to the prompt information, after registration and then log in.



• Support Chinese and English language selection.

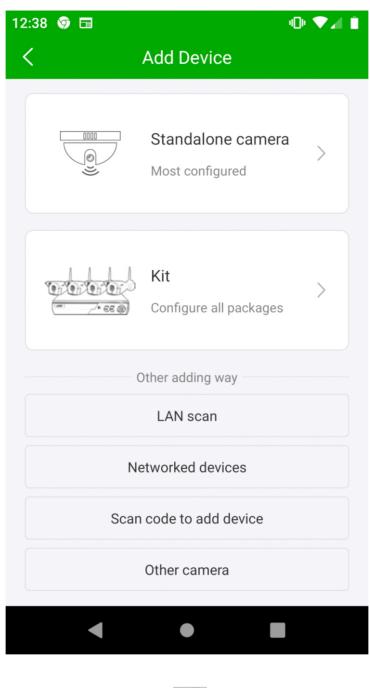
## 6. Mobile access

#### Steps:

1, App download.

Open the phone's app store and search "REVO Wireless", download and install the app.

2, After opening the software, as shown below:





#### Notice:

- The first time the installation is completed, the login page will pop up. If there is no login account, you may register an account. After the account login, every time you open the software, it will direct you into the device interface. You can follow the prompts to fill in the user name and password information, enter the mailbox (mailbox for forgetting the password to retrieve the password, you can skip), you can also click "local" to enter the mobile client to add equipment.
- Choose "local" to experience, each time you re-open the software will first enter the login screen
- After logging in to the account, the device information will be saved on the server. When you log in to the account in another phone, the device will be displayed automatically. No need to add it again. If you

choose to experience, the added device information cannot display in other mobile phone.

3, Add device. Click the top right corner "+", select the cloud ID, fill in the NVR connection information. As shown below:





### Explanation

- Click "+", Add device can choose cloud ID, IP / DDNS, LAN scan
- After the account login, system automatically identify the number of ID, click submission after adding then complete.
- Local mode, you need to choose the correct channel number, the default is 4.
- 4, Preview. Click on the added device to go to the preview. The default is 4 channels, you can choose a channel to preview. As shown below:



### Description

- Up to 16 channels can be previewed at the same time
- support 4/6/8/9/13/16 screen split to preview at the same time
- If the PTZ control is supported, can use the PTZ control button to operate.
- 5, Remote playback. In the preview interface, click remote playback to enter into the playback interface, as shown below:



### Explanation

- Remote playback can pull the vertical bar to select a specific period of time, click the channel to select a specific channel.
- Support 1 channel playback.
- If the video has sound, the playback will also have sound.
- Click on the video, can be recorded when playback, video saved in the phone.
- Click the screenshot to intercept the current playback screen.

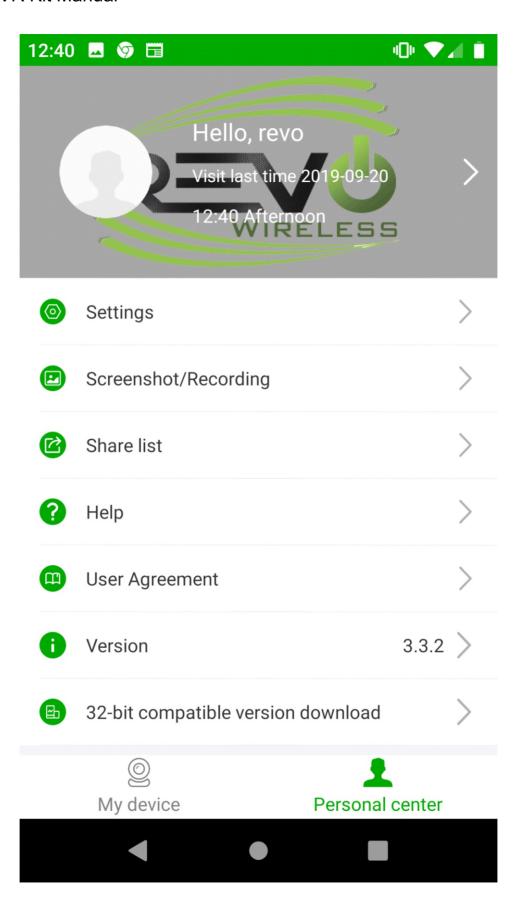
### 6, Snapshot / video / quality





- Click the screenshot to intercept the current screen
- Click and select video to save the video in your phone
- Click on the picture quality, can choose HD or SD, HD is the main stream, SD is sub-stream.

7, Mobile phone APP alarm. Click "me", enter the operation interface, select "alarm setup", and open the alarm message. You can see the alarm information after the app set alarm push and enter into alarm information section.



#### Explanation

- Need to use the account login, not using account login cannot set off the alarm
- Before adding a device, you need to set the alarm function in the app. A detailed reference, Please refer to 4.9.1 motion detection alarm, otherwise you cannot receive alarm information or even open the alarm setting.

# 7. Appendix

## 7.1 Hard disk capacity unit conversion

The device capacity unit conversion		Operating system capacity conversion	
В	1 B = 8 b	В	1 B = 8 b
MB	1 MB = 1000 KB	MB	1 MB = 1024 KB
GB	1 GB = 1000 MB	GB	1 GB = 1024 MB
ТВ	1 TB = 1000 GB	ТВ	1 TB = 1024 GB

# Explanation

• The capacity conversion of this device is the same with hard disk manufacturers, are using 1GB = 1000MB.

# 7.2 Video required capacity calculation

- 1. Single channel image per hour video file size:  $A=B \div 8 \div 1000 \times 3600$
- 2. N-channel images daily (24 hours) video file size:  $A=B \div 8 \div 1000 \times 3600 \times 24 \times N$
- 3. N-channel image recording D-day file size:  $A=B \div 8 \div 1000 \times 3600 \times 24 \times D \times N$

# Explanation

 A is the required hard disk capacity, B is the bit rate size, N is the number of video channels, D is the number of recording days.