DVR User’s Manual

V 1.02

Welcome

Thank you for purchasing our Cosmic DVR!

This user's manual is designed to be a reference tool for the installation and operation of your system.

Here you can find information about this series hybrid standalone DVR features and functions, as well as a detailed menu tree.

Before installation and operation please read the following safeguards and warnings carefully!

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

Keep upwards. Handle with care.
Do not apply power to the DVR before completing installation. Do not place objects on the DVR

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

The DVR should be installed in a cool, dry place away from direct sunlight, inflammable, explosive substances and etc.

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. Lithium battery

Improper battery use may result in fire, explosion, or personal injury!
When replace the battery, please make sure you are using the same model!

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1 FEATURES

1.1 Overview

The hybrid standalone series DVR is an excellent digital monitor product designed for security field.

It adopts embedded Linux OS to maintain reliable operation. Popular H.264 compression algorithm and G.711 audio compression technology realizes high quality, low bit stream. Unique frame by frame play function is suitable for detailed analysis. It has various functions such as record, playback, monitor at the same time and can guarantee audio video synchronization. This series product has advanced technology and strong network data transmission function.

This series device adopts embedded design to achieve high security and reliability. It can work in the local end, and at the same time, when connecting it to the Krypto Video Management System (KVMS), it can connect to the security network to realize strong network and remote monitor function.

This series product can be widely used in various areas such as banking, telecommunication, electric power, interrogation, transportation, intelligent resident zone, factory, warehouse, resources, and water conservancy.

1.2 Features

This series product has the following features:

- Real-time surveillance

Support VGA port and HDMI port. Realize the surveillance through displayer. Support HDMI, VGA, and TV output at the same time.

- Storage function

Special data format to guarantee data security and can remove the risk of the vicious data modification. Support digital watermark.

- Compression format

Support multiple-channel audio and video. An independent hardware decodes the audio and video signal from each channel to maintain video and audio synchronization.

- Backup function

Support backup operation via USB port (such as U disk, portable HDD, burner) Client-end user can download the file to local HDD to backup via network.

- Record & playback function

Support each channel real-time record independently, and at the same time it can support search, forward play, network monitor, record search, download etc. Support various playback modes: slow

play, fast play, backward play and frame by frame play. Support time title overlay so that you can view event accurate occurred time Support customized zoom function during the preview.

- Network operation

Support network remote real-time monitor, remote record search and remote PTZ control.

- Alarm activation function

Several relay alarm outputs to realize alarm activation and on-site light control. The alarm input port and output have the protection circuit to guarantee device safety.

- Communication port

RS485 port can realize alarm input and PTZ control. RS232 port can connect to keyboard to realize central control and can also connect to PC COM to upgrade system and realize maintenance, and matrix control. Standard Ethernet port can realize network access function. The dual-network port has the multiple-access, fault-tolerance, load-balance setup mode.

- PTZ control

Support PTZ decoder via RS485.

- Intelligent operation

Mouse operation function In the menu, support copy and paste setup function

- UPNP (Universal Plug and Play)

Establish mapping connection between LAN and WAN via UPNP protocol. Slight function differences may be found due to different series.

2 Overview of Navigation and Controls

2.1 Boot up and Shutdown

2.1.1 Boot up

Before the boot up, please make sure:

- The rated input voltage matches the device power on-off button. Please make sure the power wire connection is OK. Then click the power on-off button.
- Always use the stable current, if necessary UPS is a best alternative measure.

Please follow the steps listed below to boot up the device.

- Connect the device to the monitor and then connect a mouse.
- Connect power cable.
- Click the power button at the front or rear panel and then boot up the device. After device booted up, the system is in multiple-channel display mode by default.

2.1.2 Shutdown

Note

- When you see corresponding dialogue box “System is shutting down…” Do not click power on-off button directly.
- Do not unplug the power cable or click power on-off button to shutdown device directly when device is running (especially when it is recording.)

There are three ways for you to log out.

a. Main menu (**RECOMMENDED**)

From Main Menu Shutdown, select shutdown from dropdown list. Click OK button, you can see device shuts down.

b. From power on-off button on the front panel or remote control

Press the power on-off button on the DVR front panel or remote control for more than 3 seconds to shut down the device.

c. From power on-off button on the rear panel.

2.1.3 Auto Resume after Power Failure

The system can automatically backup video and resume previous working status after power failure.

2.1.4 Replace Button Battery

Please make sure to use the same battery model if possible.

We recommend replace battery regularly (such as one-year) to guarantee system time accuracy. Note:

Before replacement, please save the system setup, otherwise, you may lose the data completely!

2.2 Device Initialization

If it is your first time to use the device, please set a login password of **admin** (system default user).

Note
For your device safety, please keep your login password of **admin** well after the initialization steps and change the password regularly.

Steps:

a. Boot up device.

Device displays device initialization interface. See Figure 2-1

Figure 2-1

b. Set login password of **admin**.

- User name: The default user name is **admin**.
- Password/confirm password: The password ranges from 8 to 32 digitals. It can contain letters, numbers and special characters (excluding “.”, “,”, “;”, “:”, “&”. The password shall contain at least two categories. Usually we recommend the strong password.
- Prompt question: If you set the prompt question here. On the login interface, click, device can display the corresponding prompt question for you to remind the password.

WARNING
STRONG PASSWORD RECOMMENDED-For your device own safety, please create a strong password of your own choosing. We also recommend you change your password periodically especially in the high security system.

c. Click Next.

Device goes to unlock pattern interface. See Figure 2-2.

Figure 2-2

d. Set unlock pattern.

After set unlock pattern, device goes to password protection interface. See Figure 2-3.

Note

- The unlock pattern shall at least contain 4 grids.
- Device adopts unlock pattern to login by default if you have set pattern here. If there is no unlock pattern, please input the password to login.
- Click Skip if there is no need to set unlock pattern.

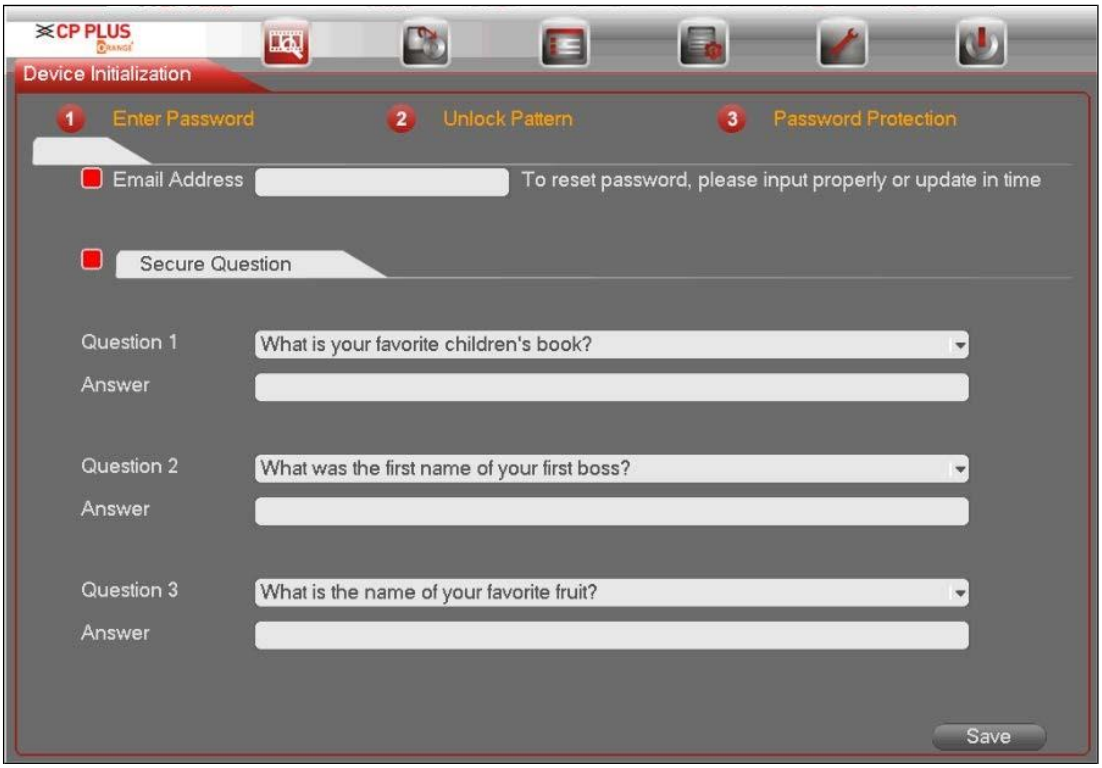


Figure 2-3

e. Set security questions.

Note

- After setting the security questions here, you can use the email you input here or answer the security questions to reset admin password. Refer to chapter 4.1.3 Reset password for detailed information.
- Cancel the email or security questions box and then click Next button to skip this step.
- Email: Input an email address for reset password purpose. In case you forgot password in the future, input the security code you got on the assigned email to reset the password of admin. If you have not input email here or you need to update the email information, please go to the Main Menu Setting System Account to set.
- Security question: Set security questions and corresponding answers. Properly answer the questions to reset admin password. In case you have not input security question here or you need to update the security question information, please go to the Main Menu Setting System Account to set.

f. Click OK to complete the device initialization setup.

Device goes to startup wizard interface. Refer to chapter 0 Quick Settings for detailed information.

2.3 Reset Password

If you forgot **admin** password, you can reset the password by email or by answering the security questions.

Steps:

a. Go to the device login interface. See Figure 2-4 or Figure 2-5.

- If you have set unlock pattern, device displays unlock pattern login interface. See Figure 2-4.
- Click “Forgot unlock pattern”, device goes to Figure 2-5.
- If you have not set unlock pattern, device displays password interface. See Figure 2-5.

Note

Click Switch user button in Figure 2-4 or click the user name in Figure 2-5 and then select a user from the dropdown list, you can login via other account.

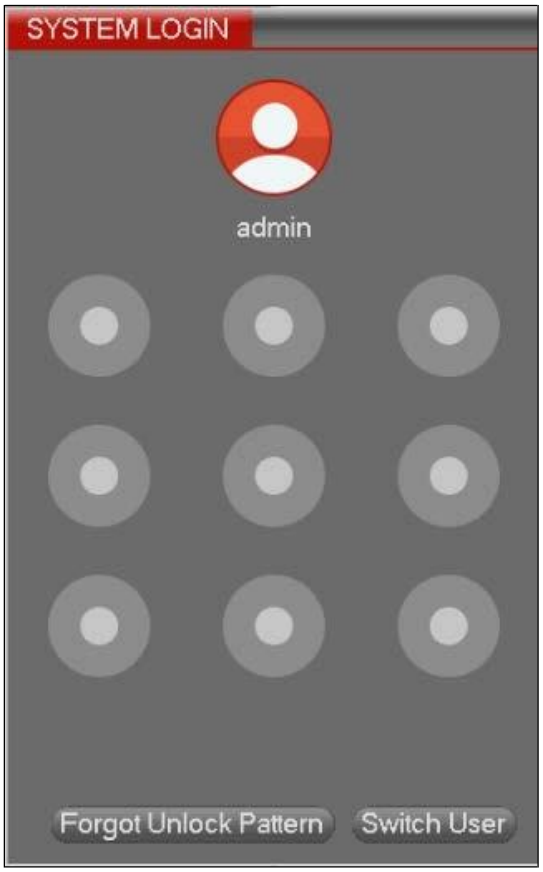


Figure 2-4

Figure 2-5

b. Click 

- If you have not input email address information when you are initializing the device, the interface is shown as in Figure 2-6. Please input an email address and then click Next button, devices go to Figure 2-7.
- If you have input email when you are initializing the device, device goes to Figure 2-7.

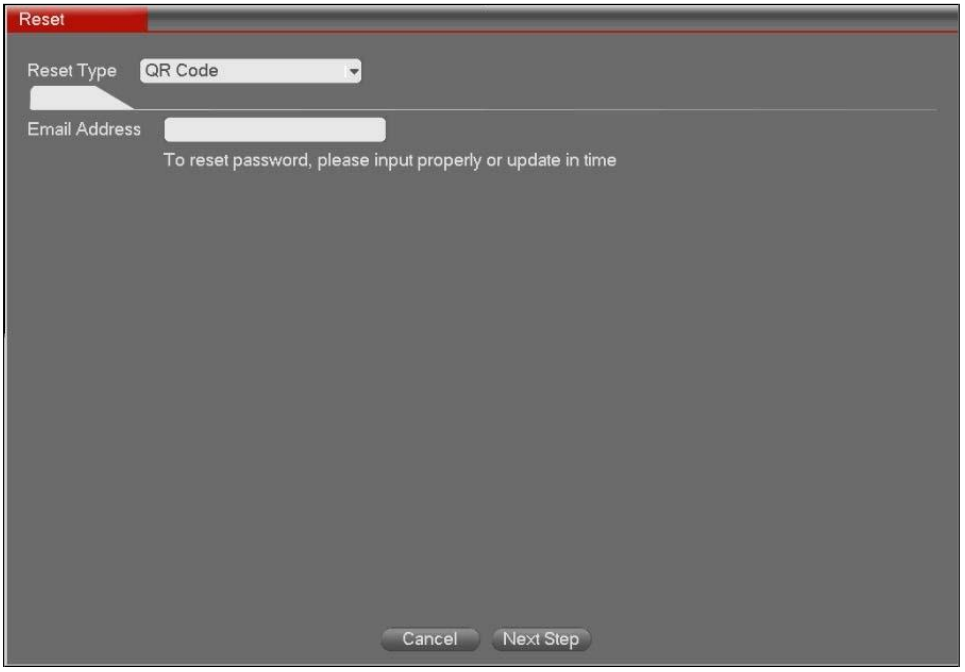


Figure 2-6

Figure 2-7

c. Reset login password.

There are two ways to reset the password: Scan QR code and reset by email/security questions (local menu only).

- Email

In Figure 2-7, follow the prompts on the interface to scan the QR code, and then input the security code you get via the assigned email.

WARNING

- ✧ For the same QR code, max scan twice to get two security codes. Refresh the QR code if you want to get security code again.
- ✧ The security code on your email is only valid for 24 hours.

- Security questions

In Figure 2-6, select security question from the drop-down list. Device displays security question interface. See Figure 2-8. Please input the correct answers here.

Note

There is no security question item from the dropdown list if you have not set the security question and corresponding answers when initializing the device.

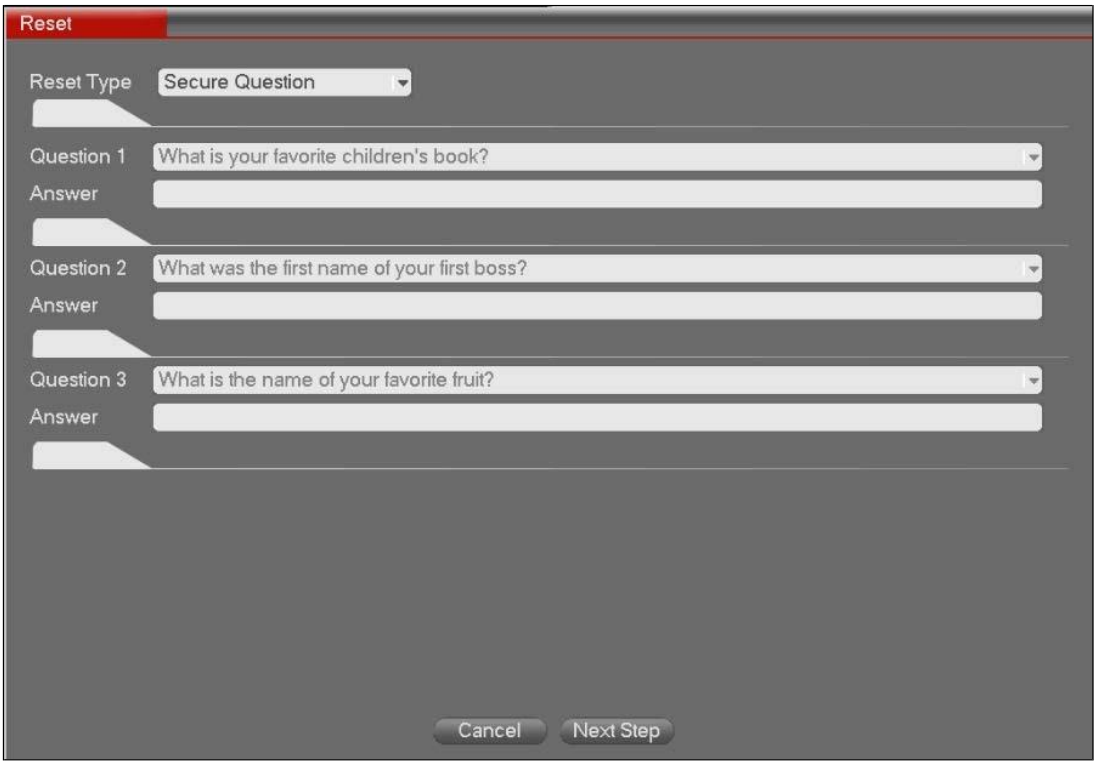


Figure 2-8

d. Click Next button.

Device displays reset password interface. See Figure 2-9.

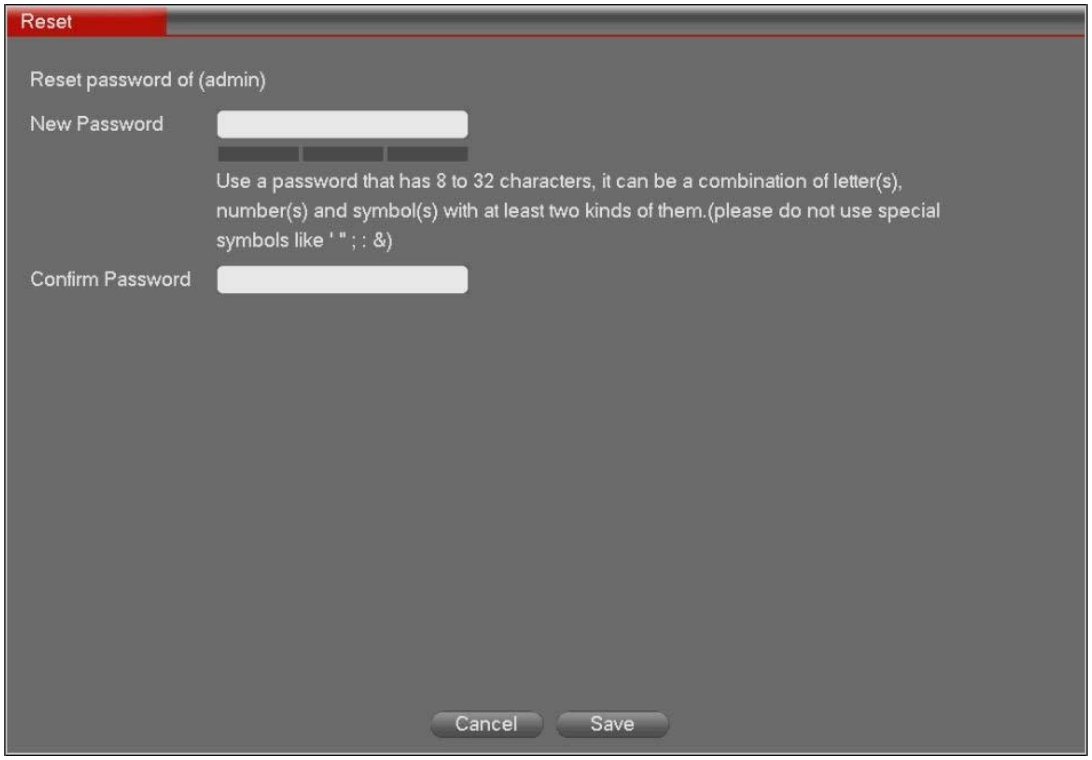


Figure 2-9

e. Input new password and then confirm.

WARNING

STRONG PASSWORD RECOMMENDED-For your device own safety, please create a strong password of your own choosing. The password shall be at least 8-digit containing at least two types of the following categories: letters, numbers and symbols. We also recommend you change your password periodically especially in the high security system.

f. Click Save button to complete the reset setup.

Device pops up dialogue box asking you to sync the password to the camera connecting by the default protocol. See Figure 2-10. Click OK to change the camera password. See Figure 2-11.

Note

The following dialogue pops up if there is a digital channel.

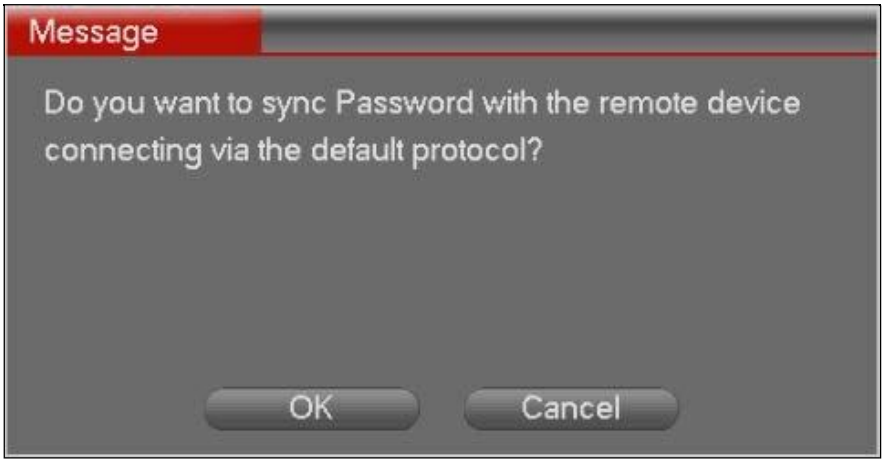


Figure 2-10

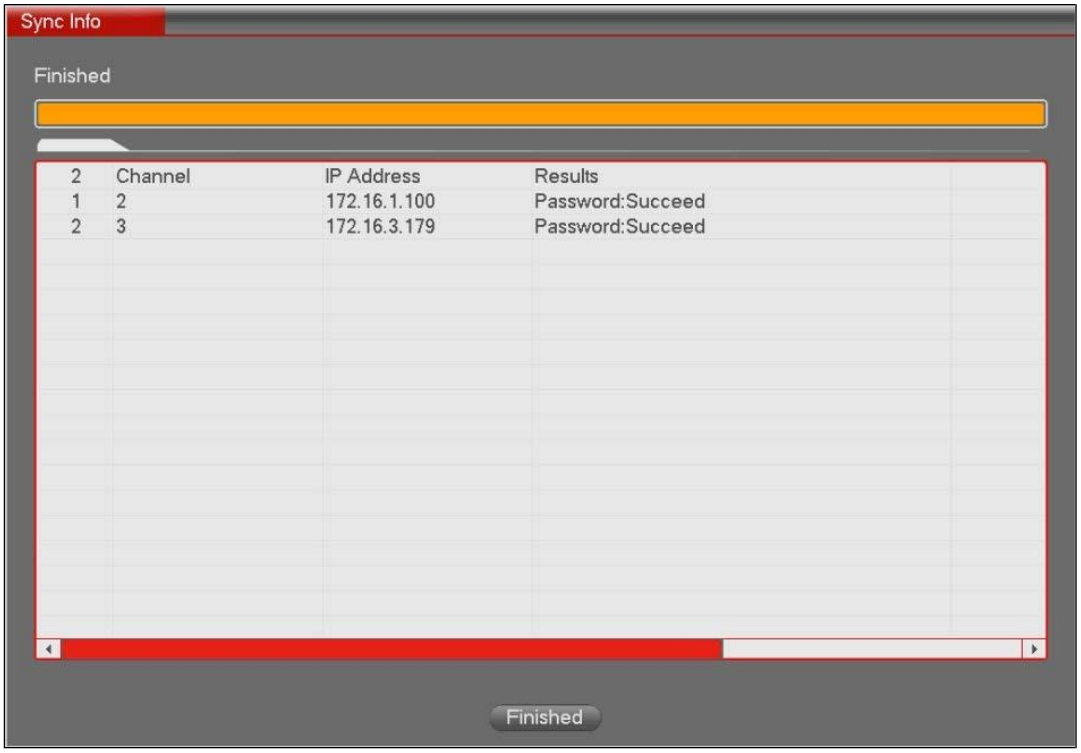


Figure 2-11

2.4 Startup Wizard

After device successfully booted up, it goes to startup wizard. Click Cancel/Next button, you can see system goes to login interface.

Tips

Check the box Startup button here, system goes to startup wizard again when it boots up the next time. Cancel the Startup button, system goes to the login interface directly when it boots up the next time.

Figure 2-12

Click Cancel button or Next Step button, system goes to login interface. See Figure 2-13. System consists of two accounts:

- **Username**: admin. **Password**: admin. (administrator, local and network)
- **Username**: default. **Password**: default (hidden user). Hidden user “default” is for system interior use only and cannot be deleted. When there is no login user, hidden user “default” automatically login. You can set some rights such as monitor for this user so that you can view some channel view without login.

Figure 2-13

Caution

- For security reason, please modify password after you first login.
- Continuous three times login failure will result in system alarm and five times login failure will result in account lock!
- Please reboot the device or wait for 30 minutes to try again if your account has been locked.

After input corresponding user name and password, you can click OK button. System goes to the

startup wizard.

- When there are all analog channels, the startup wizard includes general, encode, schedule, record control, network, INSTAON.
- When there is an IP channel, the startup wizard includes general, network, INSTAON, remote device and schedule.

Click OK button, you can go to General interface. See Figure 2-14. For detailed information, please refer to chapter 2.12.4.1.

Figure 2-14

Note
You can only see the remote device interface if you have set IP channel (Chapter 2.10.3.3.4)

Click Next button, you can go to network interface. See Figure 2-15. For detailed information, please refer to chapter 2.11.3.

Figure 2-15

Click Next button, you can set INSTAON function. Scan the QR code, download the App to the cell phone, you can use the smart phone to add the device. See Figure 2-16.

Figure 2-16

Click Next button, you can go to Encode interface. See Figure 2-17. For detailed information, please refer to chapter 2.10.3.3.

Figure 2-17

Click Next button, you can go to Basic setup. See Figure 2-18. For detailed information, please refer to chapter 2.12.3.1.

Figure 2-18

Click Next button, you can go to Schedule interface. See Figure 2-19. For detailed information, please refer to chapter 2.12.3.1.

Figure 2-19

2.5 Live Viewing

After you logged in, the system is in live viewing mode. You can see system date, time, channel name and window No. If you want to change system date and time, you can refer to general settings (Main Menu □ Setting □ System □ General). If you want to modify the channel name, please refer to the display settings (Main Menu □ Camera □ CAM name)

1		Recording status	3		Video loss
2		Motion detection	4		Camera lock

Tips

- Preview drag: If you want to change position of channel 1 and channel 2 when you are previewing, you can left click mouse in the channel 1 and then drag to channel 2, release mouse you can switch channel 1 and channel 2 positions.
- Use mouse middle button to control window split: You can use mouse middle button to switch window split amount.

Please note you cannot switch position of one analog channel and one digital channel.

Preview Control

The preview control function has the following features.

- Support preview playback.
  - In the preview desktop, system can playback previous 5-60 minutes record of current channel. Please go to the Main Menu->General to set real-time playback time.
  - Support drag and play function. You can use your mouse to select any playback start time.
  - Support playback, pause and exit function.
  - Right now, system does not support slow playback and backward playback function.
- Support digital zoom function.
- Support real-time backup function.

You can follow the contents listed below for the operation instruction.

Preview control interface

Move you mouse to the top center of the video of current channel, you can see system pops up the preview control interface. See Figure 2-19. If your mouse stays in this area for more than 6 seconds and has no operation, the control bar automatically hides.

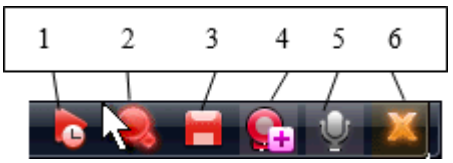


Figure 2-20

1) Real-time playback

It is to playback the previous 5-60 minutes record of current channel.

Please go to the Main menu Setting System General to set real-time playback time. System may pop up a dialogue box if there is no such record in current channel.

2) Digital zoom

It is to zoom in specified zone of current channel. It supports zoom in function of multiple-channel. Click button , the button is shown as .

There are two ways for you to zoom in.

- Drag the mouse to select a zone, you can view an interface show as Figure 2-21..

Figure 2-21

- Put the middle button at the center of the zone you want to zoom in, and move the mouse, you can view an interface shown as in Figure 2-22.

Figure 2-22

Right click mouse to cancel zoom and go back to the original interface.

3) Manual record function

It is to back up the video of current channel to the USB device. System cannot backup the video of multiple-channel at the same time.

Click button  , system begins recording. Click it again, system stops recoridng. You can find the record file on the flash disk.

4) Manual Snapshot

Click  to snapshot 1-5 times. The snapshot file is saved on the USB device or HDD. You can go to the Search interface (chapter 2.10.1) to view.

5) **Mute** (For analog channel only)

Click to mute. Click again to enable audio function when preview. Please note this function is for one-window mode only.

6) **Bidirectional talk** (For digital channel only)

If the connected front-end device supports bidirectional talk function, you can click this button. Click button  to start bidirectional talk function the icon now is shown as  . Now the rest bidirectional talk buttons of digital channel become null too.

Click  again, you can cancel bidirectional talk and the bidirectional talk buttons of other digital channels become as 

7) **Remote device** (For digital channel only)

Shortcut menu. Click it to go to the remote device interface to add/delete remote device or view its corresponding information. Please refer to chapter 2.10.3.1 for detailed information.

2.6 Right-Click Menu

On the preview interface, right click mouse, you can view menu interface shown as in Figure 2-23.

Tips

After you go to the corresponding interface, right click mouse to go back to the upper-level.

Figure 2-23

2.6.1 Window Switch

System supports 1/4/8/9-window (The options here depend on your product channel amount). You can select from the dropdown list. See Figure 2-24.

- **Window split mode:** You can select window amount and then select channels.
- **PTZ:** Click it to go to PTZ interface.
- **Auto focus:** Please make sure you connected network camera supports this function.
- **Color setting:** Set video corresponding information.
- **Search:** Click it to go to Search interface to search and playback a record file.
- **Record control:** Enable/disable record channel.
- **Remote device:** Click it to add remote device.
- **Main menu:** Go to system main menu interface.

Figure 2-24

2.6.2 Previous Screen/Next Screen

Click it to go to the previous screen/next screen.

2.6.3 PTZ Control

The PTZ setup is shown as in See Figure 2-25.

Please note the commend name is grey once device does not support this function. The PTZ operation is only valid in one-window mode.

Here you can control PTZ direction, speed, zoom, focus, iris, preset, tour, scan, pattern aux function, light and wiper, rotation etc.
Speed is to control PTZ movement speed. The value ranges from 1 to 8. The speed 8 is faster than speed 1. You can use the remote control to click the small keyboard to set.

You can click  and  of the zoom, focus and iris to zoom in/out, definition and brightness. The PTZ rotation supports 8 directions. If you are using direction buttons on the front panel, there are only four directions: up/down/left/right.

Figure 2-25

In the middle of the eight direction arrows, there is a 3D intelligent positioning key. See Figure 2-26. Please make sure your protocol supports this function and you need to use mouse to control.

Click this key, system goes back to the single screen mode. Drag the mouse in the screen to adjust section size. The dragged zone supports 4X to 16X speeds. It can realize PTZ automatically. The smaller zone you dragged, the higher the speed.

Figure 2-26

Name	Function key	function	Shortcut key	Function key	function	Shortcut key
Zoom		Near			Far	
Focus		Near	|		Far	▶|
Iris		close			Open	

In Figure 2-26, click to open the menu, you can set preset, tour, pattern, scan etc. See Figure 2-27.

Figure 2-27

Please refer to the following sheet for detailed information.
Please note the above interface may vary due to different protocols. The button is grey and cannot be selected once the current function is null.

Right click mouse or click the ESC button at the front panel to go back to the Figure 2-27

Icon	Function	Icon	Function
	Preset		Flip
	Tour		Reset
	Pattern		Aux
	Scan		Aux on-off button
	Rotate		Go to menu

2.6.3.1 PTZ Function Setup

Click  , you can go to the following interface to set preset, tour, pattern, and scan. See Figure 2-28.

Figure 2-28

Preset Setup

In Figure 2-28, click preset button and use eight direction arrows to adjust camera to the proper position. The interface is shown as in Figure 2-29. Click Set button and then input preset number. Click Set button to save current preset.

Figure 2-29

Tour Setup

In Figure 2-28, click tour button. Input tour value and preset no. Click Add preset button to add current preset to the tour. See Figure 2-30.

Tips

Repeat the above steps to add more presets to the tour. Click Del preset button to remove it from the tour. Please note some protocols do not support delete preset function.

Figure 2-30

Pattern Setup

In Figure 2-28, click Pattern button and input pattern number. Click Begin button to start direction operation. Or you can go back to Figure 2-27 to operate zoom/focus/iris/direction operation. In Figure 2-31, click End button.

Figure 2-31

Border Setup

In Figure 2-28, click Scan button. Use direction buttons to set camera left limit and then click Left button. Use direction buttons to set camera right limit and then click Right button. Now the scan setup process is complete.

Figure 2-32

2.6.3.2 Call PTZ Function

Call Preset

In Figure 2-27, input preset value and then click  to call a preset. Click  again to stop call.

Call Pattern

In Figure 2-27, input pattern value and then click  to call a pattern. Click  again to stop call.

Call Tour

In Figure 2-27, input tour value and then click  to call a tour. Click again  to stop call.

Call Scan

In Figure 2-27, input Scan value and then click  to call a tour. Click again  to stop call.

Rotate

In Figure 2-27, click  to enable the camera to rotate. System supports preset, tour, pattern, scan, rotate, light and etc function.

Note:

- Preset, tour and pattern all need the value to be the control parameters. You can define it as you require.
- You need to refer to your camera user's manual for Aux definition. In some cases, it can be used for special process.

Aux

Click  , system goes to the following interface. The options here are defined by the protocol. The aux number is corresponding to the aux on-off button of the decoder. See Figure 2-33.

Figure 2-33

2.6.4 Auto Focus

It is to set auto focus function. Please make sure the camera supports this function.

2.6.5 Color

Here you can set hue, brightness, contrast, saturation, gain, white level, color mode etc. See Figure 2-34.

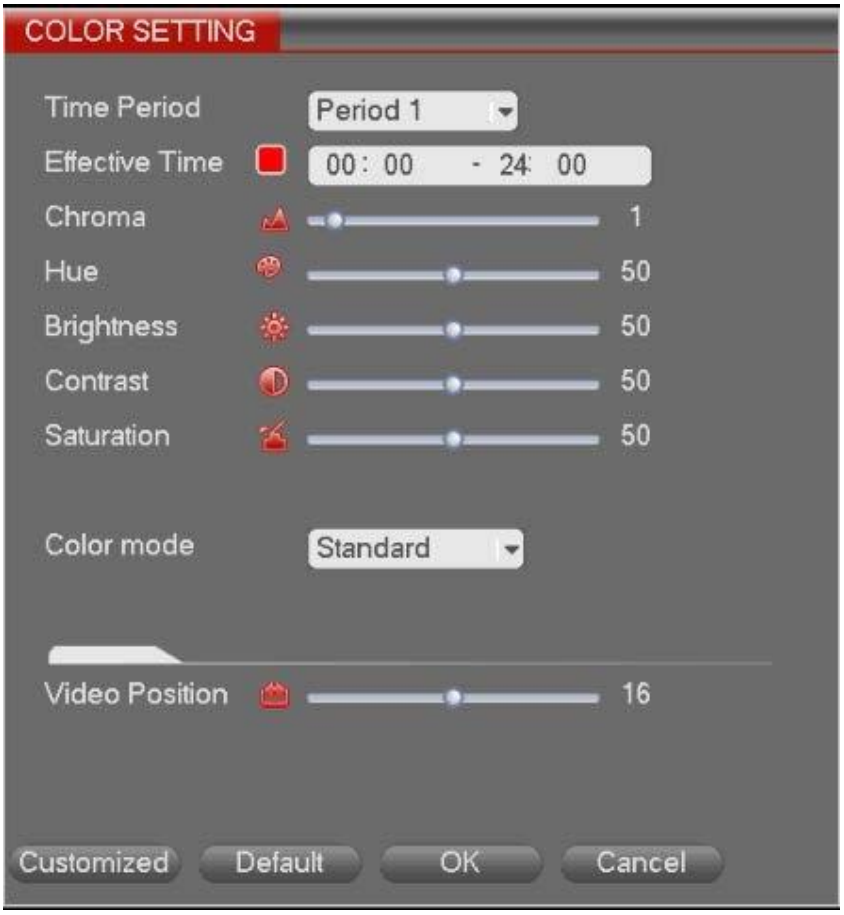


Figure 2-34

Please refer to the following sheet for detailed information.

Item	Note
Period	There are two periods in one day. You can set different sharpness, brightness, and contrast setup for different periods.
Effective Time	Check the box here to enable this function and then set period time.
Sharpness	The value here is to adjust the edge of the video. The value ranges from 0 to 100. The larger the value is, the clear the edge is and vice versa. Please note there is noise if the value here is too high. The default value is 50 and the recommended value ranges from 40 to 60.
Brightness	It is to adjust monitor window bright. The value ranges from 0 to 100. The default value is 50. The larger the number, the bright the video is. When you input the value here, the bright section and the dark section of the video will be adjusted accordingly. You can use this function when the whole video is too dark or too bright. Please note the video may become hazy if the value is too high. The recommended value ranges from 40 to 60.

Item	Note
Contrast	It is to adjust monitor window contrast. The value ranges from 0 to 100. The default value is 50. The larger the number, the higher the contrast is. You can use this function when the whole video bright is OK but the contrast is not proper. Please note the video may become hazy if the value is too low. If this value is too high, the dark section may lack brightness while the bright section may over exposure. The recommended value ranges from 40 to 60.
Saturation	It is to adjust monitor window saturation. The value ranges from 0 to 100. The default value is 50. The larger the number, the strong the color is. This value has no effect on the general brightness of the whole video. The video color may become too strong if the value is too high. For the grey part of the video, the distortion may occur if the white balance is not accurate. Please note the video may not be attractive if the value is too low. The recommended value ranges from 40 to 60.
Gain	The gain adjust is to set the gain value. The default value may vary due to different device models. The smaller the value, the low the noise. But the brightness is also too low in the dark environments. It can enhance the video brightness if the value is high. But the video noise may become too clear.
Color mode	It includes several modes such as standard, color, bright, gentle. Select a color mode, the sharpness, brightness, contrast and etc. can automatically switch to corresponding setup.
EQ	Click  or  to adjust image equalization value. Click reset button  , system can auto adjust the video to the best effect. This function is for analog channel only.
Image position	It is to adjust the image position on the screen. The value here refers to the pixel. The default pixel value is 16. This function is for analog channel only.

2.6.6 Display

It is to set display output mode. There are two modes: full screen (4:3)/image original rate (16:9). Icon means current display output mode. See Figure 2-35.

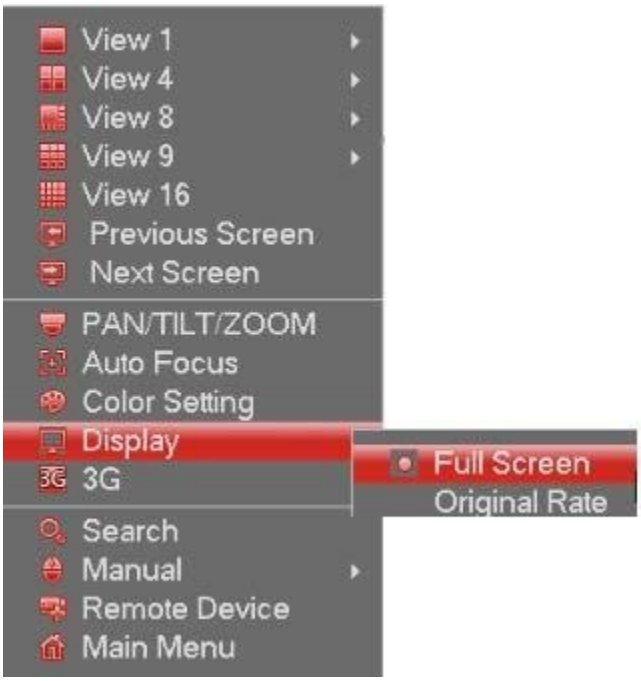


Figure 2-35

2.6.7 Search

Please refer to chapter 2.10.1 for detailed information.

2.6.8 Record Control

Please refer to chapter 2.12.3.4 for detailed information.

2.6.9 Remote Device

Please refer to chapter 2.10.3.1 for detailed information.

2.6.10 Main menu

Please refer to chapter 2.9 for detailed information.

2.7 Navigation Bar

You need to go to the Main Menu □ Setting □ System □ General to enable navigation bar function; otherwise you cannot see the following interface. The navigation bar is shown as below. See Figure 2-36.

Figure 2-36

2.7.1 Main Menu

Click button  to go to the main menu interface.

2.7.2 Output Screen

Select corresponding window-split mode and output channels.

2.7.3 Previse screen

Click it go to the previous screen.

2.7.4 Next Screen

Click it to go to the next screen.

2.7.5 Tour

Click button  to enable tour, the icon becomes  , you can see the tour is in process.

2.7.6 Favorites

Click  , system pops up add/edit favorites. See Figure 2-37.

Figure 2-37

2.7.7 Channel

It is to pop up channel tree. You can left click to select a channel on the tree and then drag it to the preview window on the left pane.

2.7.8 PTZ

Click  , system goes to the PTZ control interface. Please refer to chapter 2.6.3.

2.7.9 Color

Click button  , system goes to the color interface. Please refer to chapter 2.6.5.

2.7.10 Search

Click button system goes to search interface. Please refer to chapter 2.10.1

2.7.11 Alarm Status

Click button system goes to alarm status interface. It is to view device status and channel status. Please refer to chapter 2.12.2.

2.7.12 Channel Info

Click button , system goes to the channel information setup interface. It is to view information of the corresponding channel. See Figure 2-38.

Figure 2-38

2.7.13 Remote Device

Click , system goes to an interface for you to view remote device information. Please refer to chapter 2.10.3.1.

2.7.14 Network

Click , system goes to the network interface. It is to set network IP address, default gateway etc.

Please refer to chapter 2.12.1.

2.7.15 HDD Manager

Click  , system goes to the HDD manager interface. It is to view and manage HDD information. Please refer to chapter 2.12.3.3.

2.7.16 USB Manager

Click  , system goes to the USB Manager interface. It is to view USB information, backup and update. Please refer to chapter 2.10.2, chapter 2.11.5, chapter 2.12.4.9, and chapter 2.12.4.11 for detailed information.

2.8 USB Device Auto Pop-up

After you inserted the USB device, system can auto detect it and pop up the following dialogue box. It allows you to conveniently backup file, log, configuration or update system. See Figure 2-39. Please refer to chapter 2.10.2, chapter 2.11.5, chapter 2.12.4.9, and chapter 2.12.4.11 for detailed information.

Figure 2-39

2.9 Main Menu

The main menu interface is shown as below. See Figure 2-40.

Figure 2-40

2.10 Search

Click search button in the main menu, search interface is shown as below. See Figure 2-41.

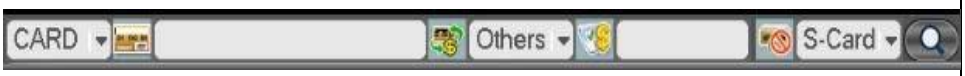
Usually there are three file types:

- R: Regular recording file.
- A: External alarm recording file.
- M: Motion detection recording file

Figure 2-

41 Please refer to the following sheet for more

SN	Name	Function
1	Display window	• Here is to display the searched picture or file. • Support 1/4/9/16-window playback.
2	Search type	• Here you can select to search the picture or the recorded file. • You can select to play from the read-write HDD, from peripheral device or from redundancy HDD. • Before you select to play from the peripheral device, please connect the corresponding peripheral device. You can view all record files of the root directory of the peripheral device. Click the Browse button; you can select the file you want to play. • Check the box here; you can enable splice playback function. Please refer to chapter 2.10.1.4 for detailed information. Important • Redundancy HDD does not support picture backup function, but it supports picture playback function. You can select to play from redundancy HDD if there are pictures on the redundancy HDD.
3	Calendar	• The blue highlighted date means there is picture or file. Otherwise, there is no picture or file. • In any play mode, click the date you want to see, you can see the corresponding record file trace in the time bar.
4	Playback	• Playback mode：1/4/9/16/customized. (It may vary due to different series.)

	mode and channel selection pane.	✧ In 1-window playback mode: you can select 1-16 channels. ✧ In 4-window playback mode: you can select 4 channels according to your requirement. ✧ In 9-window playback mode, you can switch between 1-8 and 9-16 channels. ✧ In 16-window playback mode, you can switch between1-16 and 17-32 channels. ✧ In customized mode, you can select one or more channel(s) you want to playback at the same time. See chapter 2.10.1.4. • The time bar will change once you modify the playback mode or the channel option.	
5	Card number search	The card number search interface is shown as below. Here you can view card number/field setup bar. You can implement advanced search. 	
6	Mark file list button	Click it to go to mark file list interface. You can view all mark information of current channel by time. Please refer to chapter 2.10.1.3 for detailed information. Please note only the product of this icon supports mark function.	
7	File list switch button	• Double click it, you can view the picture/record file list of current day. • The file list is to display the first channel of the record file. • The system can display max 128 files in one time. Use the □|and |□ or the mouse to view the file. Select one item, and then double click the mouse or click the ENTER button to playback. • You can input the period in the following interface to begin accurate search. • File type: R—regular record； A—external alarm record: M—Motion detect record. • Lock file. Click the file you want to lock and click the button  to lock. The file you locked will not be overwritten. • Search locked file: Click the button  to view the locked file. • Return: Click button  , system goes back to the calendar and channel	
8	Playback control	►/□	Play/Pause There are three ways for you to begin playback. ● The play buttons ● Double click the valid period of the time bar. ● Double click the item in the file list. In slow play mode, click it to switch between play/pause.
		■	Stop

	pane.	□	Backward play In normal play mode, left click the button, the file begins backward play. Click it again to pause current play. In backward play mode, click ►/□ to restore normal play.

		⏮/⏭	In playback mode, click it to play the next or the previous section. You can click continuously when you are watching the files from the same channel. In normal play mode, when you pause current play, you can click ⏭ and ⏮ to begin frame by frame playback. In frame by frame playback mode, click ►/❚❚ to restore normal playback.
		►	Slow play In playback mode, click it to realize various slow play modes such as slow play 1, slow play 2, and etc.
		⏩	Fast forward In playback mode, click to realize various fast play modes such as fast play 1, fast play 2 and etc.
		Note: The actual play speed has relationship with the software version.	
			Smart search
			The volume of the playback
			Click the snapshot button in the full-screen mode, the system can snapshot 1 picture. System supports custom snap picture saved path. Please connect the peripheral device first, click snap button on the full-screen mode, you can select or create path. Click Start button, the snapshot picture can be saved to the specified path.
			Mark button. Please note this function is for some series product only. Please make sure there is a mark button in the playback control pane. You can refer to chapter 2.10.1.3 for detailed information.
9	Time bar	• It is to display the record type and its period in current search criteria. • In 4-window playback mode, there are corresponding four-time bars. In another playback mode, there is only one time bar. • Use the mouse to click one point of the color zone in the time bar, system begins playback. • The time bar is beginning with 0 o'clock when you are setting the configuration. The time bar zooms in the period of the current playback time when you are playing the file. • The green color stands for the regular record file. The red color stands for the external alarm record file. The yellow stands for the motion detect record file.	

10	Time bar unit	• The option includes: 24H, 12H, 1H and 30M. The smaller the unit, the larger the zoom rate. You can accurately set the time in the time bar to playback the record. • The time bar is beginning with 0 o'clock when you are setting the configuration. The time bar zooms in the period of the current playback time when you are playing the file.
11	Backup	● Select the file(s) you want to back up from the file list. You can check from

		the list. Then click the backup button, now you can see the backup menu. System supports customized path setup. After select or create new folder, click the Start button to begin the backup operation. The record file(s) will be saved in the specified folder. ● Check the file again you can cancel current selection. System max supports to display 32 files from one channel. ● After you clip on record file, click Backup button you can save it. ● For one device, if there is a backup in process, you cannot start a new backup operation.
12	Clip	• It is to edit the file. • Please play the file you want to edit and then click this button when you want to edit. You can see the corresponding slide bars in the time bar of the corresponding channel. You can adjust the slide bar or input the accurate time to set the file end time. • After you set, you can click Clip button again to edit the second period. You can see the slide bar restore its previous position. • Click Backup button after clip, you can save current contents in a new file. • You can clip for one channel or multiple-channel. The multiple-channel click operation is similar with the one-channel operation. Please note: ● System max supports 1024 files backup at the same time. ● You cannot operate clip operation if there is any file has been checked in the file list.
13	Record type	In any play mode, the time bar will change once you modify the search type.
Other Functions		
14	Smart search	● When system is playing, you can select a zone in the window to begin smart search. Click the motion detect button to begin play. ● Once the motion detect play has begun, click button again will terminate current motion detect file play. ● There is no motion detect zone by default. ● If you select to play other file in the file list, system switches to motion detect play of another file. ● During the motion detect play process, you cannot implement operations such as change time bar, begin backward playback or frame by frame playback. ● Please refer to chapter 2.10.1.1 Smart Search for detailed operation.
15	Another channel synchroniz ation switch to play when	When playing the file, click the number button, system can switch to the same period of the corresponding channel to play.

	playback	
16	Sync	In pane 13 of Figure 2-42, click Sync button, you can playback the files of different channels occurred at the same time.
17	Digital zoom	When the system is in full-screen playback mode, left click the mouse in the screen. Drag your mouse in the screen to select a section and then left click mouse to realize digital zoom. You can right click mouse to exit.
18	Manually switch channel when playback	During the file playback process, you can switch to other channel via the dropdown list or rolling the mouse. This function is null if there is no record file or system is in smart search process.

2.10.1 Smart Search

During the multiple-channel playback mode, double click one channel and then click the  button, system begins smart search. System supports 396(22*18 PAL) and 330(22*15 NTSC) zones. Please left click mouse to select smart search zones. See Figure 2-42.

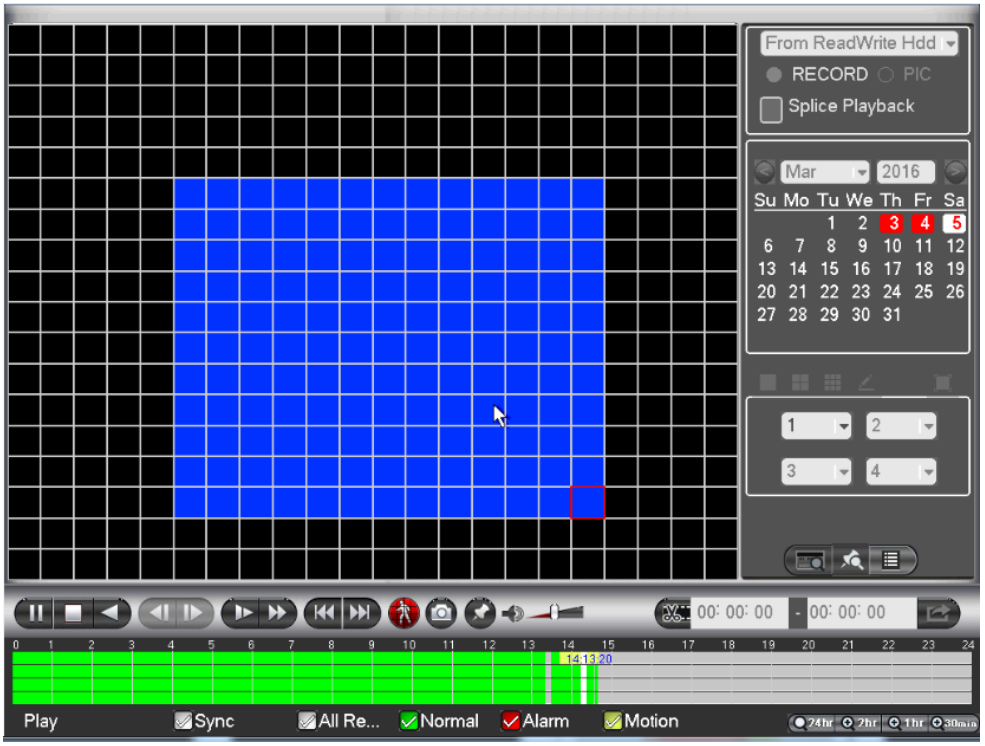


Figure 2-42

Click the  you can go to the smart search playback. Click it again, system stops smart search playback.

Important

- System does not support motion detect zone setup during the full-screen mode.

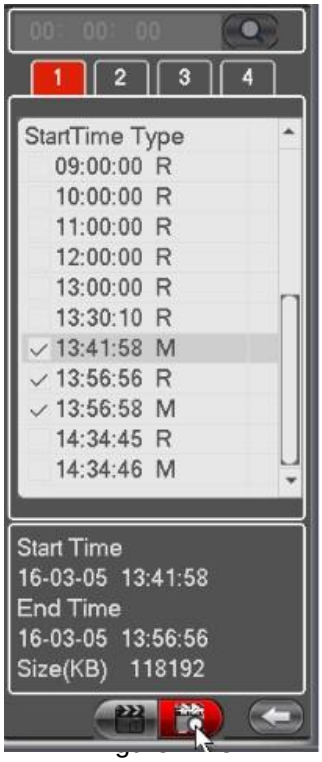
- During the multiple-channel playback, system stops playback of rest channels if you implement one-channel smart search.

2.10.2 Accurate playback by time

Select records from one day, click the list, you can go to the file list interface. You can input time at the top right corner to search records by time. See image on the left side of the Figure 2-43 For example, input time 11:00.00 and then click Search button  , you can view all the record files after 11:00.00 (The records includes current time.). See image on the right side of the Figure 2-43 Double click a file name to playback.

Note

- After you searched files, system implement accurate playback once you click Play for the first time.
- System does not support accurate playback for picture.
- System supports synchronization playback and non-synchronous playback. The synchronization playback supports all channels and non-synchronous playback only supports accurately playback of current select channel.



2.10.3 Mark Playback

Please make sure your purchased device supports this function. You can use this function only if you can see the mark playback icon on the Search interface (Figure 2-43).

When you are playback record, you can mark the record when there is important information. After playback, you can use time or the mark key words to search corresponding record and then play. It is

very easy for you to get the important video information.

- **Add Mark**

When system is playback, click Mark button  you can go to the following interface. See Figure 2-44

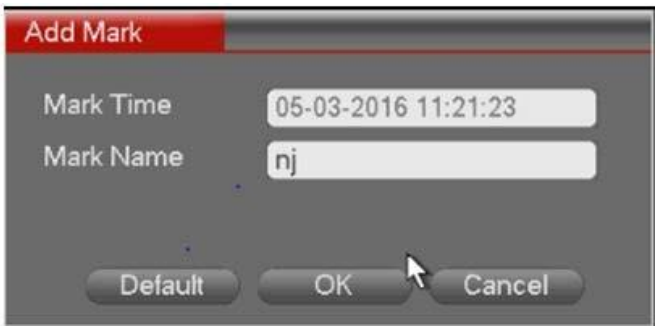


Figure 2-44

- **Playback Mark**

During 1-window playback mode, click mark file list button  in Figure 2-41, you can go to mark file list interface. Double click one-mark file, you can begin playback from the mark time.

- **Play before mark time**

Here you can set to begin playback from previous N seconds of the mark time.

Note

Usually, systems can playbacks previous N seconds record if there is such kind of record file. Otherwise, system playbacks from the previous X seconds when there is such as kind of record.

- **Mark Manager**

Click the mark manager button  on the Search interface (Figure 2-41); you can go to Mark Manager interface. See Figure 2-45. System can manage all the record mark information of current channel by default. You can view all mark information of current channel by time.

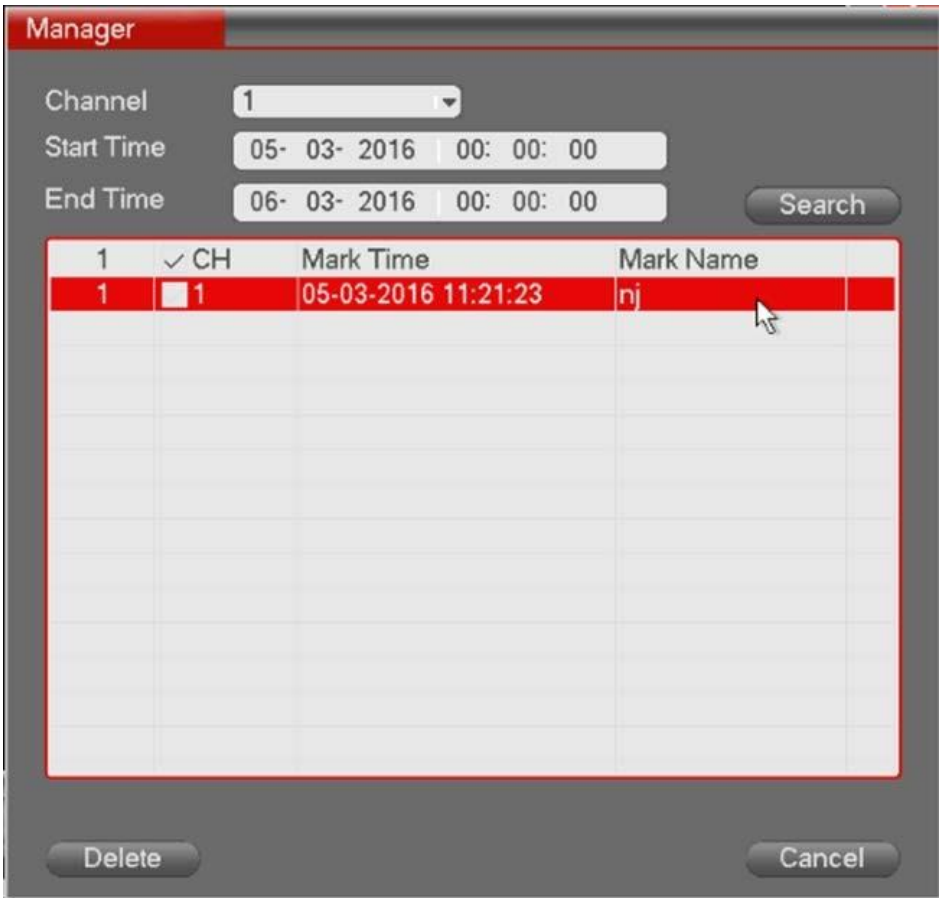


Figure 2-45

Modify

Double click one-mark information item, you can see system pops up a dialogue box for you to change mark information. You can only change mark name here.

Delete

Here you can check the mark information item you want to delete and then click Delete button, you can remove one-mark item.

Note

- After you go to the mark management interface, system needs to pause current playback. System resume playback after you exit mark management interface.
- If the mark file you want to playback has been removed, system begins playback from the first file in the list.

2.10.4 Customized Playback

You can select one or more channel(s) to playback at the same time. From main menu Search or you can right click mouse on the preview interface and then select Search, you can go to Figure 2-46. In pane 4, click  , you can see the following interface. See Figure 2-46.

Figure 2-46

Now you can select one or more channel(s) and then click to search record(s). System supports one or more channels. The window split mode can auto adjust according to the channel amount.

System max supports 16-split. Click button to select all channels at the same time.

Click system begins playback.

2.10.5 Splice Playback

For the large record file, you can use splice playback function to play the same file in several sections at the same time. It is very convenient for you to find the video footages you desire.

On the main menu, click Search button, or right click mouse and then select Search. You can go to the Figure 2-41.

On the right pane, check the box to enable splice playback function, and then set channel, date, split mode. The splice playback interface is shown as below. Each section has a small triangle; you can adjust it to set time. See Figure 2-47.

Figure 2-47

Note

Select split mode, so that the record can be spliced in several sections.

Select splice file.

- Click Playback, system playbacks from the first of current date by default.
- Click time bar, system playbacks from the time you click.
- Click , you can select on the file list.

Note

- The splice playback is for 1-window playback mode.
- System supports 1/4/8/16-split mode. Slight different may be found here.
- The min period of each section is 5 minutes. For the record is less than 20 minutes, if you select 4-split mode (or more than 4-split mode), system can auto adjust so that each section period is 5 minutes. In this situation, some channel may have no video.

2.11 Backup

DVR support CD-RW, DVD burner, USB device backup, network download and eSATA. Here we introduce USB, eSATA backup. You can refer to Chapter 7 Web Client Operation for network download backup operation.

Click backup button, you can see an interface is shown as in Figure 2-48. Here is for you to view devices information. You can view backup device name and its total space and free space. The device includes CD-RW, DVD burner, USB device, flash disk, eSATA backup.

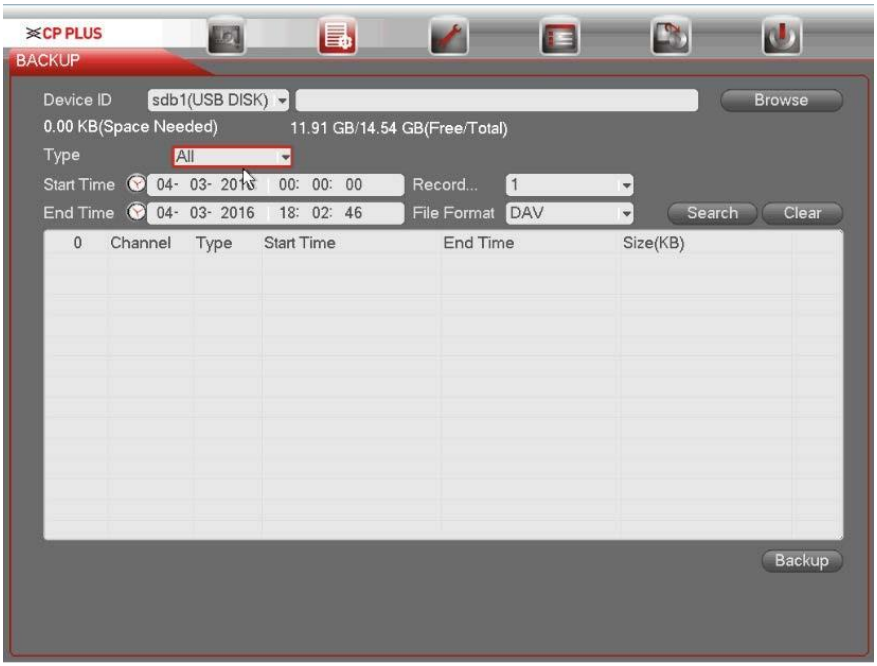


Figure 2-48

Select backup device and then set channel, file start time and end time. Click add button, system begins search. All matched files are listed below. System automatically calculates the capacity needed and remained. See Figure 2-49.

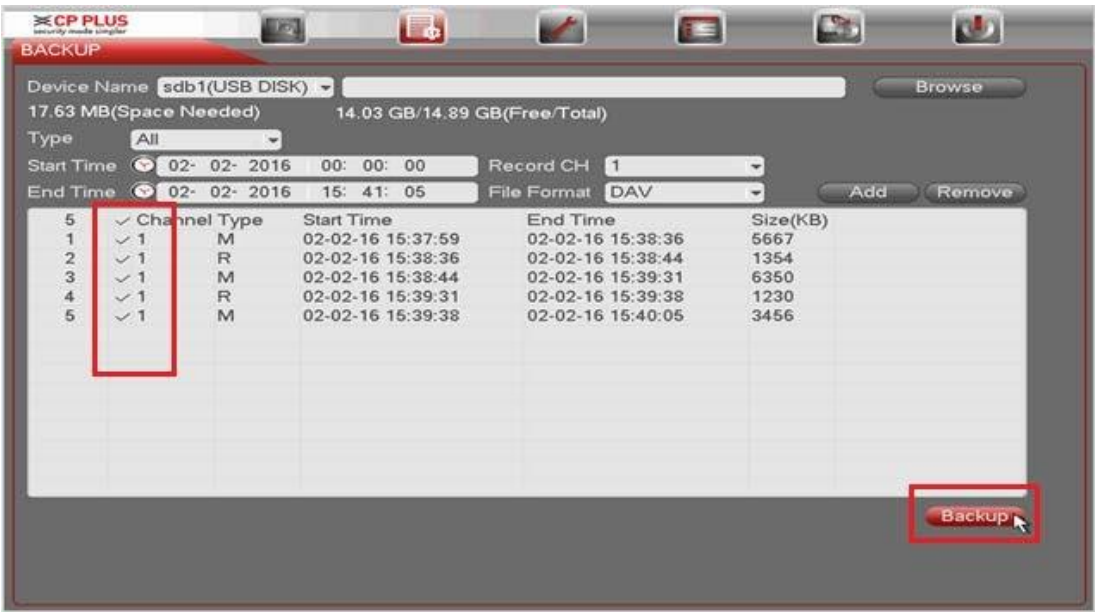


Figure 2-49

System only backup files with a √ before channel name. You can use Fn or cancel button to delete √ after file serial number.

Click Start button, system begins copy. At the same time, the backup button becomes stop button. You can view the remaining time and process bar at the left bottom.

When the system completes backup, you can see a dialogue box prompting successful backup.

 File format: Click the file format; you can see there are two options: DAV/ASF.
The file name format usually is: Channel number + Record type + Time. In the file name, the YDM format is Y+M+D+H+M+S. File extension name is ".dav".

Tips:
During backup process, you can click ESC to exit current interface for other operation. The system will not terminate backup process.

Note:
When you click stop button during the burning process, the stop function becomes activated immediately. For example, if there are ten files, when you click stop system just backup five files, system only save the previous 5 files in the device (But you can view ten file names).

2.12 Camera

For camera setting interface, please go to Main Menu Camera, see Figure 2-50.

Figure 2-50

2.12.1 Remote Device (For digital channel only)

2.12.1.1 Remote Device

In the main menu, from Camera Remote Device, you can go to an interface shown as in Figure 2-51. Here you can add/delete remote device and view its corresponding information.

- **IP search:** Click it to search IP address. It includes device IP address, port, device name, manufacturer, type. Use your mouse to click the item name, you can refresh display order. Click IP address, system displays IP address from small to large. Click IP address again, you can see icon, system displays IP address from large to small. You can click other items to view information conveniently. For the network device already added to the device, you can see there is a small icon "*" after the SN in case there is repeatedly add operation.
- **Add:** Click it to connect to the selected device and add it to the Added device list. Support Batch add.

You can see the corresponding dialogue box if all digital-channel has connected to the front-end. System cannot add new device if the device you want to add has the same IP and TCP port as the device in the list.

- **Show filter:** You can use it to display the specified devices from the added device.
- **Edit:** Click button or double click a device in the list, you can change channel setup.
- **Delete:** Please select one device in the Added device list and then click to remove.
- **Status:** means connection is OK and means connection failed.
- **Delete:** Select a device on the Added device list, click Delete button, system disconnect device first and then remove its name from the list.
- **Manual add:** Click it to add the IPC manually. The port number is 25001. The default user name is admin and password is admin.

Figure 2-51

Click the Manual Add button: you can go to the following interface. See Figure 2-52.
Channel number: The dropdown list here displays unconnected channel number. You can go to Figure 2-51 to set remote channel connection.

Please note:

- This series product supports the IPC from many popular manufactures such as Sony, Hitachi, Axis, Samsung, Dynacolor, Arecont, ONViF and Dahua.
- System default IP address is 192.168.1.240 if you do not input IP address. System will not add current IP address.

- You cannot add two or more devices in the Manual Add interface (Figure 2-52). Click OK button, system connects to the corresponding front-end device of current channel on the interface.

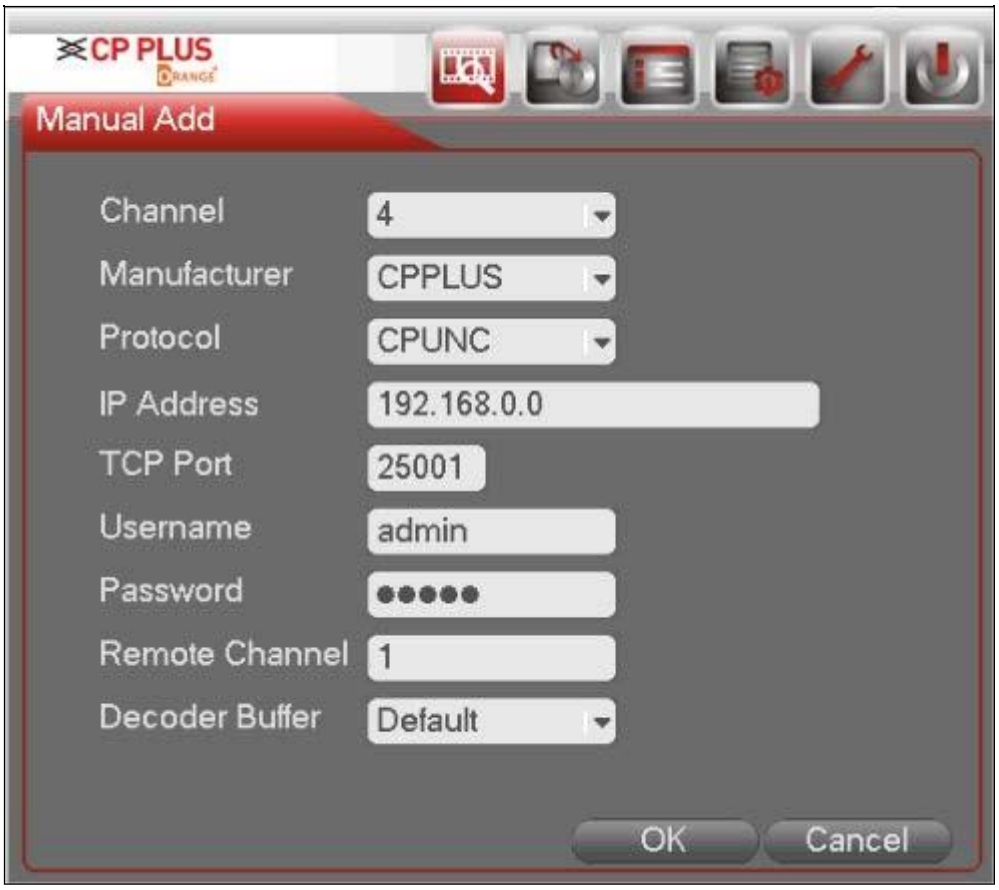


Figure 2-52

- **Show filer:** It is to filter the searched device.
  - None: it is to display all searched devices.
  - IPC: It is to display all cameras.
  - DVR: It is to display all storage devices such as NVR, DVR.

- **Change IP:**

✧ Click  you can change the information such as IP address, subnet mask, and default gateway, user name, password of the checked device. See Figure 2-53.

Figure 2-53

✧ You can check several devices at the same time and then click the edit button  .See Figure 2-55. Please check Batch modify button and then input start IP, end IP and default gateway.

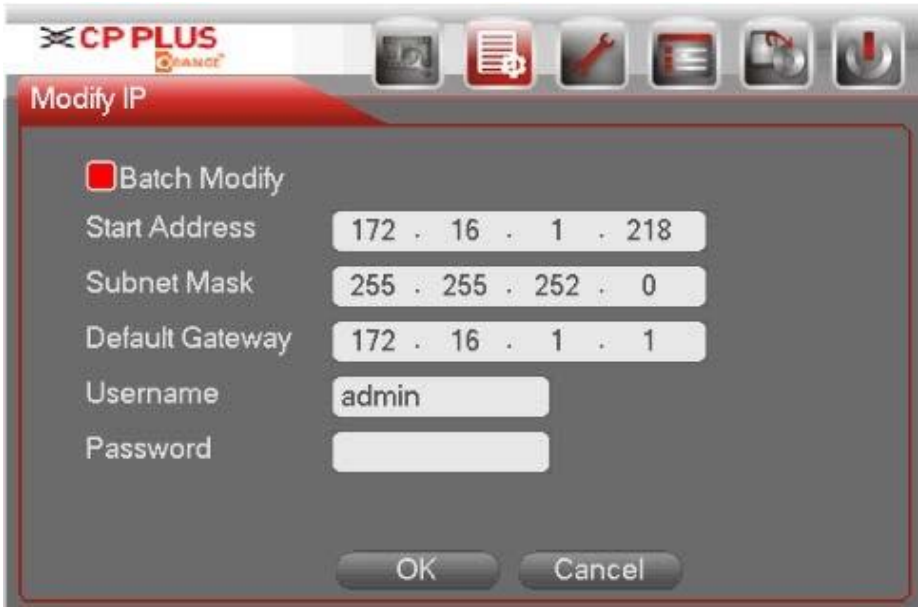


Figure 2-54

IP
Export

System can export the Added device list to your local USB device. Please insert the USB device and then click the Export button; you can see the following interface. See Figure 2-56.

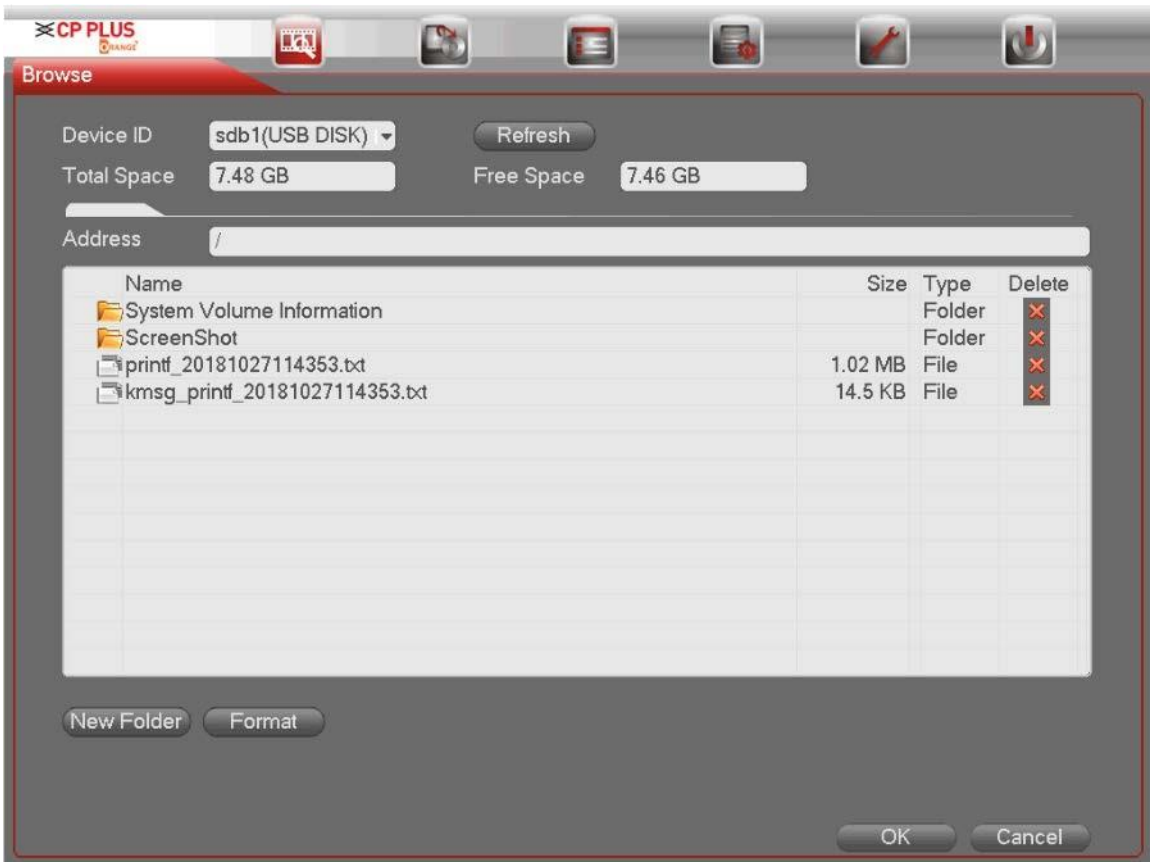


Figure 2-55

Select the directory and then click the OK button. System pops up a dialogue box to remind you successfully exported. Please click OK button to exit.

Note

The exported file extension name is .CVS. The file information includes IP address, port, remote channel number, manufacturer, user name and password.

IP Import

Click Import button, you can see the following interface. See Figure 2-56.

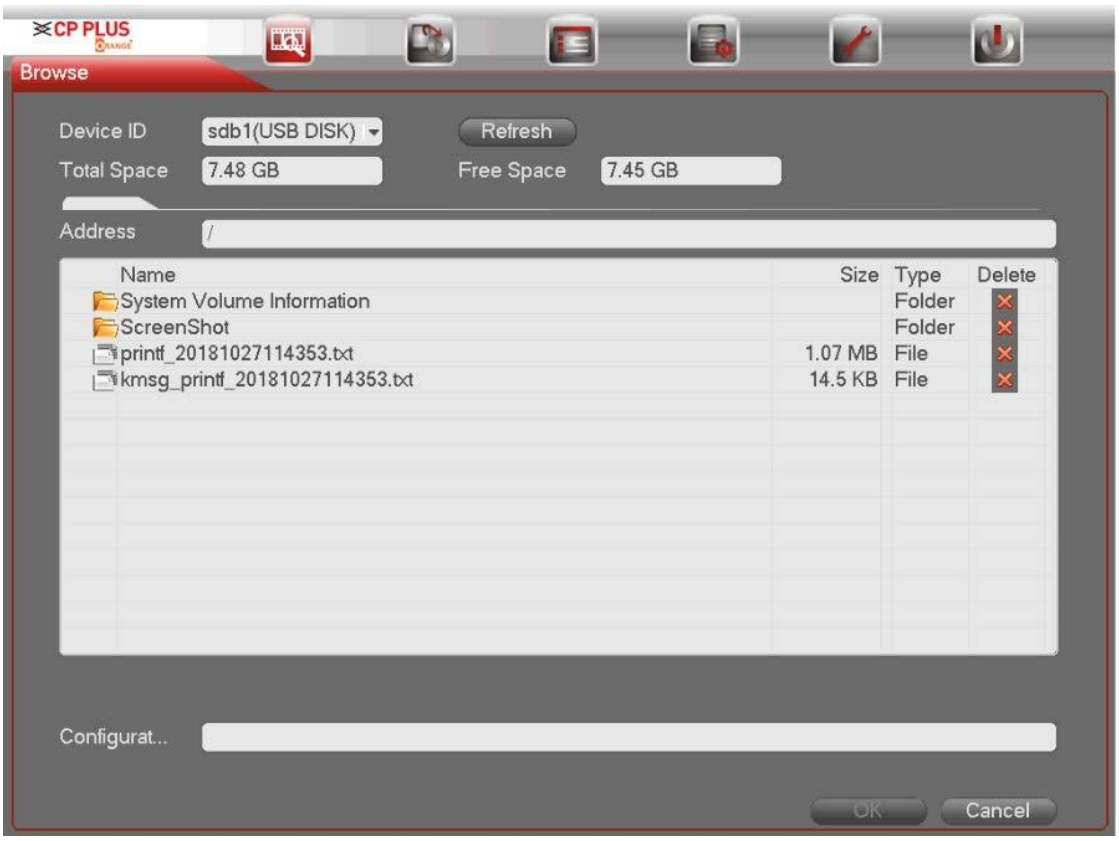


Figure 2-56

Select the import file and then click the OK button. System pops up a dialogue box to remind you successfully exported. Please click OK button to exit.

Note:

If the imported IP has conflicted with current added device, system pops up a dialogue box to remind you. You have two options:

- **OK:** Click OK button, system uses the imported setup to overlay current one.
- **Cancel:** Click Cancel button, system adds the new IP setup.

Important

- You can edit the exported .CVS file. Do not change the file format; otherwise it may result in import failure.
- Does not support customized protocol import and export.
- The import and export device shall have the same language format.

2.12.1.2 Channel Status

Here you can view the IPC status of the corresponding channel such as motions detect, video loss, tampering, alarm etc. See Figure 2-57.

- **IPC status:** : Front-end does not support. : Front-end supports. : There is

alarm event from current front-end.

- **Connection status**:  : Connection succeeded.  : Connection failed.
- **Refresh:** Click it to get latest front-end channel status.

Figure 2-57

2.12.1.3 Firmware

It is to view channel, IP address, manufacturer, type, system version, SN, video input, audio input, etc. See Figure 2-58.

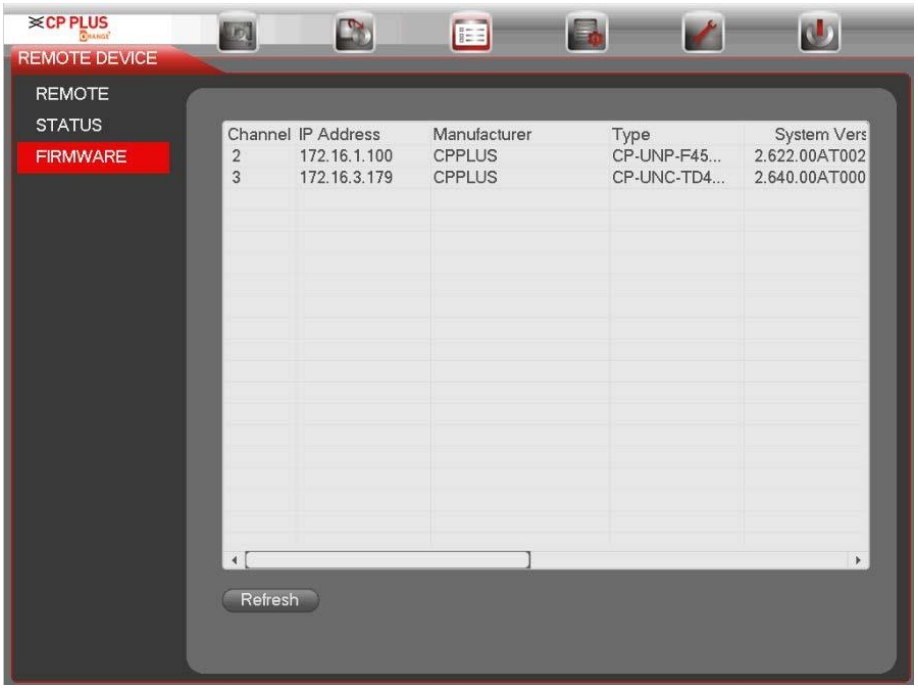


Figure 2-58

2.12.2 Image

For analog channel, the camera interface is shown as in Figure 2-59. For digital channel, the camera interface is shown as in Figure 2-59.

- **Channel:** Select a channel from the dropdown list.
- **Saturation:** It is to adjust monitor window saturation. The value ranges from 0 to 100. The default value is 50. The larger the number, the strong the color is. This value has no effect on the general brightness of the whole video. The video color may become too strong if the value is too high. For the grey part of the video, the distortion may occur if the white balance is not accurate. Please note the video may not be attractive if the value is too low. The recommended value ranges from 40 to 60.
- **Brightness:** It is to adjust monitor window bright. The value ranges from 0 to 100. The default value is 50. The larger the number is, the bright the video is. When you input the value here, the bright section and the dark section of the video will be adjusted accordingly. You can use this function when the whole video is too dark or too bright. Please note the video may become hazy if the value is too high. The recommended value ranges from 40 to 60.
- **Contrast:** It is to adjust monitor window contrast. The value ranges from 0 to 100. The default value is 50. The larger the number is, the higher the contrast is. You can use this function when the whole video bright is OK but the contrast is not proper. Please note the video may become hazy if the value is too low. If this value is too high, the dark section may lack brightness while the bright section may over exposure. The recommended value ranges from 40 to 60.
- **Sharpness:** The value here is to adjust the edge of the video. The value ranges from 0 to 100. The larger the value is, the clear the edge is and vice versa. Please note there is noise if the value here is too high. The default value is 50 and the recommended value ranges from 40 to 60.
- **Mirror:** It is to switch video up and bottom limit. This function is disabled by default.
- **Flip:** It is to switch video left and right limit. This function is disabled by default.
- **BLC:** It includes several options: BLC/WDR/HLC/OFF.
  - **BLC:** The device auto exposures according to the environments situation so that the darkest area of the video is cleared
  - **WDR:** For the WDR scene, this function can lower the high bright section and enhance the brightness of the low bright section. So that you can view these two sections clearly at the same time. The value ranges from 1 to 100. When you switch the camera from no-WDR mode to the WDR mode, system may lose several seconds record video.
  - **HLC:** After you enabled HLC function, the device can lower the brightness of the brightest section according to the HLC control level. It can reduce the area of the halo and lower the brightness of the whole video.
  - **OFF:** It is to disable the BLC function. Please note this function is disabled by default.
- **Profile:** It is to set the white balance mode. It has effect on the general hue of the video. This function is on by default. You can select the different scene mode such as auto, sunny, cloudy, home, office, night, disable etc. to adjust the video to the best quality.
  - **Auto:** The auto white balance is on. System can auto compensate the color temperature to make sure the vide color is proper.
  - **Sunny:** The threshold of the white balance is in the sunny mode.
  - **Night:** The threshold of the white balance is in the night mode.

- **Customized:** You can set the gain of the red/blue channel. The value reneges from 0 to 100.
- **Day/night.** It is to set device color and the B/W mode switch. The default setup is auto.
- **Color:** Device outputs the color video.
- **Auto:** Device auto select to output the color or the B/W video according to the device feature (The general bright of the video or there is IR light or not.)
- **B/W:** The device outputs the black and white video.
- **Sensor:** It is to set when there is peripheral connected IR light.
- **Image enhancement:** It is to enhance video quality. The larger the value is, the clearer the video is. But the noise may become large too.
- **2D NR:** It is to process the noise of the single image. The video may become soft after process. The larger the value is, the better the effect is.
- **3D NR:** it is to process the multiple-frame (at least two frames). It is to use the frame information between the following two frames to reduce noise. The larger the value is, the better the effect is.

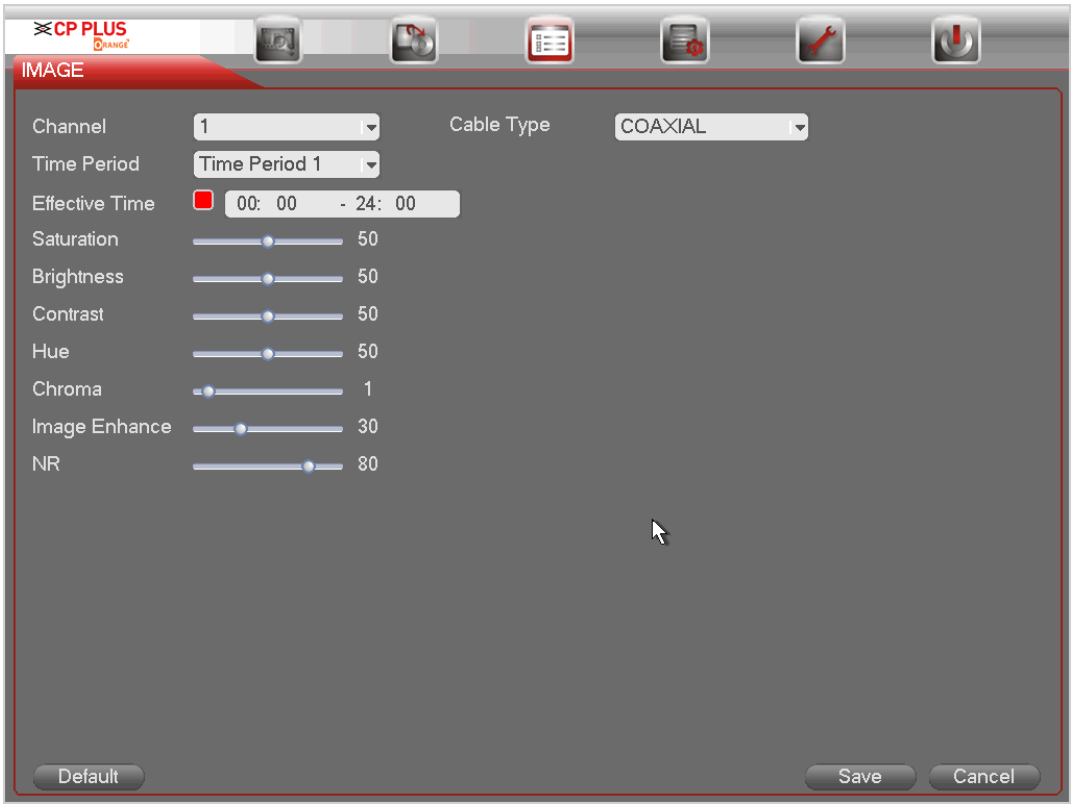


Figure 2-59

2.12.3 Encode

It is to set video bit stream, picture bit stream, video overlay parameter etc.

2.12.3.1 Encode

Video setting includes the following items. See Figure 2-60.

- **Channel:** Select the channel you want.

- **SVC:** SVC is so called scaled video coding. Check the box to enable this function. During the network transmission process, system discards unimportant frames when the bandwidth is not sufficient or the decode capability is low. It is to guarantee video quality and transmission fluency.
- **Type:** Please select from the dropdown list. There are three options: regular/motion detect/alarm. You can set the various encode parameters for different record types.
- **Compression:** System supports H.264H, H.264, H.264B, and MJPEG.
  - **H.264H:** It is the High-Profile compression algorithm. It has the high encode compression rate. It can achieve high quality encode at low bit stream. Usually we recommend this type.
  - **H.264** is the general compression algorithm.
  - **H.264B** is the Baseline algorithm. Its compression rate is low. For the same video quality, it has high bit stream requirements.
- **Resolution:** For analog channel, system supports various resolutions, you can select from the dropdown list. Please note the option may vary due to different series. For digital channel, the resolution here refers to the capability of the network camera.
- **Frame rate:** It ranges from 1f/s to 25f/s in NTSC mode and 1f/s to 30f/s in PAL mode.
- **Bit rate type:** System supports two types: CBR and VBR. In VBR mode, you can set video quality.
- **Quality:** There are six levels ranging from 1 to 6. The sixth level has the highest image quality.
- **Video/audio:** You can enable or disable the video/audio.
- **Audio format:** Please select from the dropdown list. There are three options: G711a/G711u/PCM.
- **Audio source:** Please select from the dropdown list. There are two options: local/HDCVI. For local mode, the audio signal is from the Audio In port. For HDCVI mode, the audio signal is from the coaxial cable of the camera.

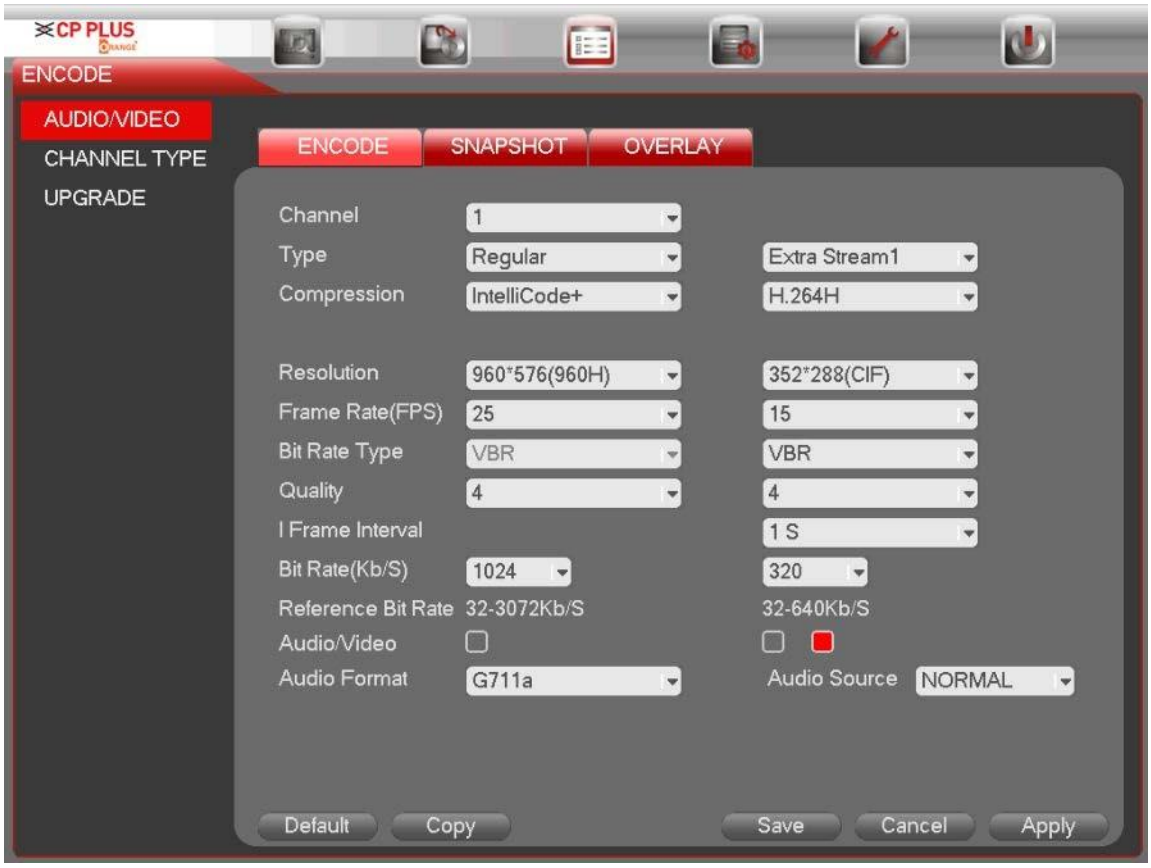


Figure 2-60

2.12.3.2 Snapshot

Here you can set snapshot mode, picture size, quality and frequency. See Figure 2-61.

- **Snapshot mode**: There are two modes: regular and trigger. If you set timing mode, you need to set snapshot frequency. If you set trigger snapshot, you need to set snapshot activation operation.
- **Image size:** Here you can set snapshot picture size.
- **Image quality:** Here you can set snapshot quality. The value ranges from 1 to 6.
- **Interval:** It is for you to set timing (schedule) snapshot interval.

Figure 2-61

2.12.3.3 Overlay

Overlay interface is shown as in Figure 2-62.

- **Cover area:** Here is for you to set cover area. You can drag you mouse to set proper section size. In one channel video, system max supports 4 zones in one channel.
- **Preview/monitor:** privacy mask has two types. Preview and Monitor. Preview means the privacy mask zone cannot be viewed by user when system is in preview status. Monitor means the privacy mask zone cannot be view by the user when system is in monitor status.
- **Time display:** You can select system displays time or not when your playback. Please click set button and then drag the title to the corresponding position in the screen.
- **Channel display:** You can select system displays channel number or not when your playback. Please click set button and then drag the title to the corresponding position in the screen.
- **Copy:** After you complete the setup, you can click Copy button to copy current setup to another channel(s). You can see an interface is shown as in Figure 2-63. You can see current channel number is grey. Please check the number to select the channel or you can check the box ALL. Please click the OK button in Figure 2-63 and Figure 2-62 respectively to complete the setup.

Please highlight icon to select the corresponding function.

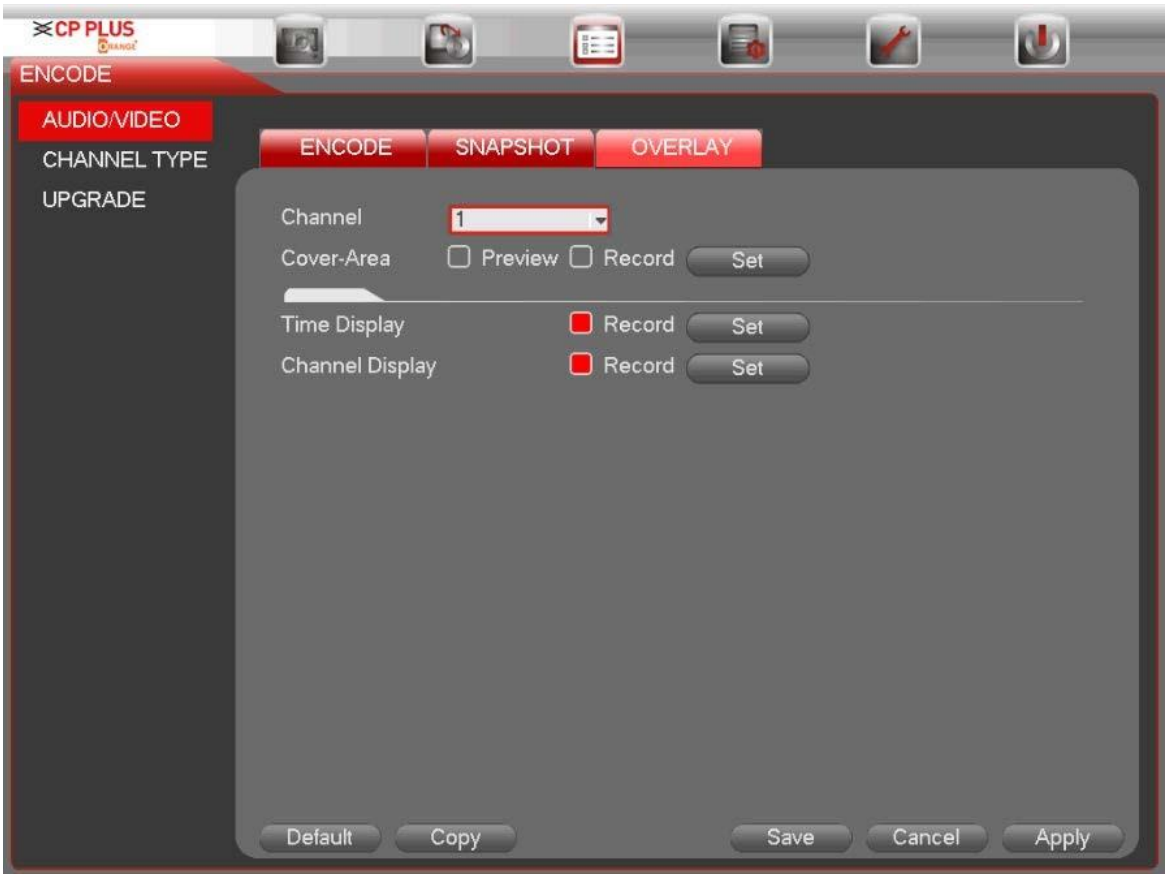


Figure 2-62

Figure 2-63

2.12.3.4 Channel Type

It is to set channel type. Each channel supports analog standard definition connections/analog HD connection/network camera connection (Slight function difference may be found). For the IP channel, you need to set from the last channel. Please note DVR needs to restart to activate new setup.

The interface is shown as in Figure 2-64.

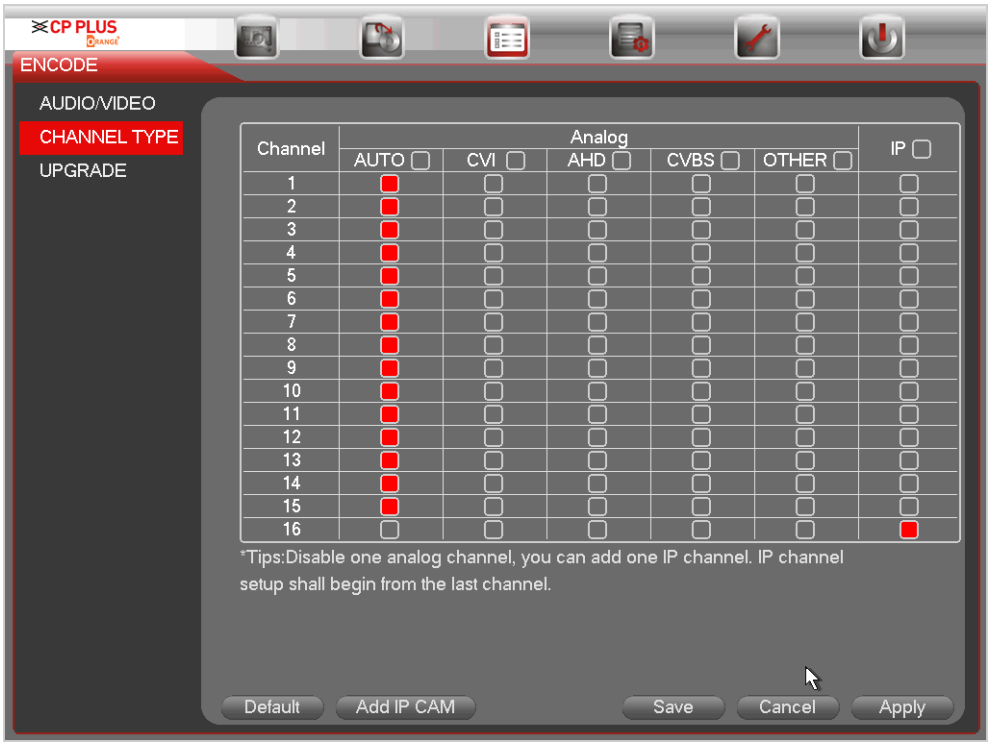


Figure 2-64

Important notice about UNI+ DVR series product:

- Nowadays, there are mainly two analog signal types on today market: analog standard definition (CVBS) and analog HD (CVI, AHD or Other). For UNI+ DVR series product, each channel supports all types of signal connection (analog signal/IP signal). For analog signal connection, the default setup is AUTO, that is to say, no matter what analog signal (CVBS, CVI, AHD or other analog HD signal) connected; the UNI+ DVR can automatically recognize the signal and display the proper image. There is no need to set manually.
- If the auto recognition error occurred, UNI+ DVR series product supports manual setup too. The manual setup featuring high recognition speed and usually there is no error. For example, in below (**Reference Image)** you can set channel 1 to connect to CVI camera, channel 2 to connect to AHD camera, channel 3 to connect to CVBS camera.

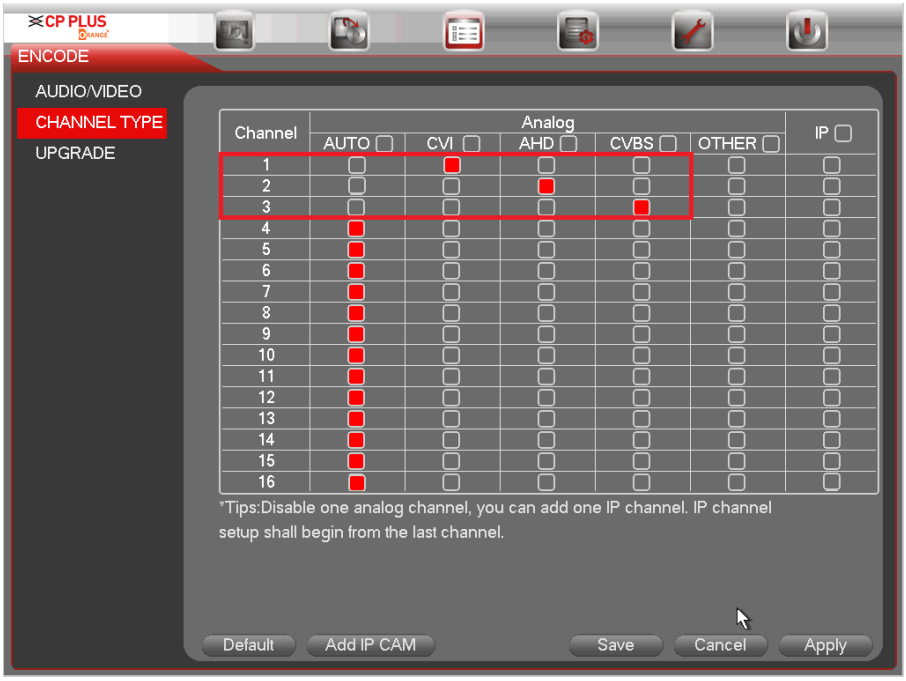


Figure 2-65

Important

Add/cancel IP CAM function is for some 4/8/16-channel series product only.

- **Add IP CAM:** Click it; you can add corresponding X IP channels. Here X refers to the product channel amount such as 4/8/16. System needs to restart to activate new setup. See Figure 2-66.

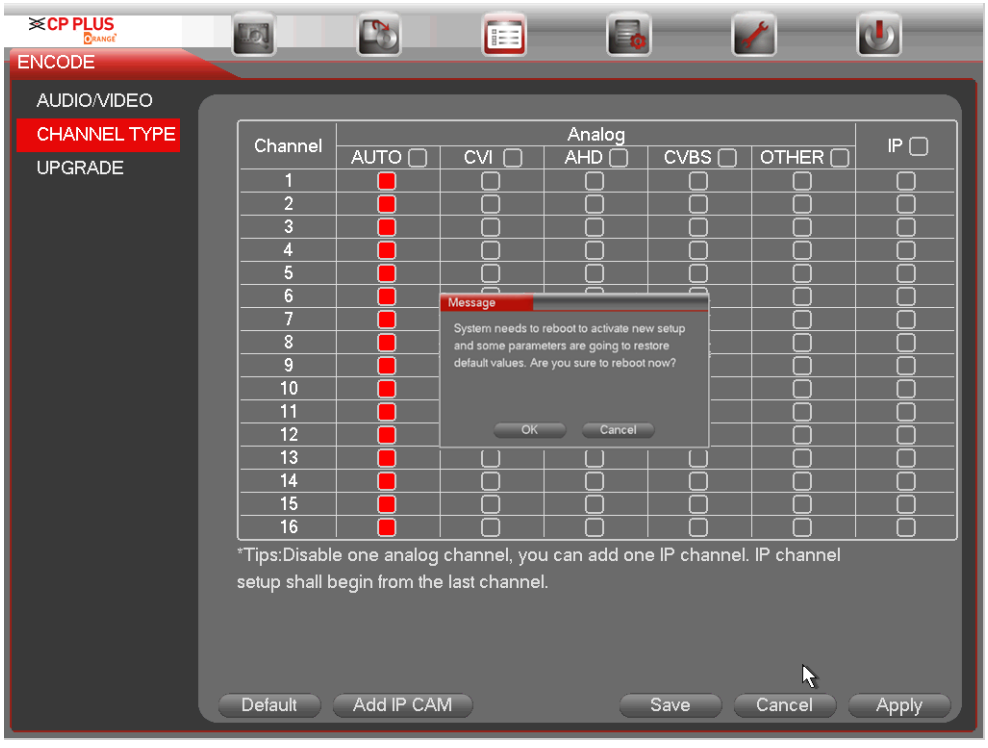


Figure 2-66

For example, there is a 4-channel analog device, after the A/D switch, it can max supports 4 analog channels and 4 IP channels. Once it has become the 3+1 mode (3 analog channels+1 IP channel), you

click Cancel IP CAM button, system becomes 3+5 mode (3 analog channels+5 IP channel).

- **Cancel IP CAM:** Click it, you can cancel IP channel. System needs to restart to restore original status.

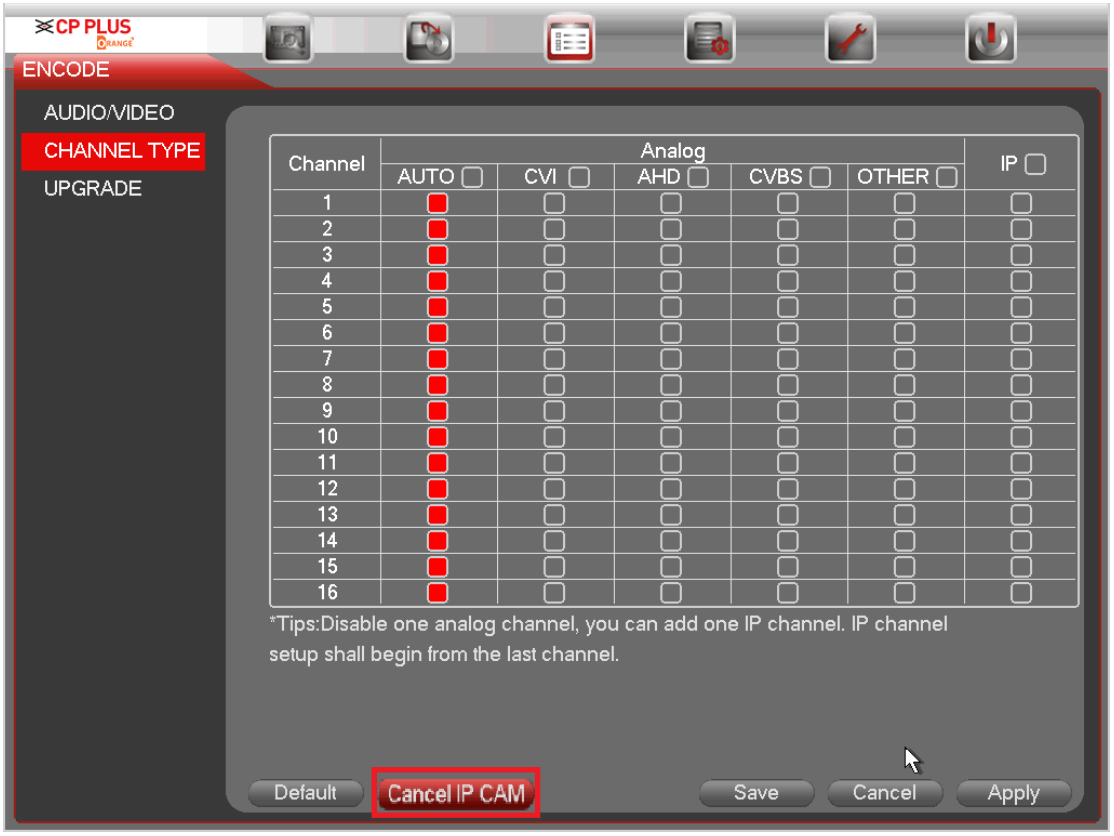


Figure 2-67

2.12.4 Upgrade

It is to update the camera. From main menu □ setting □ camera □ remote upgrade, the interface is shown as below. See Figure 2-68. Click Browse button and then select the upgrade file. Then select a channel (or you can select device type filter to select several devices at the same time.)

Click Start upgrade button to update. You can see the corresponding dialogue once the upgrade is finish.

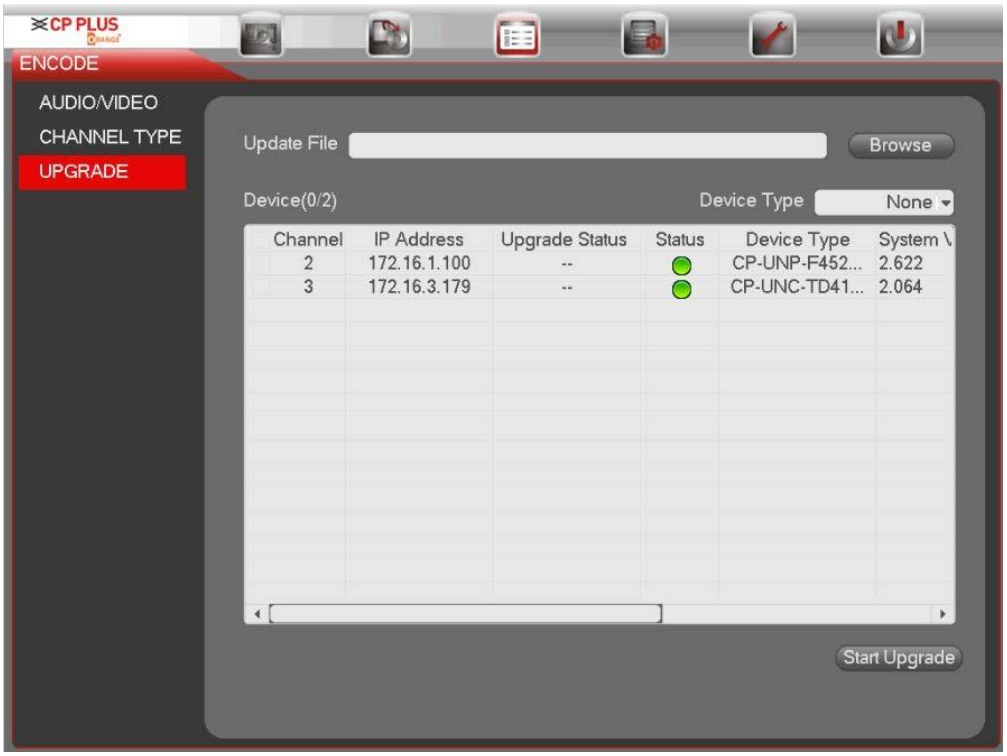


Figure 2-68

2.12.5 Channel Name

It is to modify channel name. It max supports 31-character. See Figure 2-69. Please note for digital channel, you can only modify the channel name of the connected network camera.

Figure 2-69

2.13 Info

2.13.1 Info

2.13.1.1 HDD Info

Here is to list hard disk type, total space, free space and status. See Figure 2-70.

- **SATA:** 1-2 here means system max supports 2 HDDS. ○ means current HDD is normal. X means there is error. - Means there is no HDD. If disk is damaged, system shows as “?”. Please remove the broken hard disk before you add a new one.
- **SN:** You can view the HDD amount the device connected to. * means the second HDD is current working HDD.
- **Type:** The corresponding HDD properties.
- **Total space:** The HDD total capacity.
- **Free space:** The HDD free capacity.
- **Status:** HDD can work properly or not.
- **SMART:** Display HDD information. See Figure 2-71

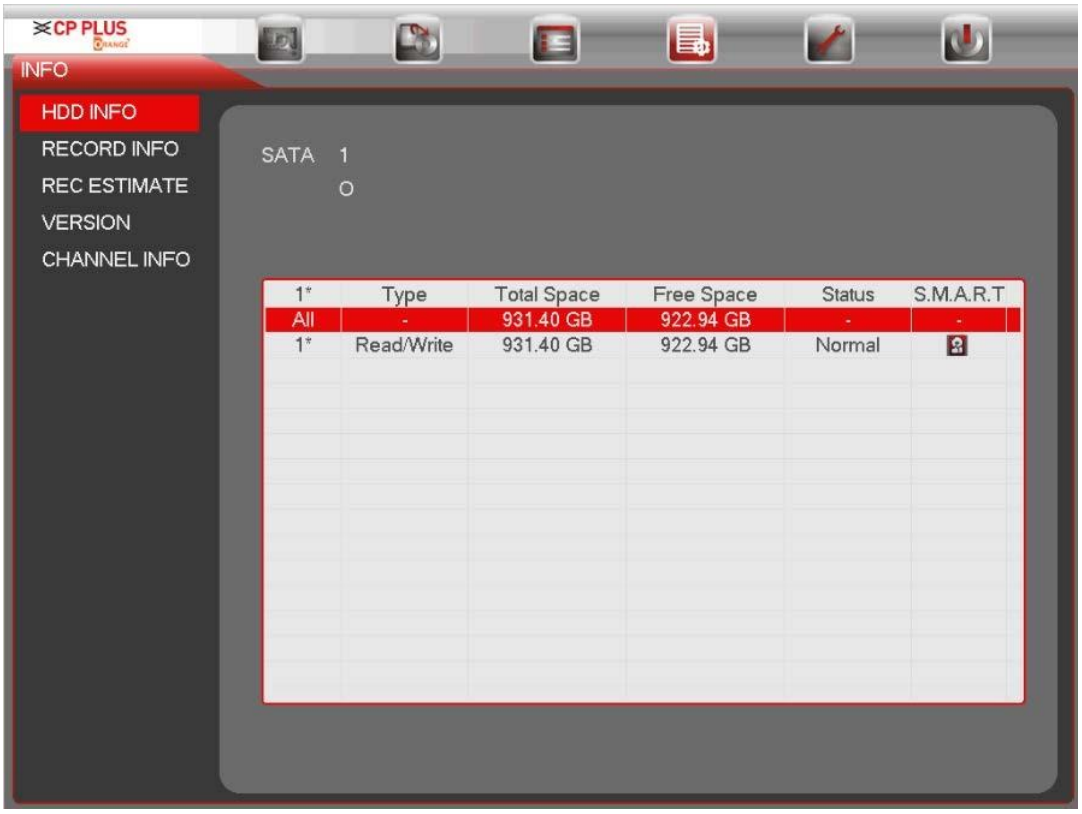


Figure 2-70

Double click one HDD information; you can see the HDD SMART information. See Figure 2-71.

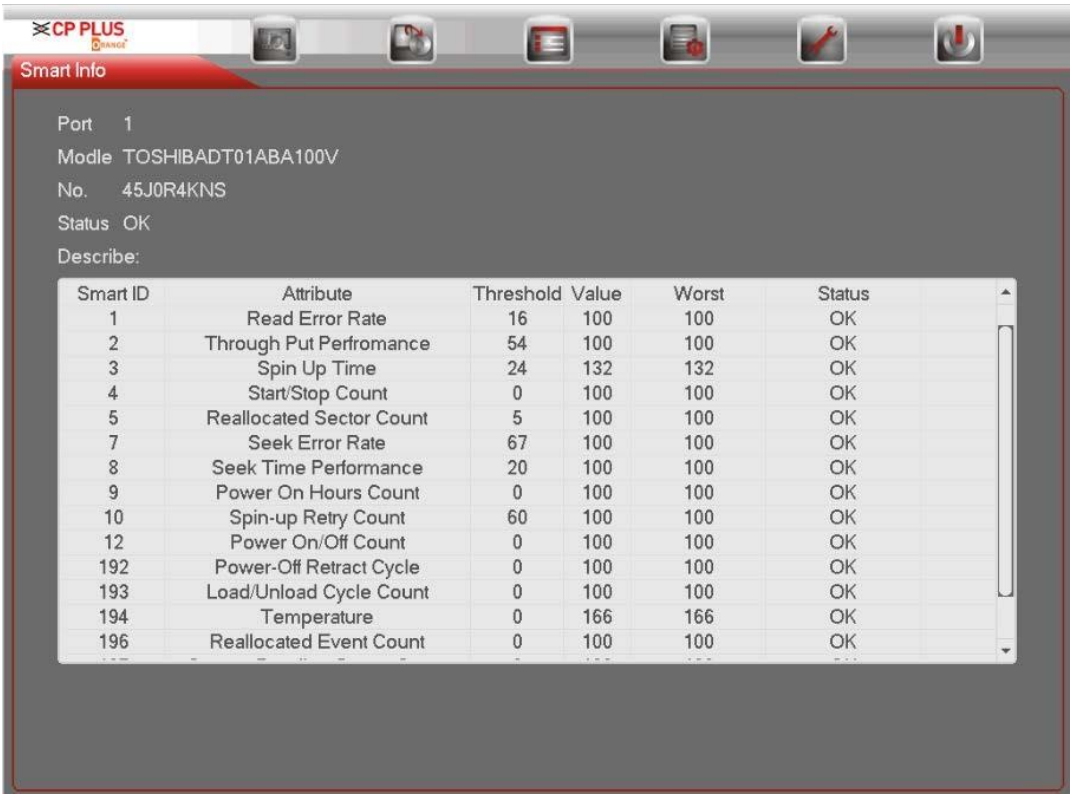


Figure 2-71

2.13.1.2 Record Info

It is to view record start time and end time. See Figure 2-72.

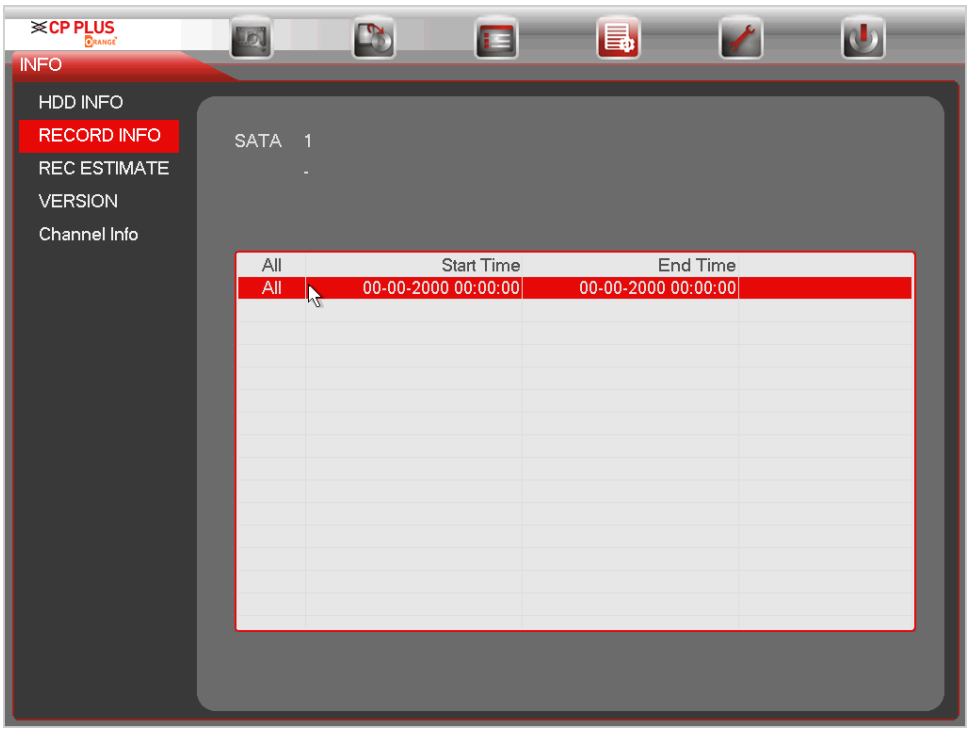


Figure 2-72

2.13.1.3 Version

Here is for you to view some version information such as version number, built date, serial number etc. See Figure 2-73.

Figure 2-73

2.13.1.4 Channel Info

It is to view information of the corresponding channel. See Figure 2-74

Figure 2-74

2.13.2 Event

It is to display device status and channel status. See Figure 2-75

Figure 2-75

2.13.3 Network Info

2.13.3.1 Online Users

Here is for you to manage online users. See Figure 2-76. You can disconnect one user or block one user if you have proper system right. Max disconnection setup is 65535 seconds. System detects there is any newly added or deleted user in each five second and refresh the list automatically.

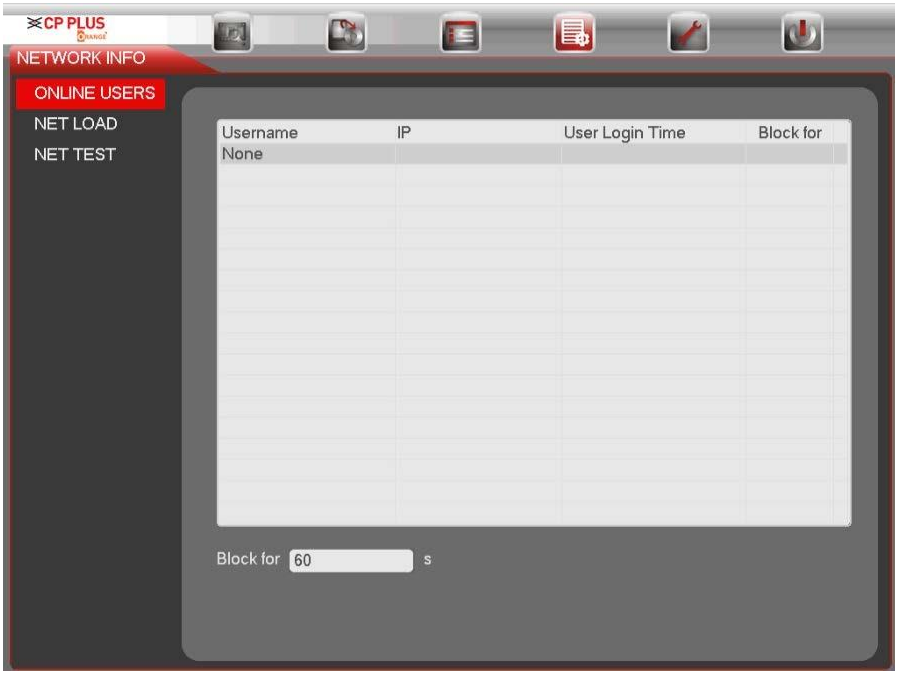


Figure 2-76

2.13.3.2 Network Load

Network load is shown as in Figure 2-77. Here you can view the follow statistics of the device network adapter. Here you can view information of all connected network adapters. The connection status is shown as offline if connection is disconnected. Click one network adapter, you can view the flow statistics such as send rate and receive rate at the top panel.

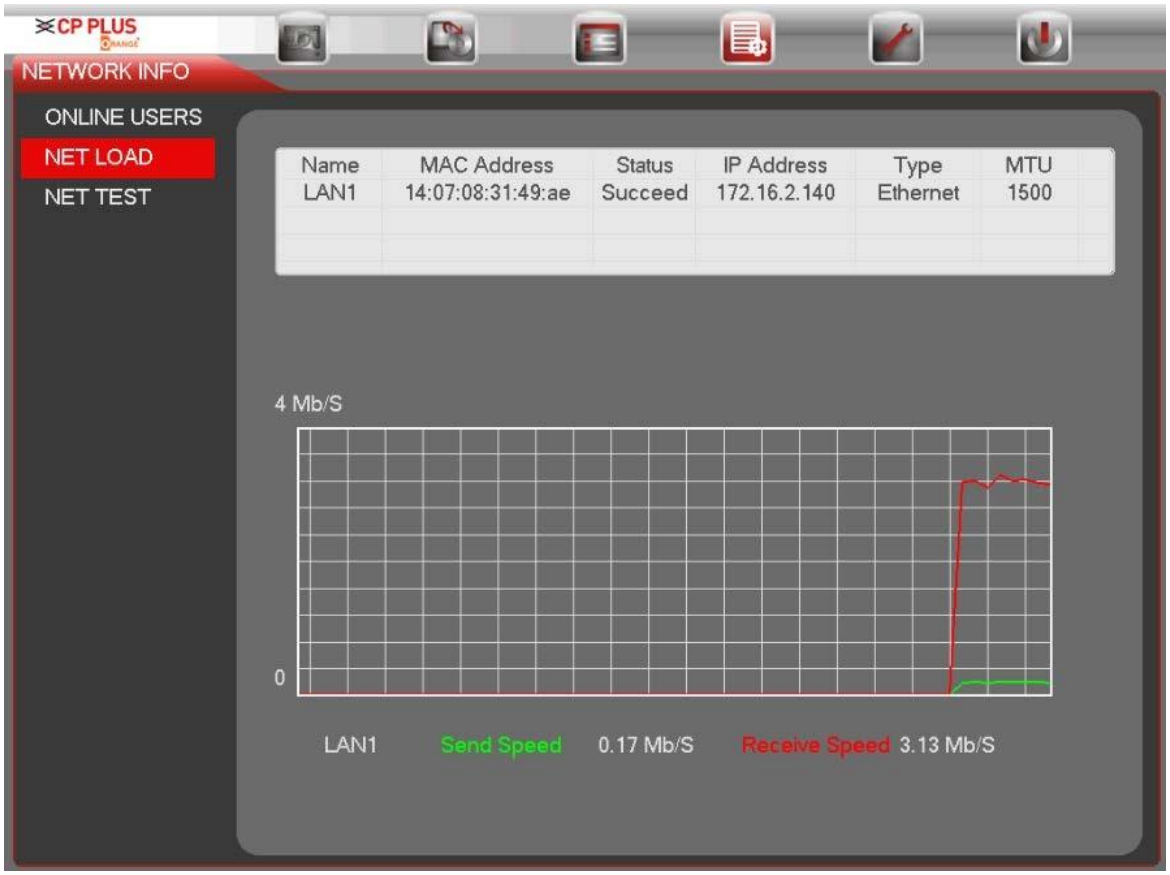


Figure 2-77

2.13.3.3 Network Test

Network test interface is shown as in Figure 2-78.

- **Destination IP:** Please input valid IPV4 address or domain name.
- **Test:** Click it to test the connection with the destination IP address. The test results can display average delay and packet loss rate and you can also view the network status as OK, bad, no connection etc.
- **Network Sniffer backup:** Please insert USB2.0 device and click the Refresh button, you can view the device on the following column. You can use the dropdown list to select peripheral device. Click Browse button to select the snap path. The steps here are same as preview backup operation.

You can view all connected network adapter names (including Ethernet, PPPoE, WIFI, and 3G), you can click the button  on the right panel to begin Sniffer. Click the grey stop button to stop. Please note system cannot Sniffer several network adapters at the same time.

After Sniffer began, you can exit to implement corresponding network operation such as login WEB,

monitor. Please go back to Sniffer interface to click  stop Sniffer. System can save the packets to the specified path. The file is named after “Network adapter name + time”. You can use software such as Wireshark to open the packets on the PC for the professional engineer to solve complicated problems.

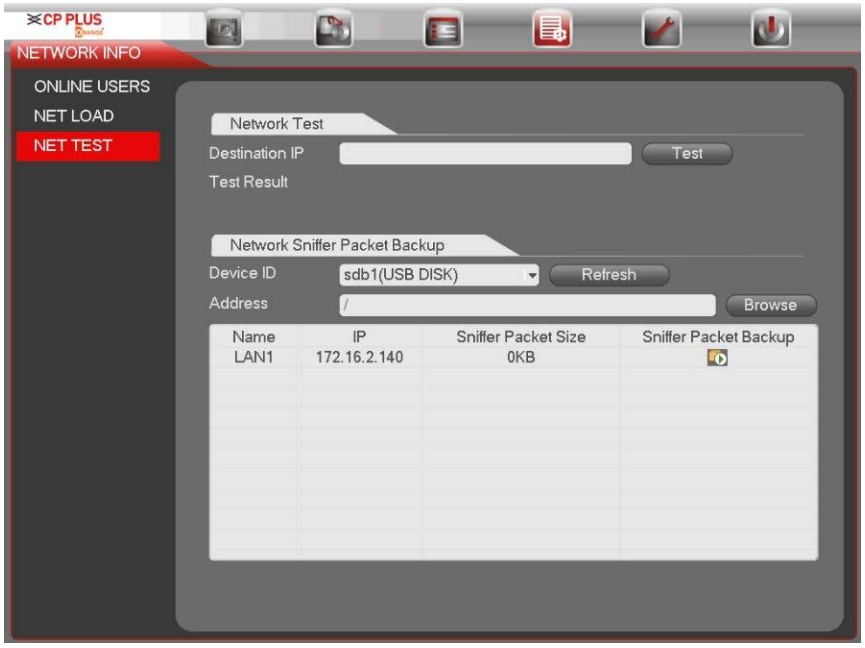


Figure 2-78

2.13.4 BPS

Here is for you to view current video data stream (KB/s) and occupied hard disk storage (MB/h). See Figure 2-79.

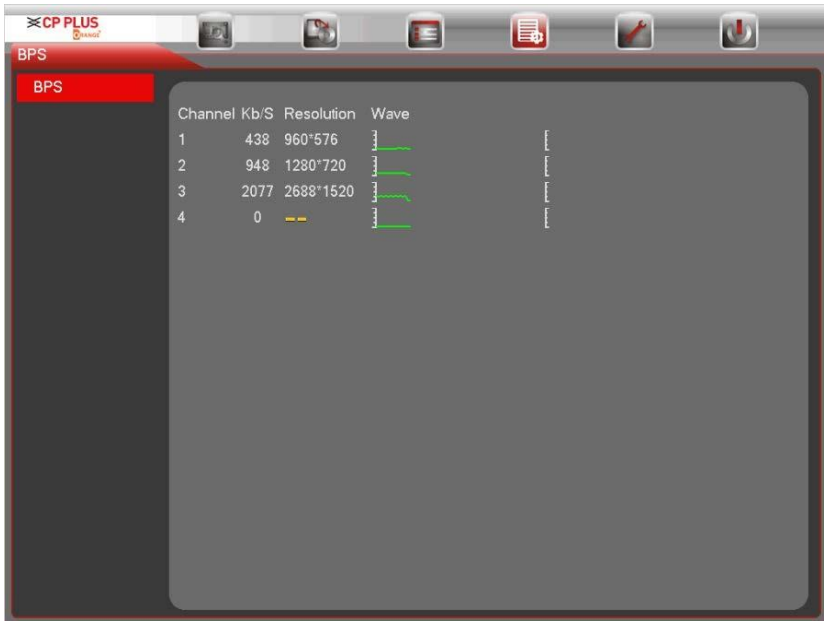


Figure 2-79

2.13.5 Log

2.13.5.1 Local Log

Here is for you to view system log file. System lists the following information. See Figure 2-80.

Log types include system operation, configuration operation, data management, alarm event, record operation, account manager, log clear, file operation etc. It optimized reboot log. There are only three types: normal reboot, abnormal reboot and protection reboot. 0x02、0x03、0x04 is included in the protection reboot type.

- **Start time/end time:** Pleased select start time and end time, then click search button. You can view the log files in a list. System max displays 100 logs in one page. It can max save 1024 log files. Please use page up/down button on the interface or the front panel to view more.
- **Backup:** Please select a folder you want to save; you can click the backup button to save the log files. After the backup, you can see there is a folder named Log time on the backup path. Double click the folder, you can see the log file
- **Details:** Click the Details button or double click the log item, you can view the detailed information. See Figure 2-81. Here you can use rolling bar to view information, or you can use Page up/Page down to view another log information.

Figure 2-80

Select an item on the list and then click the Details button or double click the log item, you can view the detailed information such as log time, log type, log user, IP address etc. See Figure 2-81.

Figure 2-81

Note

- If there is no HDD, system max supports 1024 logs.
- If you have connected to the unformatted HDD, system max supports 5000 logs.
- If you have connected to the formatted HDD, system max supports 500,000 logs.
- System operation logs are saved in system memory. Other types of logs are saved in the HDD. If there is no HDD, other types of logs are saved in the system memory too.
- The logs are safe when you format the HDD. But the logs may become loss once you removed the HDD.

2.14 Setting

2.14.1 Network

2.14.1.1 TCP/IP

The single network adapter interface is shown as in Figure 2-82 and the dual network adapters interface is shown as in Figure 2-82

- **IP Version:** There are two options: IPv4 and IPv6. Right now, system supports these two IP address format and you can access via them.
- **MAC address:** The host in the LAN can get a unique MAC address. It is for you to access in the LAN. It is read-only.
- **Mode –**
  - **Static:** It is to set Static or predefine IP for DVR.
  - **DHCP:** It is to auto search IP. When enable DHCP function, you cannot modify IP/Subnet mask /Gateway. These values are from DHCP function. If you have not enabled DHCP function, IP/Subnet mask/Gateway display as zero. You need to disable DHCP function to view current IP information. Besides, when PPPoE is operating, you cannot modify IP/Subnet mask /Gateway.
- **IP address:** Here you can use up/down button (□□) or input the corresponding number to input IP address. Then you can set the corresponding subnet mask the default gateway.
- **Default gateway:** Here you can input the default gateway. Please note system needs to check the validity of all IPv6 addresses. The IP address and the default gateway shall be in the same IP section. The specified length of the subnet prefix shall have the same string.
- **MTU:** It is to set MTU value of the network adapter. The value ranges from 1280-7200 bytes. The default setup is 1500 bytes. Please note MTU modification may result in network adapter reboot and network becomes off. MTU modification can affect current network service. System may pop up dialog box for you to confirm setup when you want to change MTU setup. Click OK button to confirm current reboot, or you can click Cancel button to terminate current modification. Before the modification, you can check the MTU of the gateway; the MTU of the DVR shall be the same as or is lower than the MTU of the gateway. In this way, you can reduce packets and enhance network transmission efficiency.

The following MTU value is for reference only.

- **1500:** Ethernet information packet max value and it is also the default value. It is the typical setup when there is no PPPoE or VPN. It is the default setup of some router, switch or the network adapter.
- **1492:** Recommend value for PPPoE.
- **1468:** Recommend value for DHCP.

- **Preferred DNS server:** DNS server IP address.
- **Alternate DNS server:** DNS server alternate address.

After completing all the setups please click save button, system goes back to the previous menu.

Figure 2-82

2.14.1.2 Connection

The connection setup interface is shown as in Figure 2-83.

- **Max connection:** system support maximal 128 users. 0 means there is no connection limit.
- **TCP port:** Default value is 25001.
- **UDP port:** Default value is 25002.
- **HTTP port:** Default value is 80.
- **HTTPS port:** Default value is 443.
- **RTSP port:** Default value is 554.

Important: System needs to reboot after you changed and saved any setup of the above four ports. Please make sure the port values here do not conflict.

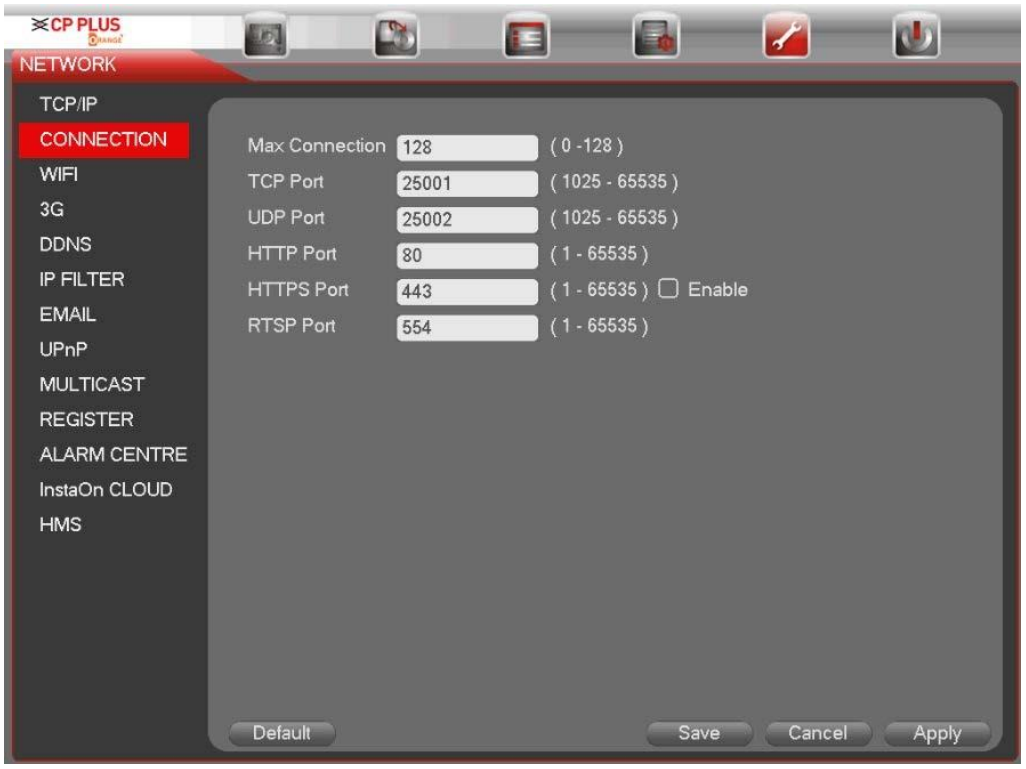


Figure 2-83

2.14.1.3 WIFI

The WIFI interface is shown as below. See Figure 2-84.

- **Auto connect WIFI:** Check the box here, system automatically connects to the previous WIFI hotspot.
- **Refresh:** You can click it to search the hotspot list again. It can automatically add the information such as the password if you have set it before.
- **Disconnect:** Here you can click it to turn off the connection.
- **Connect:** Here you can click it to connect to the hotspot. System needs to turn off current connection and then connect to a new hotspot if there is connection of you selected one.

Figure 2-84

- **WIFI working status:** Here you can view current connection status.

Please note:

- After successful connection, you can see WIFI connection icon at the top right corner of the preview interface.
- When the hotspot verification type is WEP, system displays as AUTO since the device cannot detect its encryption type.
- System does not support verification type WPA and WPA2. The display may become abnormal for the verification type and encryption type.

After device successfully connected to the WIFI, you can view the hotspot name, IP address, subnet mask, default gateway etc.

2.14.1.4 3G

3G setup interfaces is shown as below. See Figure 2-85.

Please refer to the following contents for the parameter information.

- **Pane 1:** Display 3G signal intensity after you enabled 3G function.
- **Pane 2:** Display 3G module configuration information after you enabled 3G function.
- **Pane 3:** Display 3G module status information after you enabled 3G function.

It is to display current wireless network signal intensity such as EVDO, CDMA1x, WCDMA, WCDMA, EDGE etc.

- **3G module:** It is to display current wireless network adapter name.

- **3G Enable/Disable:** Check the box here to enable 3G module.
- **Network type:** There are various network types for different 3G network modules. You can select according to your requirements.
- **APN:** It is the wireless connection server. It is to set you access the wireless network via which method.
- **AUTH:** It is the authentication mode. It supports PAP/CHAP.
- **Dial number:** Please input 3G network dialup number you got from your ISP.
- **User name:** It is the user name for you to login the 3G network.
- **Password:** It is the password for you to login the 3G network.
- **Pulse interval:** You can set dialup duration. Once you disable the extra stream, the connection time begins. For example, if you input 5 seconds here, then 3G network connection periods is 5 seconds. The device automatically disconnects when time is up. If there is no extra stream, 3G network connection is valid all the time. **If the alive time is 0, then the 3G network connection is valid all the time.**
- **Dial:** Here you can enable or disable 3G network connection/disconnection manually.
- **3G wireless network:** Here is to display wireless network status, SIM card status, dial status. If the 3G connection is OK, then you can see the device IP address the wireless network automatically allocates.

Figure 2-85

2.14.1.5 DDNS Setup

DDNS setup interface is shown as in Figure 2-86. You need a PC of fixed IP in the internet and there is the DDNS software running in this PC. In other words, this PC is a DNS (domain name server).

In network DDNS, please select DDNS type and highlight enable item. Then please input your PPPoE name you get from you IPS and server IP (PC with DDNS). Click save button and then reboot system.

Figure 2-86

- **DDNS Type**：www.CPPLUSDDNS.com
- Port number：80
- **Domain name: Y**ou can also use customized domain name (You can input your self-defined domain name.) After successful registration, you can use domain name to login installed of the device IP.

Important

- Do not register frequently. The interval between two registrations shall be more than 60 seconds. Too many registration requests may result in server attack.
- System may take back the domain name that is idle for one year. You can get a notification email before the cancel operation if your email address setup is OK.

2.14.1.6 IP Filter

IP filter interface is shown as in Figure 2-87. You can add IP in the following list. The list supports max 64 IP addresses. System supports valid address of IPv4 and IPv6. **Please note system needs to check**

the validity of all IPv6 addresses and implement optimization.

After you enabled trusted sites function, only the IP listed below can access current DVR.
If you enable blocked sites function, the following listed IP addresses cannot access current DVR.

- **Enable:** Highlight the box here, you can check the trusted site function and blocked sites function. You cannot see these two modes if the Enable button is grey.
- **Type:** You can select trusted site and blacklist from the dropdown list. You can view the IP address on the following column.
- **Start address/end address:** Select one type from the dropdown list, you can input IP address in the start address and end address. Now you can click Add IP address or Add IP section to add.

    a) For the newly added IP address, it is in enable status by default. Remove the √ before the item, and then current item is not in the list.
    b) System max supports 64 items.
    c) Address column supports IPv4 or IPv6 format. If it is IPv6 address, system can optimize it. For example, system can optimize aa:0000: 00: 00aa: 00aa: 00aa: 00aa: 00aa as aa:: aa: aa: aa: aa: aa: aa.
    d) System automatically removes space if there is any space before or after the newly added IP address.
    e) System only checks start address if you add IP address. System check start address and end address if you add IP section and the end address shall be larger than the start address.
    f) System may check newly added IP address exists or not. System does not add if input IP address does not exist.
- **Delete:** Click it to remove specified item.
- **Edit:** Click it to edit start address and end address. System can check the IP address validity after the edit operation and implement IPv6 optimization.
- **Default:** Click it to restore default setup. In this case, the trusted sites and blocked sites are both null.

Note:

- If you enabled trusted sites, only the IP in the trusted sites list can access the device.
- If you enabled blocked sites, the IP in the blocked sites cannot access the device.
- System supports add MAC address.

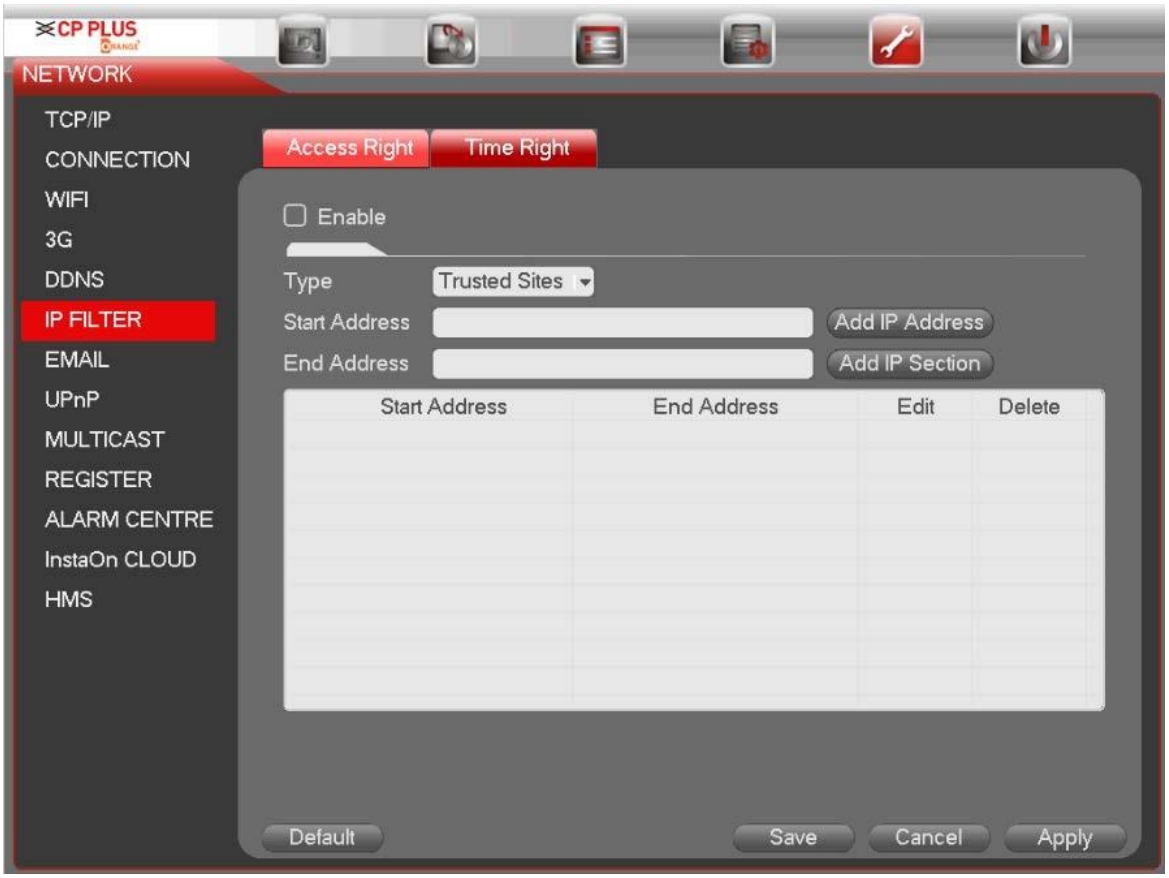


Figure 2-87

2.14.1.7 Email

The email interface is shown as below. See Figure 2-88.

- SMTP server: Please input your email SMTP server IP here.
- Port: Please input corresponding port value here.
- **User name:** Please input the user name to login the sender email box.
- **Password:** Please input the corresponding password here.
- **Sender:** Please input sender email box here.
- **Title:** Please input email subject here. System support English character and Arabic number. Max 32-digit.
- **Receiver:** Please input receiver email address here. System max supports 3 email boxes. System automatically filters same addresses if you input one receiver repeatedly.
- **SSL enable:** System supports SSL encryption box.
- **Interval:** The send interval ranges from 0 to 3600 seconds. 0 means there is no interval.
- **Health email enable:** Please check the box here to enable this function. This function allows the system to send out the test email to check the connection is OK or not.
- **Interval:** Please check the above box to enable this function and then set the corresponding interval. System can send out the email regularly as you set here. Click the Test button, you can see the corresponding dialogue box to see the email connection is OK or not.

Please note system will not send out the email immediately when the alarm occurs. When the alarm, motion detection or the abnormity event activates the email, system sends out the email according to the interval you specified here. This function is very useful when there are too many emails

activated by the abnormity events, which may result in heavy load for the email server.

Figure 2-88

2.14.1.8 UPnP

The UPNP protocol is to establish a mapping relationship between the LAN and the WAN. Please input the router IP address in the LAN in Figure 2-89. See Figure 2-90

- **UPNP on/off**：Turn on or off the UPNP function of the device.
- **Status:** When the UPNP is offline, it shows as “Unknown”. When the UPNP works it shows “Success”
- **Router LAN IP:** It is the router IP in the LAN.
- **WAN IP:** It is the router IP in the WAN.
- **Port mapping list**： The port mapping list here is the one to one relationship with the router’s port mapping setting.
- List：
  - **Service name:** Defined by user.
  - **Protocol:** Protocol type
  - **Internal port:** Port that has been mapped in the router.
  - **External port:** Port that has been mapped locally.
- **Default:** UPNP default port setting is the HTTP, TCP and UDP of the DVR.
- **Add to the list:** Click it to add the mapping relationship.
- **Delete:** Click it to remove one mapping item.

Double click one item; you can change the corresponding mapping information. See Figure 2-89.

Important:

When you are setting the router external port, please use 1024~5000 port. Do not use well-known port 1~255 and the system port 256~1023 to avoid conflict.

For the TCP and UDP, please make sure the internal port and external port are the same to guarantee the proper data transmission.

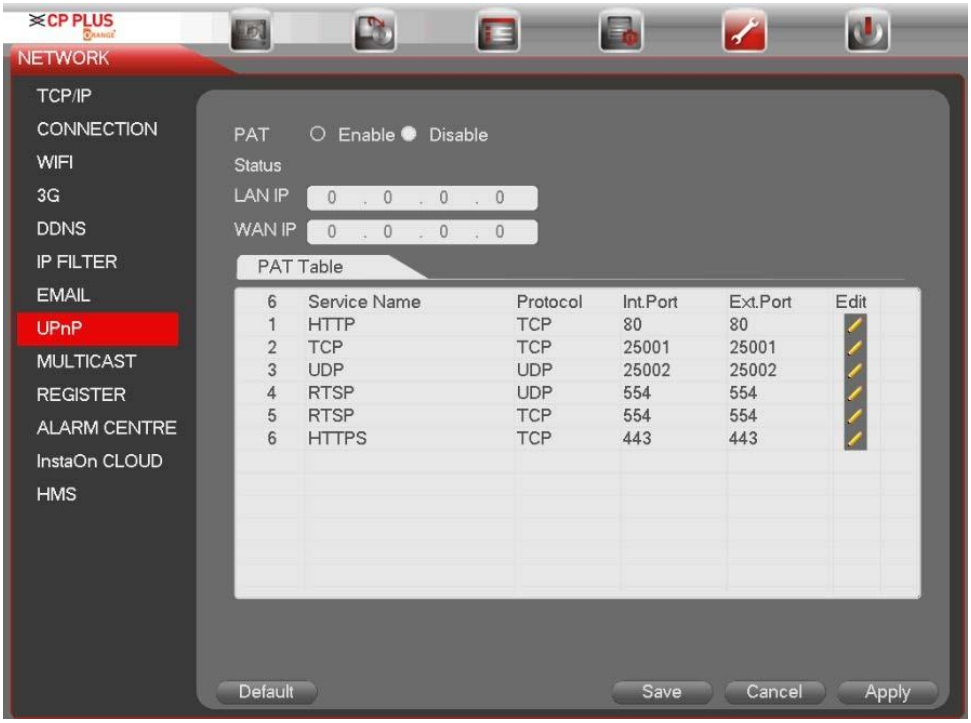


Figure 2-89

Figure 2-90

2.14.1.9 Multicast

Multicast setup interface is shown as in Figure 2-91.

Figure 2-91

Here you can set a multiple cast group. Please refer to the following sheet for detailed information.

- IP multiple cast group address

-224.0.0.0-239.255.255.255

-“D” address space

- The higher four-bit of the first byte=”1110”

- Reserved local multiple cast group address

-224.0.0.0-224.0.0.255

-TTL=1 When sending out telegraph

-For example

224.0.0.1	All systems in the sub-net
224.0.0.2	All routers in the sub-net
224.0.0.4	DVMRP router
224.0.0.5	OSPF router
224.0.0.13	PIMv2 router

- Administrative scoped addressees

-239.0.0.0-239.255.255.255

-Private address space

- Like the single broadcast address of RFC1918
- Cannot be used in Internet transmission
- Used for multiple cast broadcast in limited space.

Except the above-mentioned addresses of special meaning, you can use other addresses. For example:

Multiple cast IP: 235.8.8.36 Multiple cast PORT: 3666.

After you logged in the Web, the Web can automatically get multiple cast address and add it to the multiple cast groups. You can enable real-time monitor function to view the view. Please note multiple cast function applies to special series only.

2.14.1.10 Register

This function allows the device to auto register to the proxy you specified. In this way, you can use the client-end to access the DVR etc. via the proxy. Here the proxy has a switch function. In the network service, device supports the server address of IPv4 or domain. Please follow the steps listed below to use this function. Please set proxy server address, port, and sub-device name at the device-end. Please enable the auto register function, the device can auto register to the proxy server.

1) The setup interface is shown as in Figure 2-92. Important

Do not input network default port such as TCP port number.

Figure 2-92

2) The proxy server software developed from the SDK. Please open the software and input the global setup. Please make sure the auto connection port here is the same as the port you set in the previous step.

3) Now you can add device. Please do not input default port number such as the TCP port in the mapping port number. The device ID here shall be the same with the ID you input in Figure 2-92. Click Add button to complete the setup.

4) Now you can boot up the proxy server. When you see the network status is Y, it means your registration is OK. You can view the proxy server when the device is online.

Important

The server IP address can also be domain. But you need to register a domain name before you run proxy device server.

2.14.1.11 Alarm Centre

This interface is reserved for you to develop. See Figure 2-93.

Figure 2-93

2.14.1.12 INSTAON

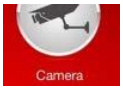
You can use your cell phone to scan the QR code and add it to the cell phone client. Via the SN from scanning the QR code, you can access the device in the WAN. Please refer to the InstaOn operation manual included in the resources CD.

From Main Menu □ Setting □ Network □ InstaOn, you can go to the following interface, the INSTAON interface is shown as in Figure 2-94.

Figure 2-94

- **Android:**
  Open Google Play app in your smart phone. Search GCMOB, download it and install.
- **iOS:**
  Open App Store app in your smart phone. Search ICMOB, download it

  and install. Please follow the steps listed below.

- Open App; tap 

to go to the Liv preview.

- Tap at the top left corner, you can see the main menu.
- Tap Device manager button, you can use several modes (INSTAON/DDNS/IP and etc.) to add the device. Click  to save current setup. Tap Start Live preview to view all-channel video from the connected device. See Figure 2-95.

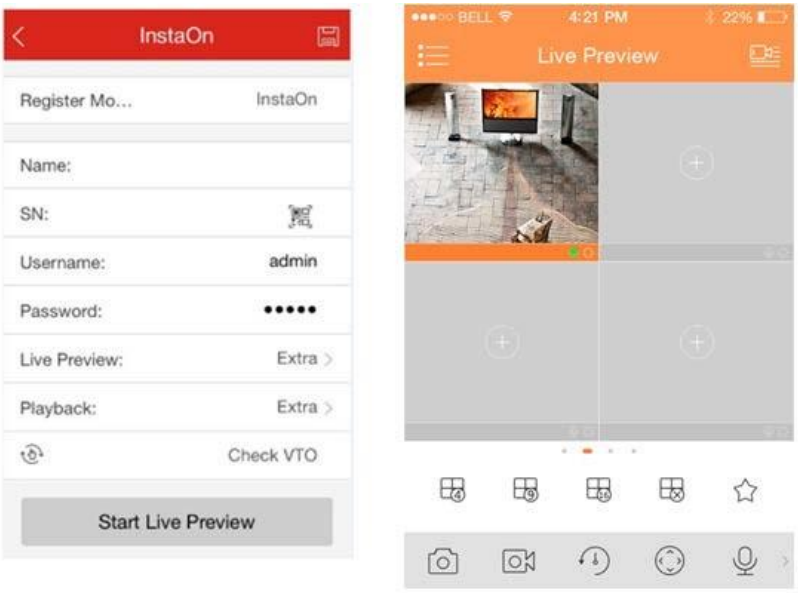

InstaOn
Register Mo...
InstaOn
Name:
SN:
Username:
admin
Password:
Live Preview:
Extra
Playback:
Extra
Check VTO
Start Live Preview
BELL
4:21 PM
22%
Live Preview

Figure 2-95

2.14.2 Event

2.14.2.1 Detect

In the main menu, from Setting □ Event □ Detect, you can see motion detect interface. See Figure 2-96 There is three detection types: motion detection, video loss, tampering.

- The video loss has no detection region and sensitivity setup and tampering has no detection region setup.
- You can see motion detect icon if current channel has enabled motion detect alarm.
- You can drag you mouse to set motion detect region. Please click OK button to save current region setup. Right click mouse to exit current interface.
- For digital channel, the detect function refers to support detection function of the front-end and support local activation function. The front-end can get enable/disable status, sensitivity and region setup. You can get corresponding prompt if front-end cannot get the above information. You can change front-end setup if it can get.

2.14.2.1.1 Motion Detect

After analysis video, system can generate a video loss alarm when the detected moving signal reached the sensitivity you set here.

Detection menu is shown as below. See Figure 2-96.

- **Event type:** From the dropdown list you can select motion detection type.
- **Channel:** Select a channel from the dropdown list to set motion detect function.
- **Enable:** Check the box here to enable motion detect function.
- **Region:** Click select button, the interface is shown as in Figure 2-97. Here you can set motion detection zone. There are four zones for you to set. Please select a zone first and then left drag the mouse to select a zone. The corresponding color zone displays different detection zone. You can click Fn button to switch between the arm mode and disarm mode. In arm mode, you can click the direction buttons to move the green rectangle to set the motion detection zone. After you completed the setup, please click ENTER button to exit current setup. Do remember click save button to save current setup. If you click ESC button to exit the region setup interface system will not save your zone setup.
- **Sensitivity:** System supports 6 levels. The sixth level has the highest sensitivity.
- **Anti-dither:** Here you can set anti-dither time. The value ranges from 5 to 600s. The anti-dither time refers to the alarm signal lasts time. It can be seem as the alarm signal activation stays such as the buzzer, tour, PTZ activation, snapshot, channel record. The stay time here does not include the latch time. During the alarm process, the alarm signal can begin an anti-dither time if system detects the local alarm again. The screen prompt, alarm upload, email and etc will not be activated. For example, if you set the anti-dither time as 10 second, you can see the each activation may last 10s if the local alarm is activated. During the process, if system detects another local alarm signal at the fifth second, the buzzer, tour, PTZ activation, snapshot, record channel will begin another 10s while the screen prompt, alarm upload, email will not be activated again. After 10s, if system detects another alarm signal, it can generate an alarm since the anti-dither time is out.
- **Period:** Click set button, you can see an interface is shown as in Figure 2-99. Here you can set motion detect period. System only enables motion detect operation in the specified periods. It

is not for video loss or the tampering. There are two ways for you to set periods. Please note system only supports 6 periods in one day.

✧ In Figure 2-99, Select icon  of several dates, all checked items can be edited together. Now the icon is shown as  . Click  to delete a record type from one period.

✧ In Figure 2-100.. Click button  after one date or a holiday, you can see an interface shown as in Figure 2-1. There are four record types: regular, motion detection (MD), Alarm, MD & alarm.

- **Alarm output:** when an alarm occurs, system enables peripheral alarm devices.
- **Latch:** when motion detection complete, system auto delays detecting for a specified time. The value ranges from 1-300(Unit: second)
- **Show message:** System can pop up a message to alarm you in the local host screen if you enabled this function.
- **Alarm upload:** System can upload the alarm signal to the network (including alarm centre) if you enabled current function.
- **Send email:** System can send out email to alert you when an alarm occurs.
- **Record channel:** System auto activates motion detection channel(s) to record once an alarm occurs. Please make sure you have set MD record in Schedule interface(Main Menu □ Setting □ Schedule) and schedule record in manual record interface(Main Menu □ Advanced □ Manual Record)
- **PTZ activation:** Here you can set PTZ movement when an alarm occurs. Such as go to preset, tour &pattern when there is an alarm. Click “select” button, you can see an interface is shown as in Figure 2-98.
- **Record Delay:** System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
- **Tour:** Here you can enable tour function when alarm occurs. System one-window tour.
- **Snapshot:** You can enable this function to snapshot image when a motion detect alarm occurs.
- **Video matrix:** Check the box here to enable this function. When an alarm occurs, SPOT OUT port displays device video output. It displays video (1-window tour) from alarm activation channel you select at the Record channel item.
- **Buzzer:** Highlight the icon to enable this function. The buzzer beeps when alarm occurs.
- **Log:** Check the box here, system can record motion detect log.
- **Test:** Click it to test current motion detect setup (do not need to save). Click Select button after Region, you can set motion detect area.
- **Voice prompts:** Check the box here to trigger audio broadcast function. You can select specified audio file here. System can play the audio file once the corresponding event occurs.

Please highlight icon  to select the corresponding function. After all the setups please click save button, system goes back to the previous menu.

Note:

In motion detection mode, you cannot use copy/paste to set channel setup since the video in each channel may not be the same.

In Figure 2-97, you can left click mouse and then drag it to set a region for motion detection. Click Fn to switch between arm/withdraw motion detection. After setting, click enter button to exit.

Figure 2-96

Figure 2-97

Figure 2-98

Figure 2-99

Figure 2-100

Motion detect here only has relationship with the sensitivity and region setup. It has no relationship with other setups.

2.14.2.1.2 Video Loss

In Figure 2-101, select video loss from the type list. You can see the interface is shown as in Figure 2-101. This function allows you to be informed when video loss phenomenon occurred. You can enable alarm output channel and then enable show message function.

Tips:

You can enable preset/tour/pattern activation operation when video loss occurs. Please refer to chapter 2.12.2.1.1 motion detection for detailed information.

Figure 2-101

2.14.2.2 Alarm

Before operation, please make sure you have properly connected alarm devices such as buzzer. In the main menu, from Setting □ Event □ Alarm, you can see alarm setup interface. For analog channel. For HDCVI channel, there are three alarm types. See Figure 2-102.. For digital channel, there are four alarm types. See Figure 2-102 to Figure 2-107.

- **HDCVI:** System can get the camera temperature, smoke, external alarm and set corresponding alarm activation operation.
- **IPC external alarm:** It is the on-off alarm signal from the front-end device and can activate the local HDVR.

- **IPC offline alarm:** Once you select this item, system can generate an alarm when the front-end IPC disconnects with the local HDVR. The alarm can activate record, PTZ, snap and etc. The alarm can last until the IPC and the HDVR connection resumes.

Important

- If it is your first time to boot up the device, the disconnection status of the front-end network camera will not be regarded as offline. After one successfully connection, all the disconnection events will be regarded as IPC offline event.
- When IPC offline alarm occurs, the record and snapshot function of digital channel is null.

- **Alarm in:** Here is for you to select channel number.
- **Type:** normal open or normal close.
- **PTZ activation:** Here you can set PTZ movement when alarm occurs. Such as go to preset, tour& pattern when there is an alarm. Click “select” button, you can see an interface is shown as in Figure 2-105.
- **Period:** Click set button, you can see an interface is shown as in Figure 2-106. There are two ways for you to set periods. There are max 6 periods in one day. There are four record types: regular, motion detection (MD), Alarm, MD & alarm.
  - In Figure 2-107, Select icon  of several dates, all checked items can be edited together. Now the icon is shown as  . Click  to delete a record type from one period.
  - In Figure 2-106. Click button  after one date or a holiday, you can see an interface shown as in Figure 2-107. There are four record types: regular, motion detection (MD), Alarm, MD & alarm.
- **Anti-dither:** Here you can set anti-dither time. Here you can set anti-dither time. The value ranges from 5 to 600s. The anti-dither time refers to the alarm signal lasts time. It can be seeming as the alarm signal activation stays such as the buzzer, tour, PTZ activation, snapshot, channel record. The stay time here does not include the latch time. During the alarm process, the alarm signal can begin an anti-dither time if system detects the local alarm again. The screen prompt, alarm upload, email etc. will not be activated. For example, if you set the anti-dither time as 10 second, you can see each activation may last 10s if the local alarm is activated. During the process, if system detects another local alarm signal at the fifth second, the buzzer, tour, PTZ activation, snapshot, record channel will begin another 10s while the screen prompt, alarm upload, email will not be activated again. After 10s, if system detects another alarm signal, it can generate an alarm since the anti-dither time is out.
- **Show message:** System can pop up a message to alarm you in the local host screen if you enabled this function.
- **Alarm upload:** System can upload the alarm signal to the network (including alarm center) if you enabled current function.
- **Send email:** System can send out email to alert you when alarm occurs.

- Record channel: you can select proper channel to record alarm video (Multiple choices). At the same time, you need to set alarm record in schedule interface (Main Menu Setting Schedule) and select schedule record in manual record interface (Main Menu Advance Manual Record).
- **Latch:** Here is for you to set proper delay duration. Value ranges from 10 to 300 seconds. System automatically delays specified seconds in turning off alarm and activated output after external alarm cancelled.
- **Tour:** Here you can enable tour function when alarm occurs. System supports 1/8-window tour. Please note the tour setup here has higher priority than the tour setup you set in the Display interface. Once there two tours are both enabled, system can enable the alarm tour as you set here when an alarm occurred. If there is no alarm, system implements the tour setup in the Display interface.
- **Snapshot:** System can snapshot corresponding channel when an alarm occurs. Please note the activation snapshot has the higher priority than schedule snapshot. If you have enabled these two types at the same time, system can activate the activation snapshot when alarm occurs, and otherwise system just operates the schedule snapshot.
- **Video matrix**: Check the box here to enable this function. When an alarm occurs, SPOT OUT port displays device video output. It displays video (1-window tour) from alarm activation channel you select at the Record channel item.
- **Log:** Check the box here, system can record local alarm log.
- **Buzzer:** Highlight the icon to enable this function. The buzzer beeps when alarm occurs.
- **Voice prompts:** Check the box here to trigger audio broadcast function. You can select specified audio file here. System can play the audio file once the corresponding event occurs.

Please note, network alarm means the alarm signal from the TCP/IP. You can use NET SDK to activate network alarm. Comparing with the local alarm, there is no type, anti-dither, alarm upload function.

Please highlight icon  to select the corresponding function. After setting all the setups please click save button, system goes back to the previous menu.

Figure 2-102

Figure 2-103

Figure 2-104

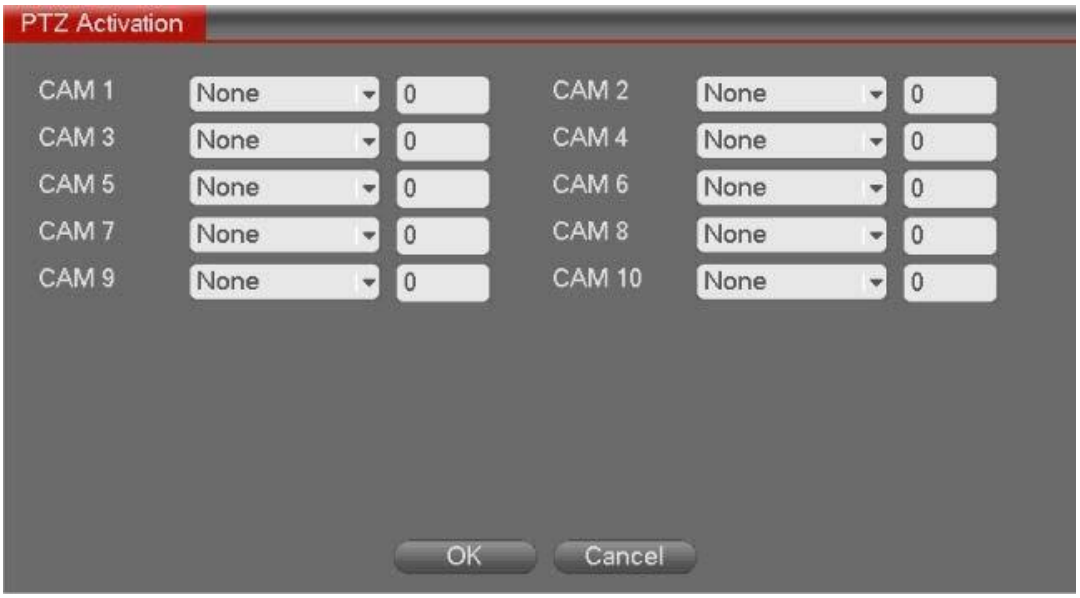


Figure 2-105

Figure 2-106

Figure 2-107

2.14.2.3 Abnormality

There are three types: HDD/Network/user.

- ✧ **HDD:** HDD error, no disk, no space. See Figure 2-108 and Figure 2-110.
- ✧ **Network:** Disconnection, IP conflict, MAC conflict. See Figure 2-111..
- ✧ **User:** Ilegal login. See Figure 2-112 .

- **Alarm output:** Please select alarm activation output port (multiple choices).
- **Less than:** System can alarm you when the HDD space is less than the threshold you set here (For HDD no space type only).
- **Latch:** Here you can set corresponding delaying time. The value ranges from 1s-300s. System automatically delays specified seconds in turning off alarm and activated output after external alarm cancelled.
- **Show message:** system can pop up the message in the local screen to alert you when alarm occurs.
- **Alarm upload:** System can upload the alarm signal to the network (including alarm center) if you enabled current function. For disconnection event, IP conflict event and MAC conflict event, this function is null.
- **Send email:** System can send out email to alert you when alarm occurs.
- **Buzzer:** Highlight the icon to enable this function. The buzzer beeps when alarm occurs.
- **Log:** Check the box here, system can record HDD event log.
- **Voice prompts:** Check the box here to trigger audio broadcast function. You can select specified audio file here. System can play the audio file once the corresponding event occurs.

Figure 2-108

Figure 2-109

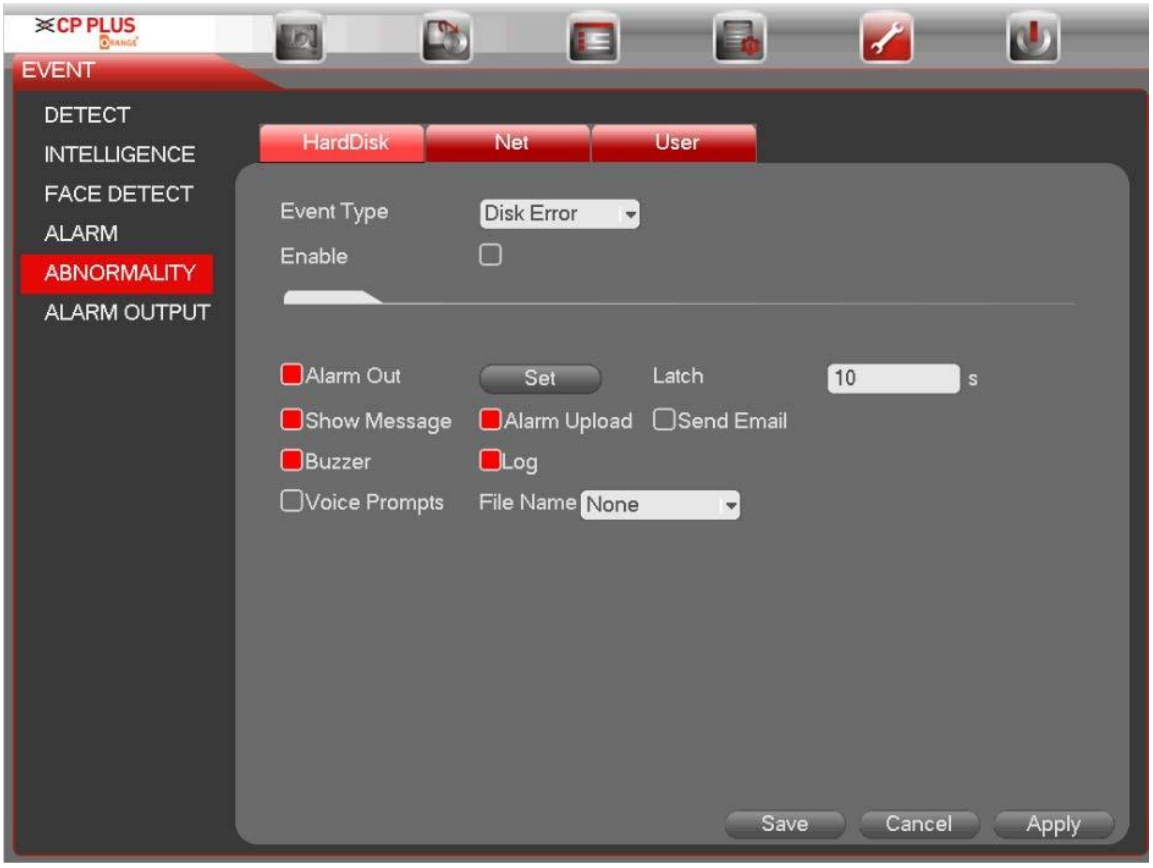


Figure 2-110

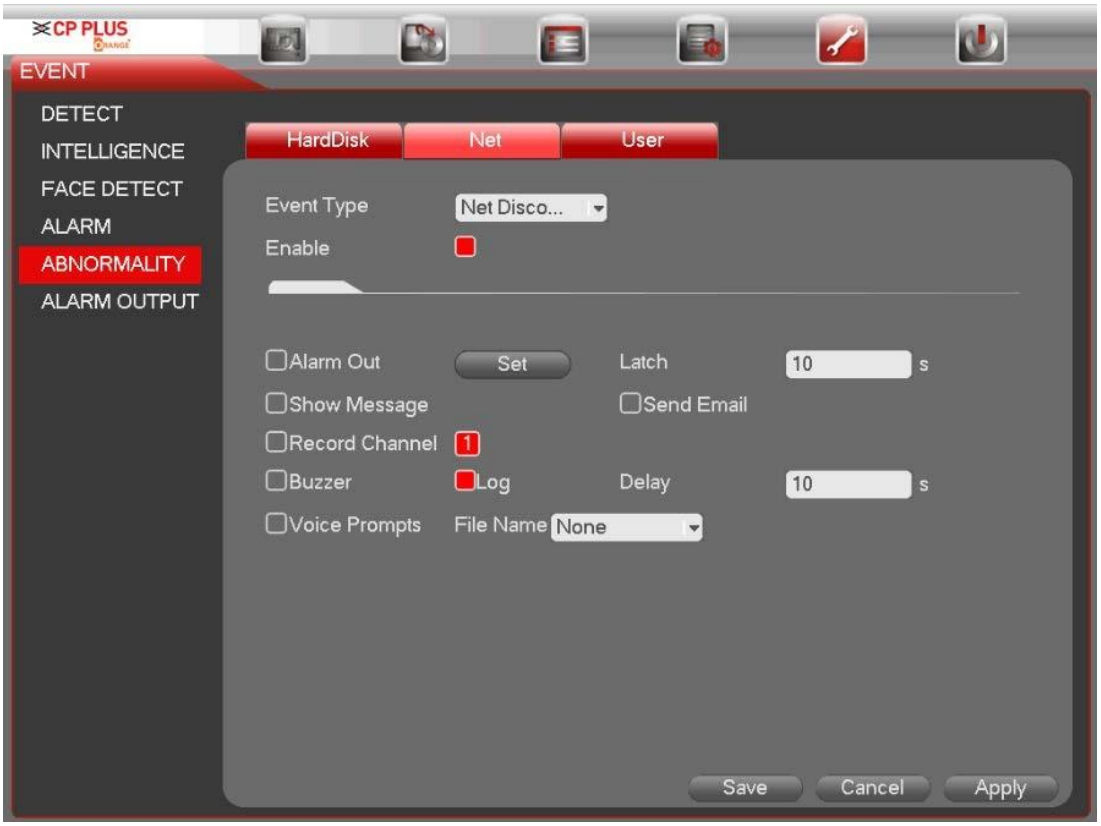


Figure 2-111

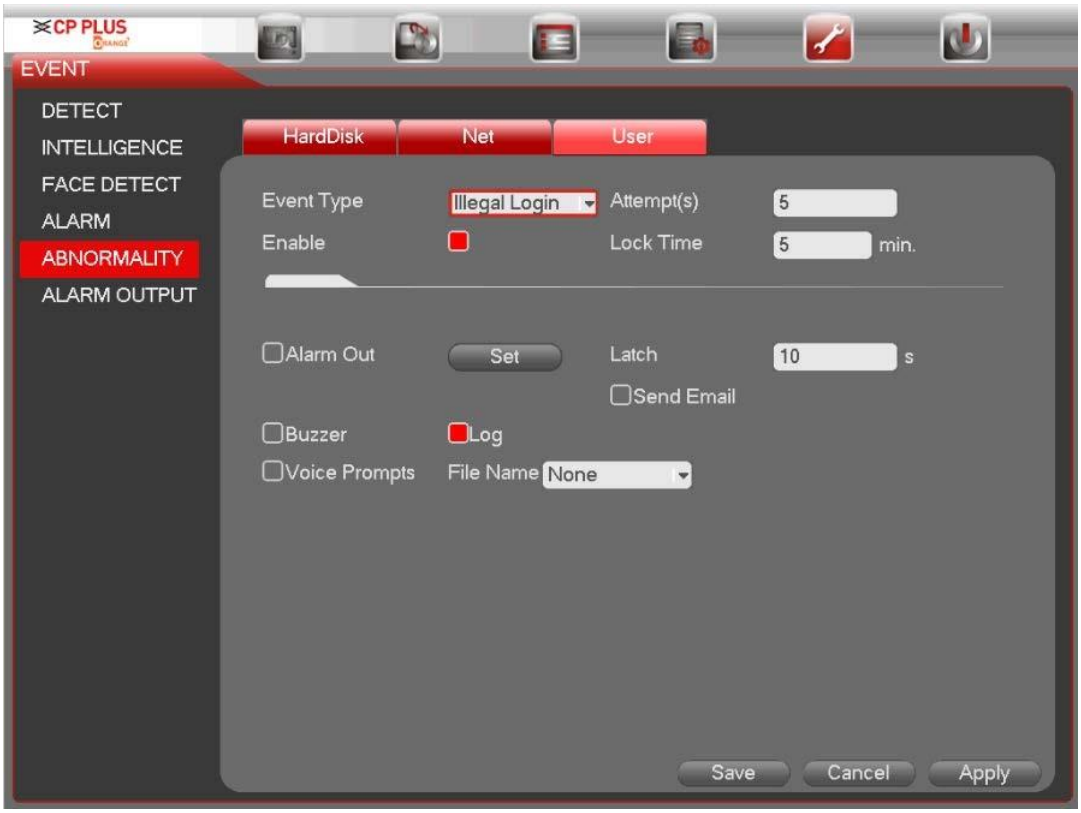


Figure 2-112

2.14.3 Storage

2.14.3.1 Basic

Go to **Main Menu** □ **Storage** □ **BASIC**. The **BASIC** interface is displayed. See Figure 2-113.

Figure 2-113

Configure the settings for the basic settings parameters, please refer to below table.

Parameter	Description
HDD Full	Configure the settings for the situation all the read/write discs are full, and there is no more free disc. Select **Stop Record** to stop recording Select **Overwrite** to overwrite the recorded video files always from the earliest time.
Pack Mode	Configure the time length and file length for each recorded video.
Auto-Delete Old Files	Configure whether to delete the old files and if yes, configure the N days.

Click **Apply** to complete the settings.

2.14.3.2 Schedule

2.14.3.2.1 Recor

d Note:

You need to have proper rights to implement the following operations. Please make sure the HDDs have been properly installed. After the system booted up, it is in default 24-hour regular mode. You can set record type and time in schedule interface. In the main menu, from Setting □ Storage □ Schedule, you can go to schedule menu. See Figure 2-116.

Please note you need to go to main menu □ Setting □ System □ General □ Holiday to set holiday date first, otherwise, there is no holiday setup item.

- Channel: Please select the channel number first. You can select “all” if you want to set for the whole channels.
-  : Sync connection icon. Select icon  of several dates, all checked items can be edited together. Now the icon is shown as  .
-  Click it to delete a record type from one period.
- Record Type: Please check the box to select corresponding record type. There are four types: Regular/MD (motion detect)/Alarm/MD & Alarm.
- Week day: There are eight options: ranges from Saturday to Sunday and all.
- Holiday: It is to set holiday setup. Please note you need to go to the General interface (Main Menu->System->General) to add holiday first. Otherwise you cannot see this item.
- Pre-record: System can pre-record the video before the event occurs into the file. The value ranges from 1 to 30 seconds depending on the bit stream.
- Redundancy: System supports redundancy backup function. You can highlight Redundancy button to activate this function. Please note, before enabling this function, please set at least one HDD as redundant. (Main menu->Setting->Storage->HDD Manager). **Please note this function is null if there is only one HDD.**
- **Period setup:** Click button  after one date or a holiday, you can see an interface shown as in Figure 2-6.There are four record types: regular, motion detection (MD), Alarm, MD & alarm.

Please following the steps listed below to draw the period manually.

- Select a channel you want to set. See Figure 2-114.

Figure 2-114

- Set record type. See Figure 2-115

Figure 2-115

- Please draw manually to set record period. There are six periods in one day. See Figure 2-118.

Figure 2-116

Please highlight icon  to select the corresponding function. After completing all the setups please click save button, system goes back to the previous menu.

There are color bars for your reference. Green color stands for regular recording, yellow color stands for motion detection and red color stands for alarm recording. The white means the MD and alarm record is valid. Once you have set to record when the MD and alarm occurs, system will not record neither motion detect occurs nor the alarm occurs.

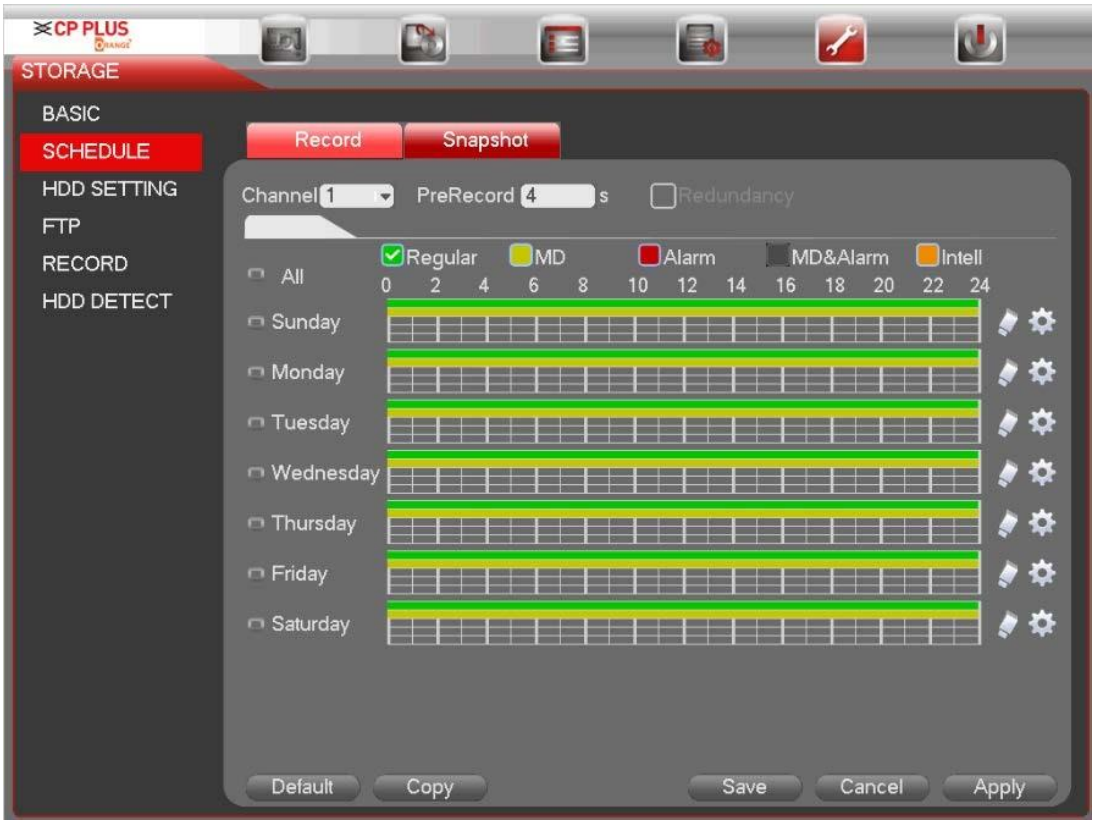


Figure 2-117

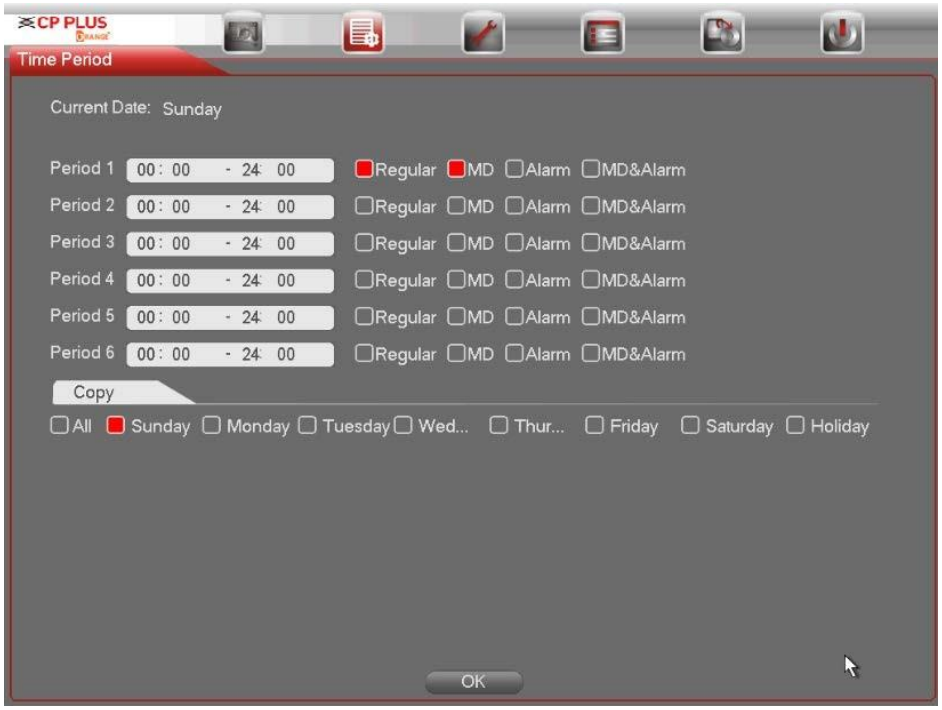


Figure 2-118

Quick Setup

Copy function allows you to copy one channel setup to another. After setting in channel 1, click Copy button, you can go to interface Figure 2-119. You can see current channel name is grey such as

channel 1. Now you can select the channel you want to paste such as channel 5/6/7. If you want to save current setup of channel 1 to all channels, you can click the first box “ALL”. Click the OK button to save current copy setup. Click the OK button in the Encode interface, the copy function succeeded.

Please note, if you select ALL in Figure 2-119, the record setup of all channels is the same and the Copy button becomes hidden.

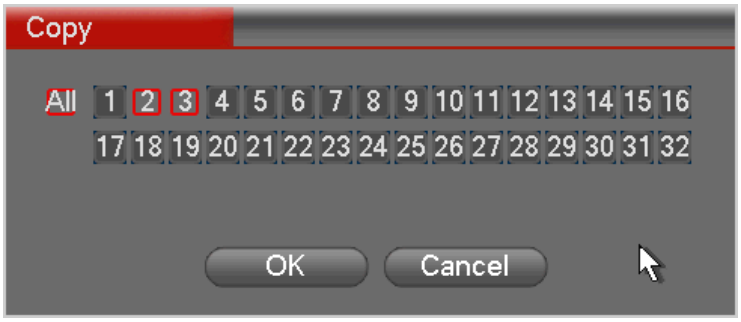


Figure 2-119

Click OK button to save current setup.

2.14.3.2.2 Snapshot

- On the preview interface, right click mouse and then select Manual □ Record, or in the main menu, from Setting □ Storage □ Record, check the box to enable snapshot function of corresponding channels. See Figure 2-120
- In main menu, from Setting □ Camera □ Encode □ Snapshot interface, here you can input snapshot mode as regular, size, quality and frequency. See Figure 2-121.
- In main menu, from Setting □ Camera □ Storage □ Schedule interface, please enable snapshot function. See interface on the right of Figure 2-122.

Please refer to the following figure for detailed information.

Figure 2-120

Figure 2-121

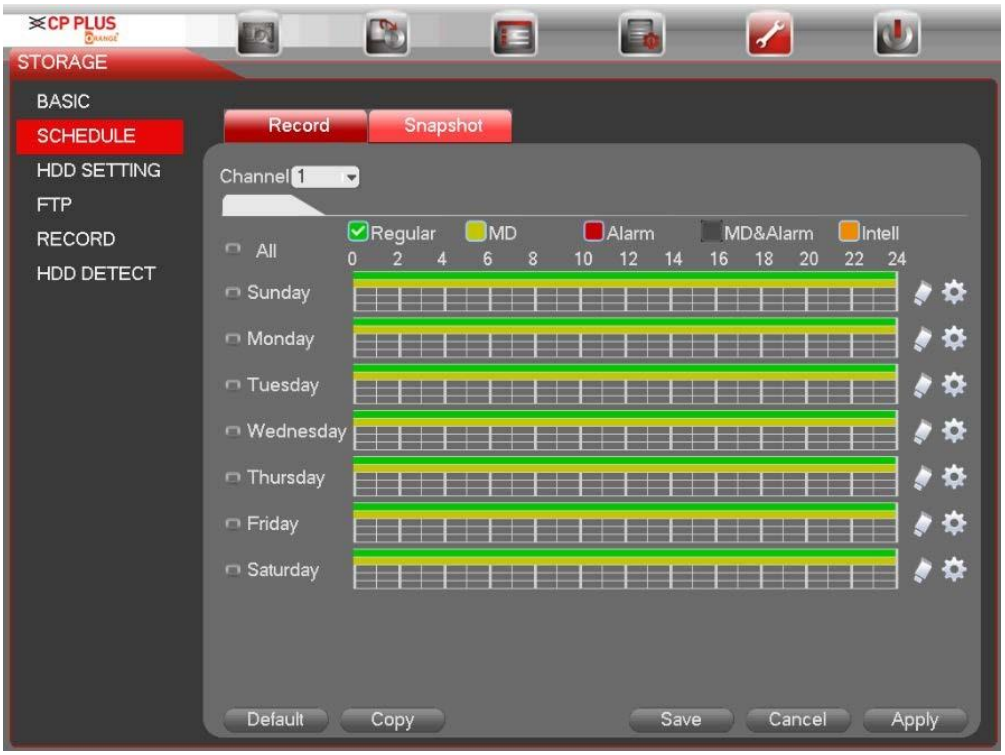


Figure 2-122

2.14.3.3 HDD Setting

Here is for you to view and implement hard disk management. See Figure 2-123. You can see current HDD type, status, capacity etc. The operation includes format HDD and change HDD property (read and write/read-only/redundancy).

Figure 2-123

2.14.3.4 FTP

You can store and view the recorded videos and snapshots on the FTP server. Preparation for

Configuration

Purchase or download a FTP server and install it on your PC.

NOTE

For the created FTP user, you need to set the write permission; otherwise the upload of recorded videos and snapshots will be failed.

Configuration Steps

- Select **Main Menu** → **Storage** → **FTP**. The **FTP** interface is displayed. See Figure 2-124.

Figure 2-124

Configure the settings for the FTP settings parameters, please refer to below table

Parameter	Description
Enable	Enable the FTP upload function.
Host IP	IP address of the PC that is installed with FTP server.
Port	The default is 21.
Anonymity	Enter the user name and password to login the FTP server. Enable the anonymity function, and then you can login anonymously without entering the user name and password.
User Name	
Password	

Parameter	Description
Remote Directory	Create folder on FTP server. If you do not enter the name of remote directory, system automatically creates the folders according to the IP and time. If you enter the name of remote directory, the system creates the folder with the entered name under the FTP root directory first, and then automatically creates the folders according to the IP and time.
File Length(M)	Enter the length of the uploaded recorded video. If the entered length is less than the recorded video length, only a section of the recorded video can be uploaded. If the entered length is more than the recorded video length, the whole recorded video can be uploaded. If the entered length is 0, the whole recorded video will be uploaded.
Image Upload Interval (Sec.)	If this interval is longer than snapshot interval, the system takes the recent snapshot to upload. For example, the interval is 5 seconds, and snapshot interval is 2 seconds per snapshot, the system uploads the recent snapshot every 5 seconds. If this interval is shorter than snapshot interval, the system uploads the snapshot per the snapshot interval. For example, the interval is 5 seconds, and snapshot interval is 10 seconds per snapshot, the system uploads the snapshot every 10 seconds. To configure the snapshot interval, select **Main Menu** □ **Camera** □ **Encode** □ **Snapshot**.
Channel	Select the channel that you want to apply the FTP settings.
Week Day Period 1, Period 2	Select the week day and set the time period that you want to upload the recorded files. You can set two periods for each week day.
Record type	Select the record type (Alarm, Intel, MD, and General) that you want to upload. The selected record type will be uploaded during the configured time period.

- Click **Test**.

The system pops up a message to indicate success or failure. If failed, please check the network connection or configurations.

- Click **Apply** to complete the settings.

2.14.3.5 Record

2.14.3.5.1 Record

Control Note:

You need to have proper rights to implement the following operations. Please make sure the

HDD has been properly installed. There are three ways for you to go to manual record menu.

- Right click mouse and then select Manual Record.

- In the main menu, from Setting □ Storage □Record.
- In live viewing mode, click record button in the front panel or record button in the remote control.

System supports main stream and sub stream. There are three statuses: schedule/manual/stop. See Figure 2-125. Please highlight icon "○" to select corresponding channel.

- Manual: The highest priority. After manual setup, all selected channels will begin ordinary recording.
- Schedule: Channel records as you have set in recording setup (Main Menu □ Setting □ System □ Schedule)
- Stop: Current channel stops recording.
- All: Check All button after the corresponding status to enable/disable all-channel schedule/manual record or enable/disable all channels to stop record.

Figure 2-125

2.14.3.5.2 Snapshot Operation

Check the corresponding box to enable/disable schedule snapshot function. See Figure 2-126.

Figure 2-126

Tips

You can check all buttons after the corresponding status to enable/disable all-channel snapshot function.

2.14.3.6 HDD Detect

The HDD detect function is to detect HDD status so that you can clearly understand the HDD performance and replace the malfunction HDD.

There are two detect types:

- Quick detect is to detect via the universal system files. System can quickly complete the HDD scan. If you want to use this function, please make sure the HDD is in use now. If the HDD is removed from other device, please make sure the write-data once was full after it installed on current device.
- Global detect adopts Windows mode to scan. It may take a long time and may affect the HDD that is recording.

2.14.3.6.1 Manual Detect

The manual detect interface is shown as below. See Figure 2-127.

Please select detect type and HDD. Click start detecting to begin. You can view the corresponding detect information. See Figure 2-128.

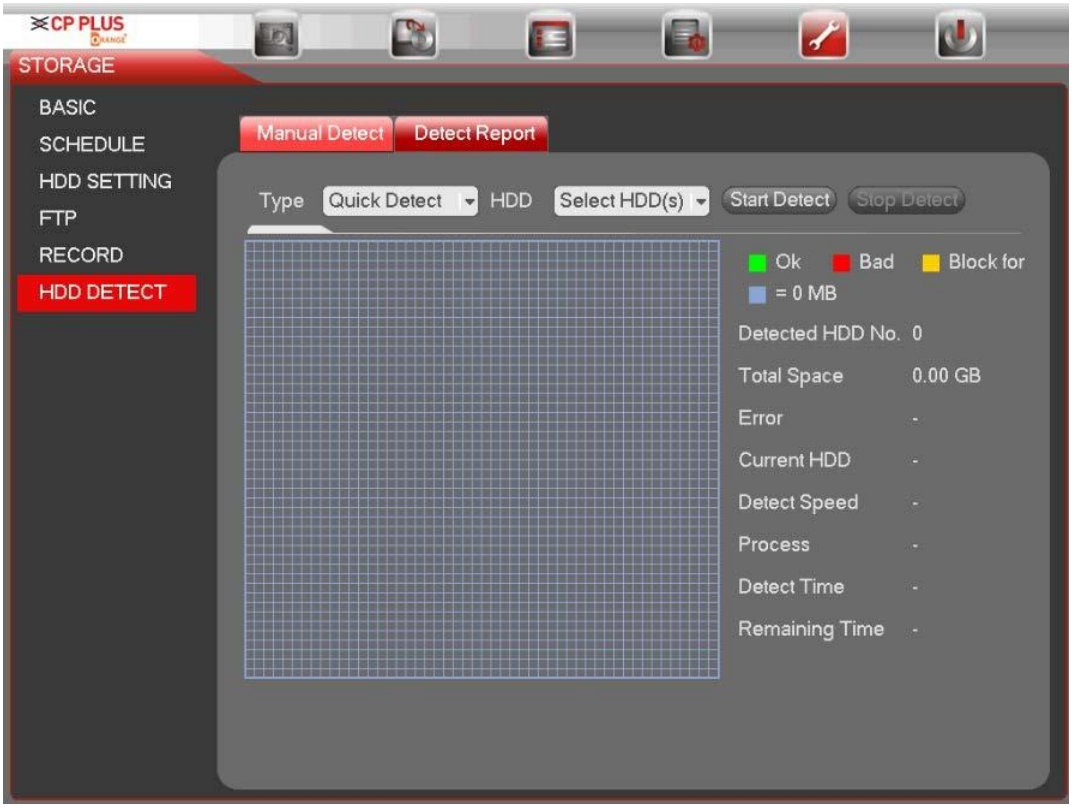


Figure 2-127

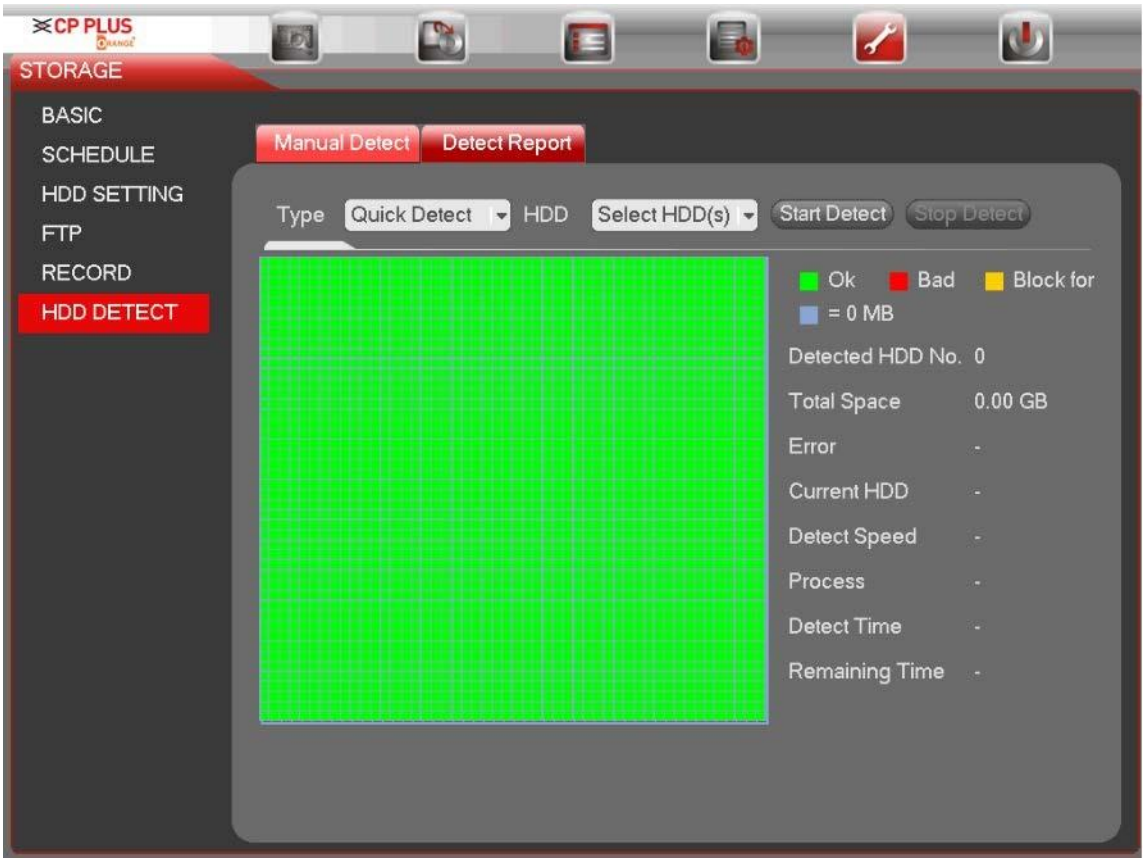


Figure 2-128

2.14.3.6.2 Detect Report

After the detect operation, you can go to the detect report to view corresponding information. The detect report interface is shown as below. See Figure 2-129.

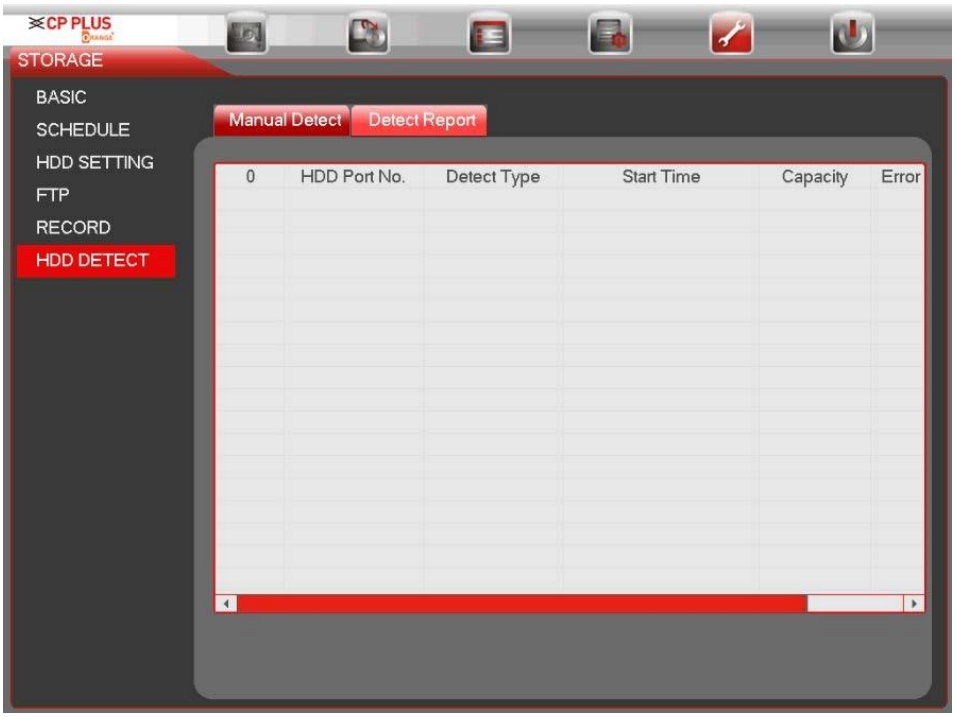


Figure 2-129

Click the item you can see the detailed information such as detect result. See Figure 2-130.

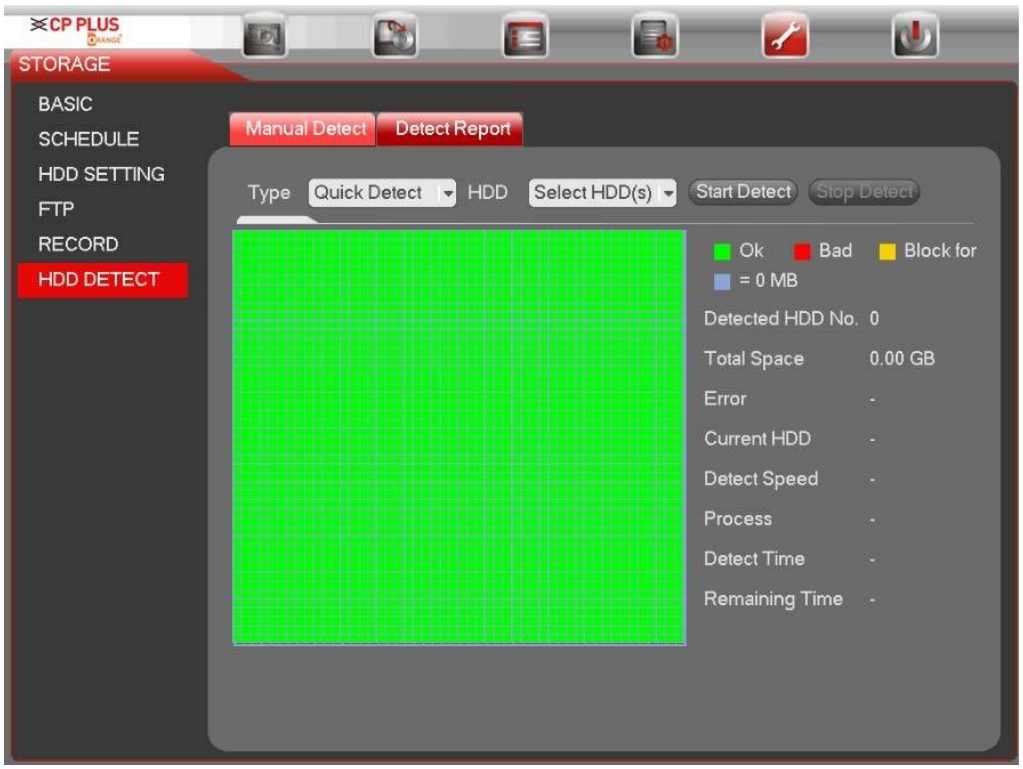


Figure 2-130

2.14.4 Setting

2.14.4.1 General

2.14.4.1.1 General

General setting includes the following items. See Figure 2-131

- **Device ID:** Please input a corresponding device name here.
- **Device No:** Here you can set device number.
- **Language:** System supports various languages: Chinese (simplified), Chinese (Traditional), English, Italian, Japanese, French, Spanish (All languages listed here are optional. Slight difference may be found in various series.)
- **Video standard:** There are two formats: NTSC and PAL.
- **HDD full:** Here is for you to select working mode when hard disk is full. There are two options: stop recording or rewrite. If current working HDD is overwritten or the current HDD is full while the next HDD is no empty, then system stops recording, If the current HDD is full and then next HDD is not empty, then system overwrites the previous files.
- **Pack duration:** Here is for you to specify record duration. The value ranges from 1 to 120 minutes. Default value is 60 minutes.
- **Real-time playback:** It is to set playback time you can view in the preview interface. The value ranges from 5 to 60 minutes.
- **Auto logout:** Here is for you to set auto logout interval once login user remains inactive for a specified time. Value ranges from 0 to 60 minutes.
- **IPC Time Sync:** You can input an interval here to synchronize the DVR time and IPC time.
- **Navigation bar:** Check the box here, system displays the navigation bar on the interface.
- **Startup wizard:** Once you check the box here, system will go to the startup wizard directly when the system restarts the next time. Otherwise, it will go to the login interface.
- **Mouse property:** You can set double click speed via dragging the slide bard. You can Click Default button to restore default setup.

Figure 2-131

2.14.4.1.2 Date and Time

The interface is shown as in Figure 2-132

- **Date format:** There are three types: YYYYY-MM-DD: MM-DD-YYYYY or DD-MM-YYYY.
- **Date separator:** There are three denotations to separate date: dot, beeline and solidus.
- **DST:** Here you can set DST time and date. Here you can set start time and end time by setting corresponding week setup or by setting corresponding date setup.
- **NTP:** It is to set NTP server information.

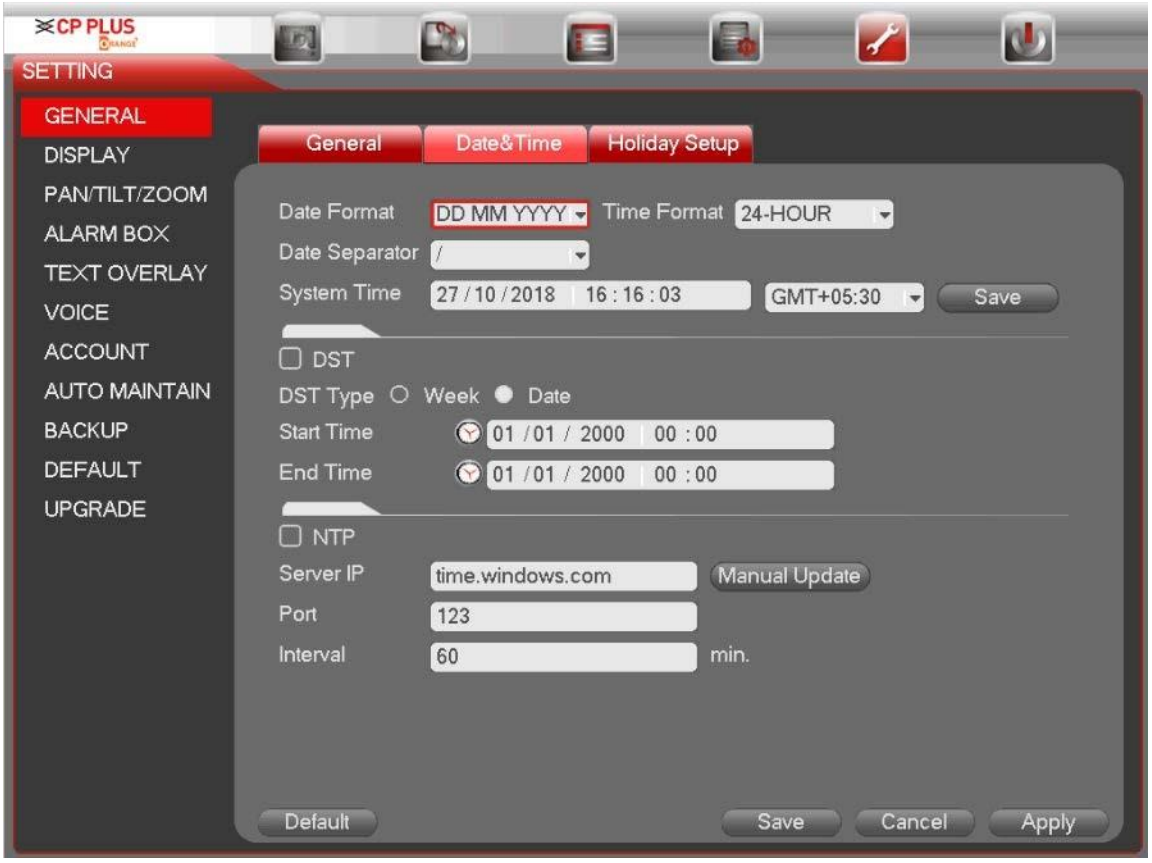


Figure 2-132

2.14.4.1.3 Holiday

Holiday setup interface is shown as in Figure 2-133. Click Add new holiday button, you can input new holiday information. See Figure 2-134. Here you can set holiday name, repeat mode and start/end time.

Note

- When you enable Holiday settings and schedule setup at the same time, holiday setting has the priority. If the selected day is a holiday, then system records as you set in holiday setting. If it is not a holiday, system records as you set in Schedule interface. Please note
- Please note, there is no year setup on the holiday setup. For example, if you set 30th Oct, 2016 as a holiday, then the date of 30th Oct in each year will be set as a holiday.

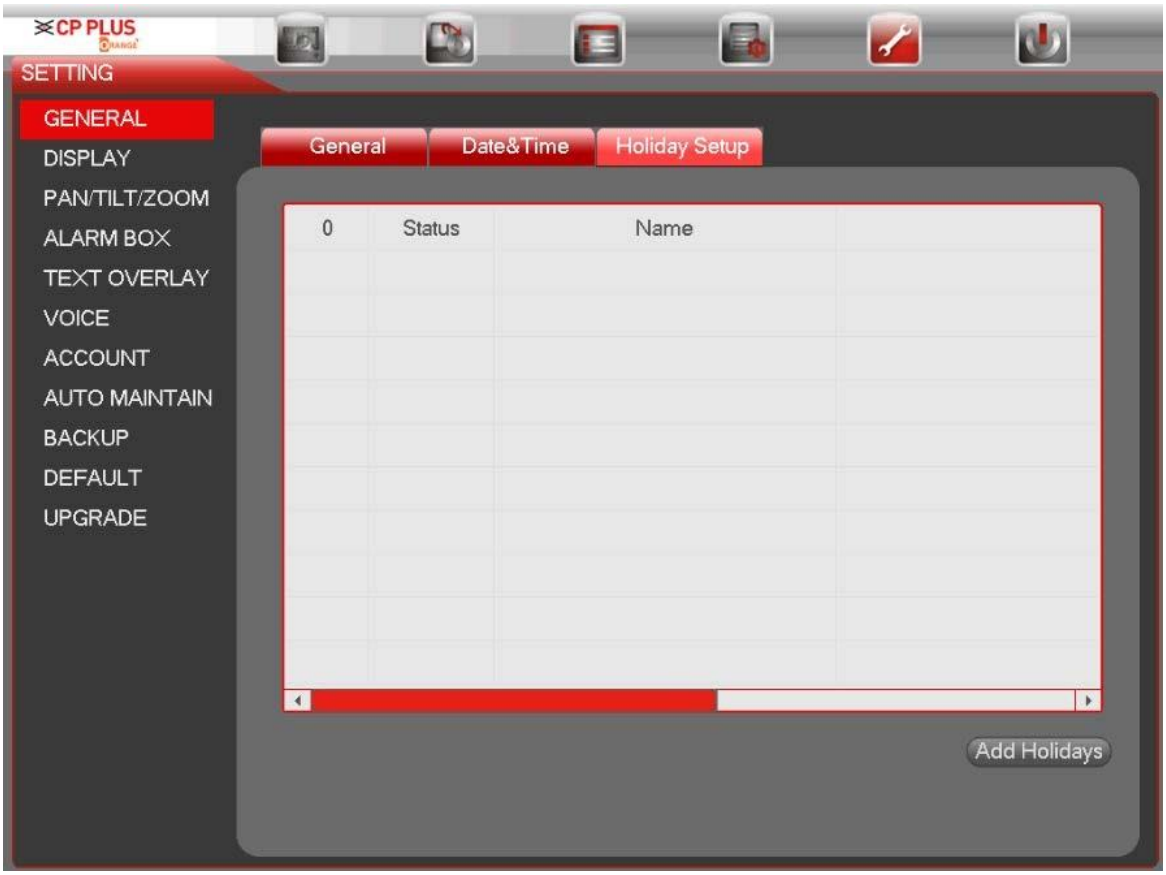


Figure 2-133

Figure 2-134

2.14.4.2 Display

2.14.4.2.1 Display

Display setup interface is shown as below. See Figure 2-135.

- **Time display:** You can select to display time or not when system is playback.
- **Channel display:** You can select to channel name or not when system is playback.
- **Original rate:** Check the box here, the video can be displayed at its actual size.
- **Transparency:** Here is for you to adjust menu transparency. The higher the value is, the more transparent the menu is.
- **Resolution:** There are four options: 1920×1080, 1280×1024(default), 1280×720, 1024×768. Please note the system needs to reboot to activate current setup.
- **Preview enhance:** Check the box; it can optimize the video quality of the preview video. Please highlight icon to select the corresponding function.

After completing all the setups please click save button, system goes back to the previous menu.

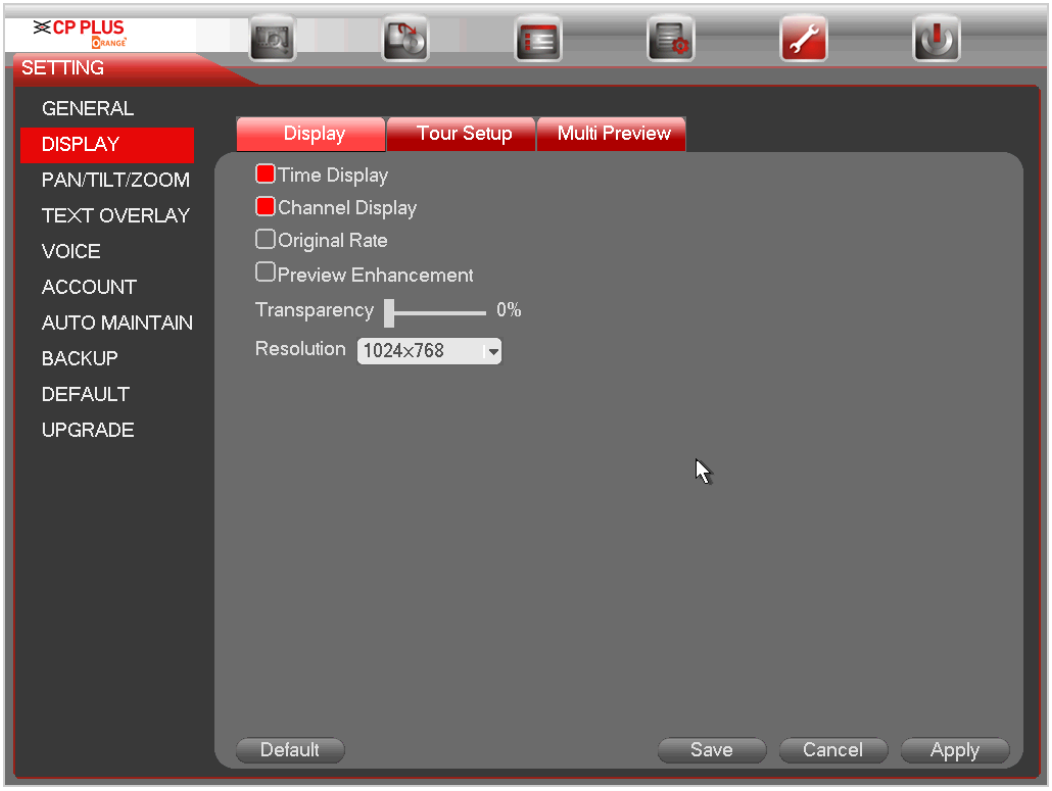


Figure 2-135

2.14.4.2.2 TV

Adjust Note

This function is for some series only. Here is for you to adjust TV output setup. See Figure 2-136. Please drag slide bar to adjust each item.

After all the setups please click OK button, system goes back to the previous menu.

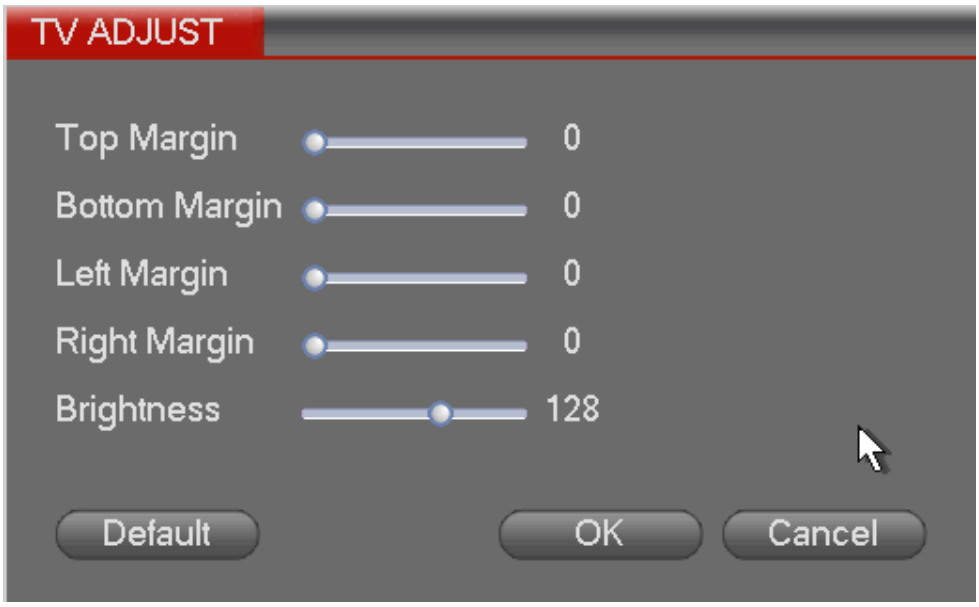


Figure 2-136

2.14.4.2.3 Tour

Here you can activate tour function. Click Setup button, you can see an interface shown as in Figure 2-137

- **Enable tour:** Highlight box here to enable this function.
- **Interval:** System supports 1/8/-window tour. Input proper interval value here. The value ranges from 5-120 seconds. It is for schedule tour/alarm/motion detects tour.
- **Split:** You can select window split mode from the dropdown list.
- **Channel group:** It is to display all channel groups on current split mode. You can edit and delete a channel group here. Double click an item in the list; you can edit its channel group setup. Right now system max supports 32.
- **Add:** Under specified window split mode, click it to add channel group.
- **Delete:** Click it to remove selected channel group.
- **Move up:** Click it to move current selected channel up.
- **Move down:** Click it to move current selected channel down.
- **Default:** Click it to restore default setup.

Tips:

- Use mouse or Shift button to switch and button to enable /disable tour. means the tour funciton is enabled and meas tour funciton is disabled.
- On the navigation bar, click or to enable/disable tour function.

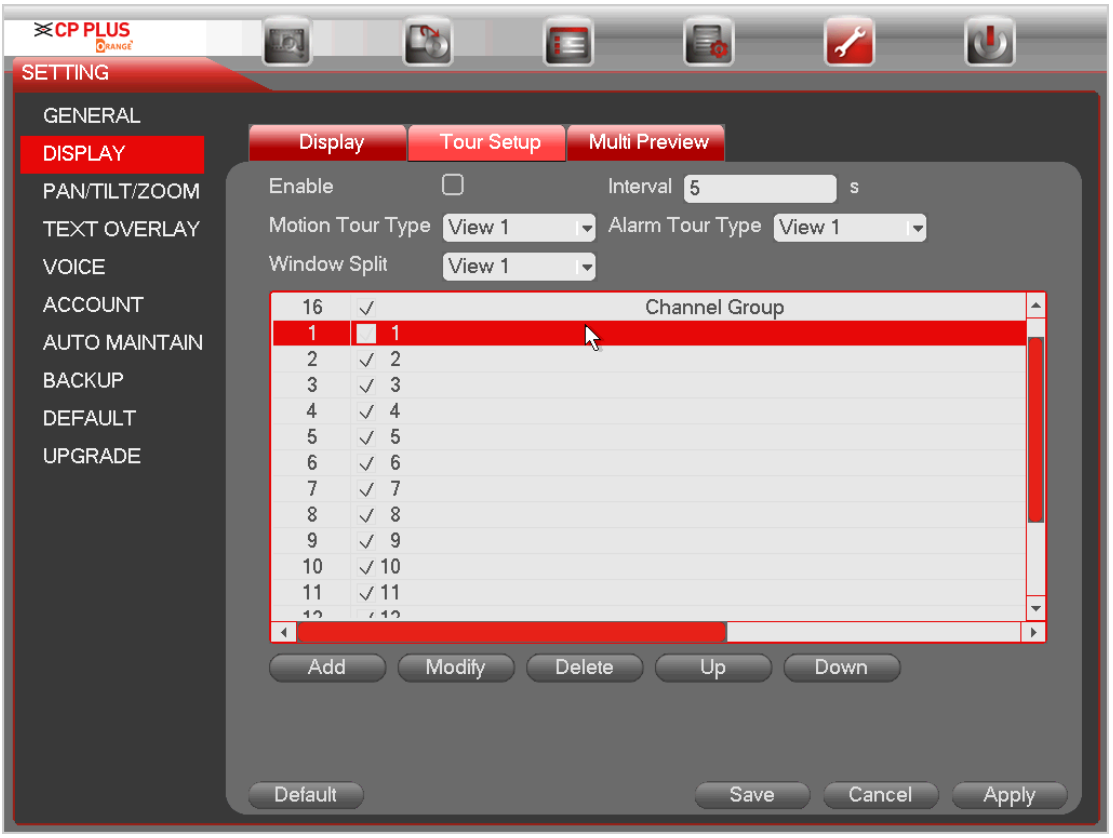


Figure 2-137

2.14.4.2.4 Multi Preview

Click zero-channel encoding button, you can go to the following interface. See. Here you can enable and set zero-channel encoding function so that you can view several video sources at one channel. See interface in Figure 2-138.

- **Enable:** This function is disabled by default. Check the box here to enable this function so that you can control the zero-channel encoding function at the WEB.
- **Compression:** System default setup is H.264. You can set according to device capability.
- **Resolution:** The resolution value may vary due to different device capabilities. Please select from the dropdown list.
- **Frame rate:** The frame rate value may vary due to different device capabilities. Please select from the dropdown list.
- **Bit Rate:** The bit rate value may vary due to different device capabilities and frame rate setups. Please select from the dropdown list.
- **Save:** Click the Save button to save current setup. If this function is disabled, you cannot operate zero-channel encoding function at the WEB, the video is black or null even you operate when the function is disabled. After you enabled this function, login the Web and you can select

  zero-channel encoding mode at the right corner of the interface  . Select a mode; you can view the local preview video.

Figure 2-138

2.14.4.3 PTZ

The pan/tilt/zoom setup includes the following items. Please select channel first. See Figure 2-139.

- **PTZ type:** There are two options: local/remote. Please select remote if you are connecting to the network PTZ.
- **Control mode:** You can select control mode from the dropdown list. There are two options: Serial/HDCVI. For HDCVI series product, please select HDCVI. The control signal is sent to the PTZ via the coaxial cable. For the serial mode, the control signal is sent to the PTZ via the RS485 port.
- **Protocol:** Please select CP-SD1 if the control mode is HDCVI.
- **Address:** input corresponding PTZ address.
- **Baud rate:** Select baud rate.
- **Data bit:** Select data bit.
- **Stop bit:** Select stop bit.
- **Parity:** There are three choices: none/odd/even.

After completed all the setups please click save button, system goes back to the previous menu.

Figure 2-139

2.14.4.4 Text Overlay

The ATM/POS function is for financial areas. It includes Sniffer, information analysis and title overlay function. The Sniffer mode includes COM and network.

2.14.4.4.1 Net

The network type interface is shown as below. See Figure 2-140.

Please use network type if you are using network to connect to the device. The interface is generally the same as the COM mode. The protocol depends on you self-develop protocol. The setup may vary since connected device or the protocol is not the same.

Here we take the ATM/POS protocol to continue.

- **Protocol:** It is to set COM sniffer protocol. You need to select protocol according to your own development situation.
- **Overlay mode:** There are two options: preview and encode. Preview means overlay the card number in the local monitor video. Encode means overlay the card number in the record file. You can view the corresponding information when playback.
- **Overlay Position:** Here you can select the proper overlay position from the dropdown list.
- **Data group:** There are total four groups IP.
- **Source IP:** Source IP refers to host IP address that sends out information (usually it is the device host.)
- **Destination IP:** Destination IP refers to other systems that receive information.
- **Source port/destination port:** Please input according to your own situation.
- **Record channel:** It is for you to check record channel. The record channel applies to one group (optional) only.
- **Frame ID:** Six frame ID groups verification can guarantee information validity and legal. You

need to input start position, length, key and etc according to your communication protocol and data packet contents.

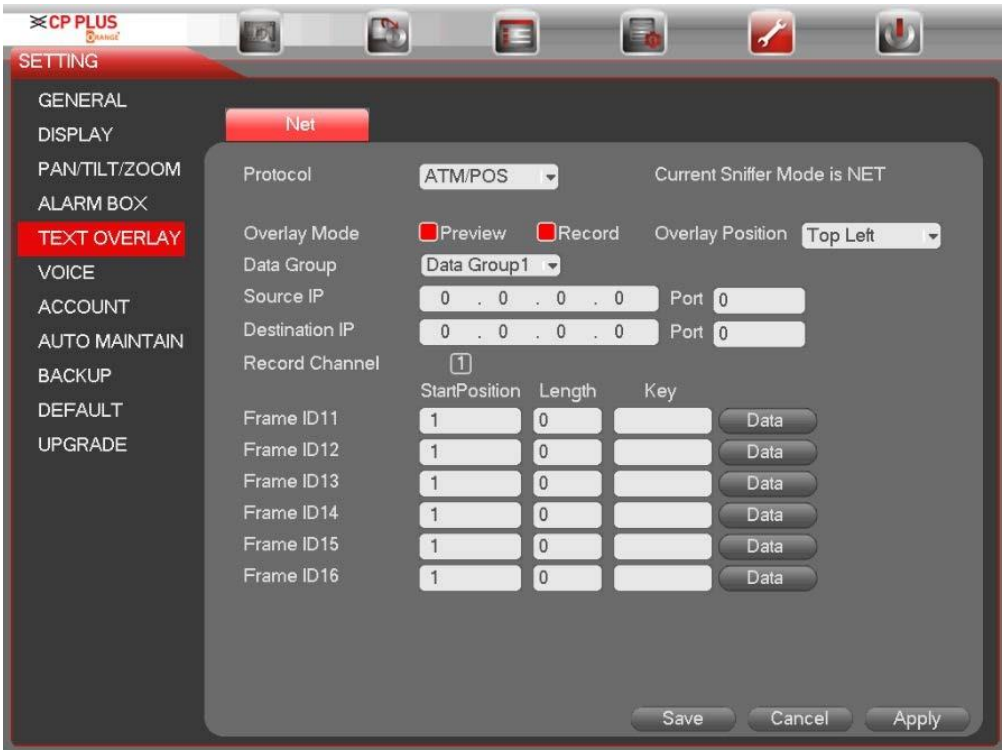


Figure 2-140

In Figure 2-32, click data button after frame ID the interface is shown as in Figure 2-141. Here you can set field start position, length, and overlay title.

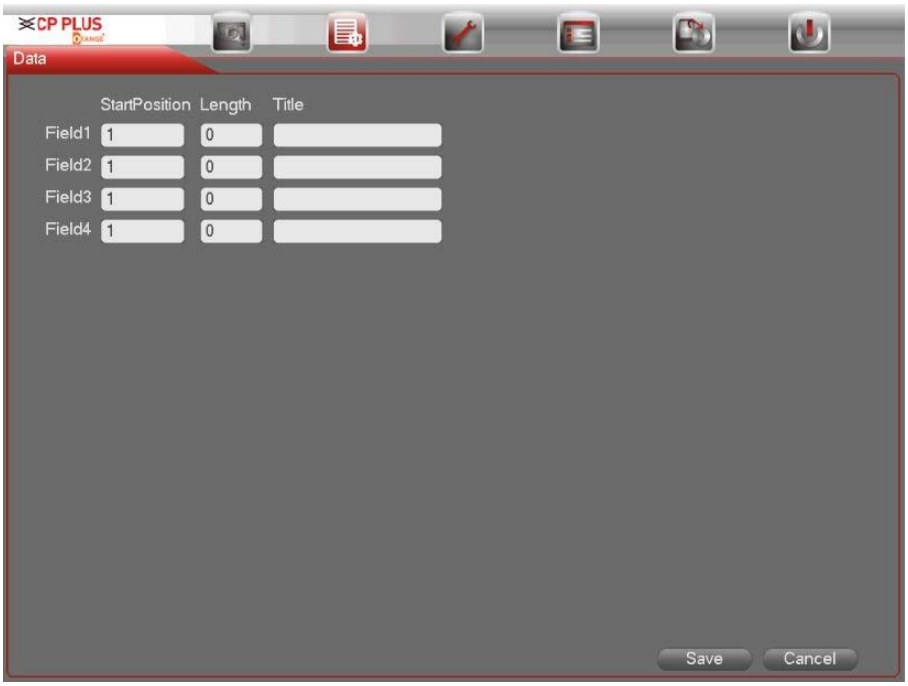


Figure 2-141

2.14.4.5 Voice

The audio function is to manage audio files and set schedule play function. It is to realize audio broadcast activation function.

2.14.4.5.1 File List

Here you can add audio file, listen to the audio file, or rename/delete audio file. Here you can also set audio volume. See Figure 2-142.

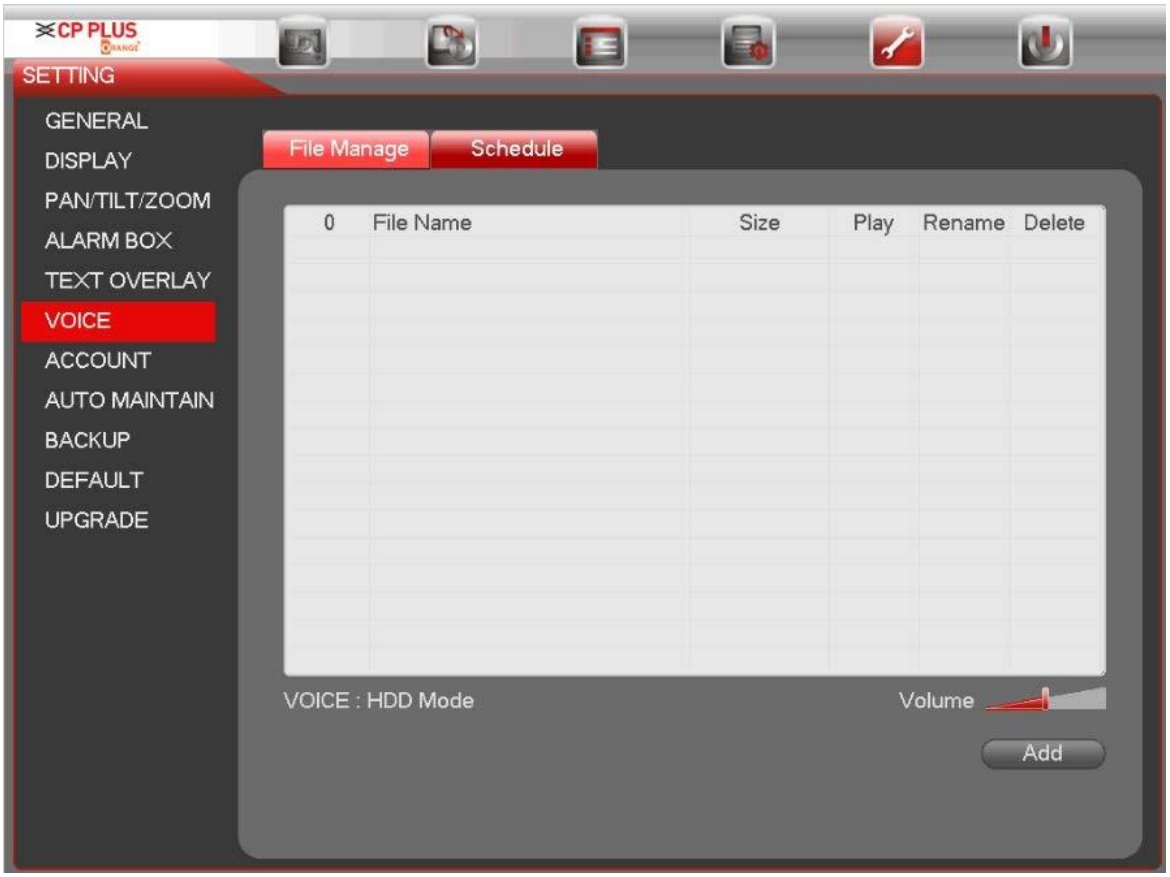


Figure 2-142

Click Add button, you can add audio file and import the audio file via the USB device. See Figure 2-143.

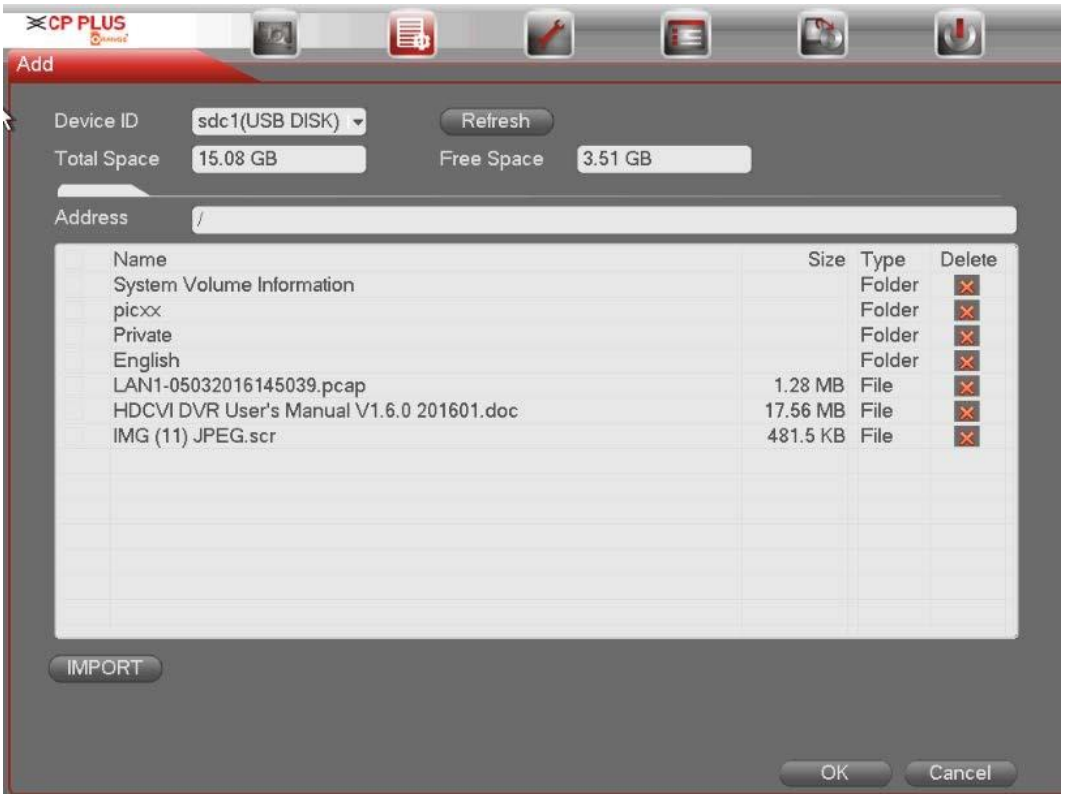


Figure 2-143

2.14.4.6 Account

Here is for you to implement account management. See Figure 2-144 Here you can:

- Add new user
- Modify user
- Add group
- Modify group
- Modify password.

For account management please note:

- For the user account name and the user group, the string max length is 6-byte. The backspace in front of or at the back of the string is invalid. There can be backspace in the middle. The string includes the valid character, letter, number, underline, subtraction sign, and dot.
- The default user amount is 64 and the default group amount is 20. System account adopts two-level management: group and user. No limit to group or user amount.
- For group or user management, there are two levels: admin and user.
- The user name and group name can consist of eight bytes. One name can only be used once. There are three default users: admin/888888 and hidden user “default”.
- Hidden user “default” is for system interior use only and cannot be deleted. When there is no login user, hidden user “default” automatically login. You can set some rights such as monitor for this user so that you can view some channel view without login.
- One user should belong to one group. User right cannot exceed group right.
- About reusable function: this function allows multiple users use the same account to login.

- About user account and MAC. When you add a new user, you can input the MAC address of current user. Only the user of the same MAC address can access the device remotely. (MAC address is for the device of the same LAN.) If you leave MAC address item in blank when you add a new user, the user of any MAC address can access the device remotely. You can set or change MAC address when you add or modify a user. The MAC address function is also valid for KVMS PRO login. **Please note current function does not support IPV6.**

After all the setups please click save button, system goes back to the previous menu.

Figure 2-144

2.14.4.6.1 Add User

Click modify user button  in Figure 2-144, the interface is shown as in Figure 2-145 Please input the user name, password, select the group it belongs to from the dropdown list. Then you can check the corresponding rights for current user.

For convenient user management, usually we recommend the general user right is lower than the admin account.

- **Username**: admin. **Password**: admin. (administrator, local and network)
- **Username**: 888888. **Password**: 888888. (administrator, local only)
- **Username**: default. **Password**: default (hidden user). Hidden user “default” is for system interior use only and cannot be deleted. When there is no login user, hidden user “default” automatically login. You can set some rights such as monitor for this user so that you can view some channels without login.

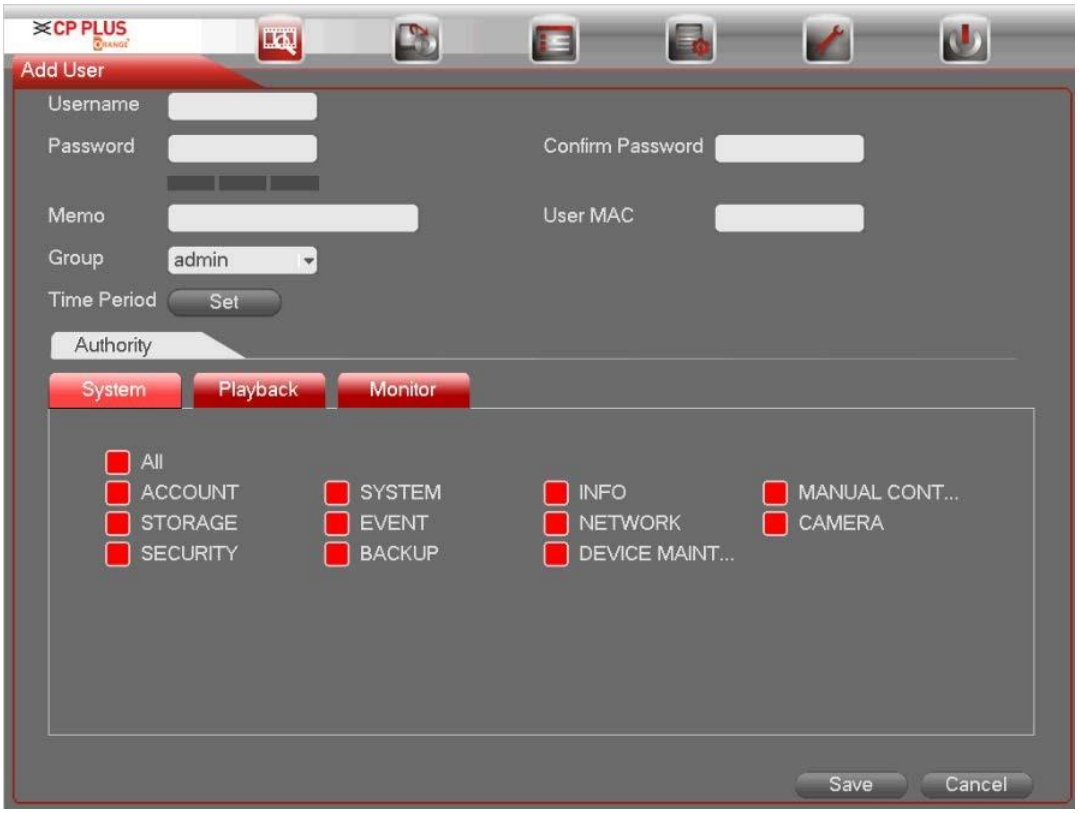


Figure 2-145

When you create a new user, you can input the corresponding MAC address of current user. If you leave this item in blank, any MAC address user can share this user account to login. Please note system needs to check the validity of MAC. Only the 12-digit 0-f format address can pass the validity verification. System only saves small character even you input capitalized one. You can see the corresponding prompt if there is any illegal input.

Click the Set button after the period, you can set valid period to use current account. See Figure 2-146.

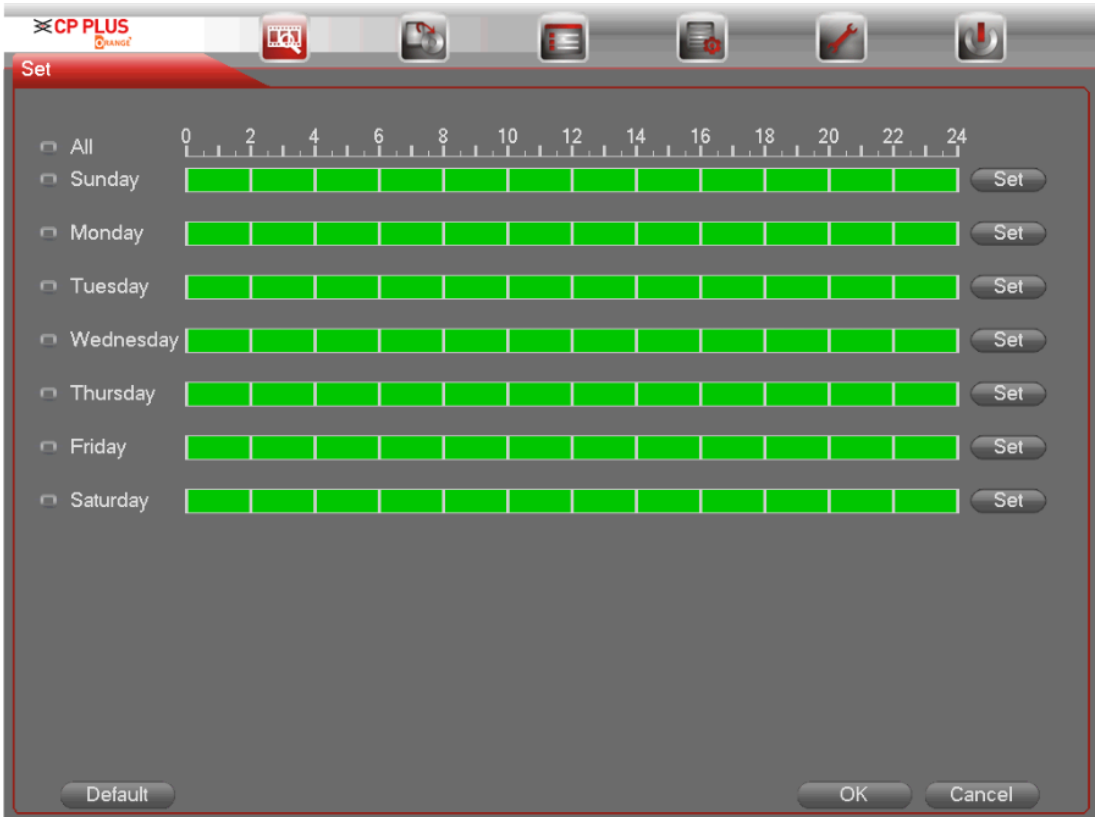


Figure 2-146

Click Set button, you can set six periods in one day. See Figure 2-147. Check the box after the period, you can enable current setup.

Figure 2-147

2.14.4.6.2 Modify user

Click  , you can go to the following interface to change user information. See Figure 2-148. For admin, 888888, and default (hidden user), you cannot change period setup.

Figure 2-148

2.14.4.6.3 Add/Modify Group

In Figure 2-148, click Group button, you can see the following interface. See Figure 2-149.

Figure 2-149

Click add group button in Figure 2-148 , the interface is shown as below. See Figure 2-150. Here you

can input group name and then input some memo information if necessary. There are total 98 rights such as control panel, shut down, real-time monitor, playback, record, record file backup, PTZ, user account, system information view, alarm input/output setup, system setup, log view, clear log, upgrade system, control device etc.

Figure 2-150

2.14.4.7 Auto Maintain

Here you can set auto-reboot time and auto-delete old files setup. You can set to delete the files for the specified days. See Figure 2-151.

You can select proper setup from dropdown list. After all the setups please click save button, system goes back to the previous menu.

Figure 2-151

2.14.4.8 Config Backup

The configuration file backup interface is shown as below. See Figure 2-152.

This function allows you to import/export system configuration. You can use this function when there are several devices need the same setup.

- **Export:** Please connect the peripheral device first and then go to the following interface. Click Export button, you can see there is a corresponding “Config_Time” folder. Double click the folder, you can view some backup files.
- **Import:** Here you can import the configuration files from the peripheral device to current device. You need to select a folder first. You can see a dialogue box asking you to select a folder if you are selecting a file. System pops up a dialogue box if there is no configuration file under current folder. After successfully import, system needs to reboot to activate new setup.
- **Format:** Click Format button, system pops up a dialogue box for you to confirm current operation. System begins format process after you click the OK button.

Note:

- System cannot open config backup interface again if there is backup operation in the process.
- System refreshes device when you go to the config backup every time and set current directory as the root directory of the peripheral device.
- If you go to the configuration backup interface first and then insert the peripheral device, please click Refresh button to view the newly added device.

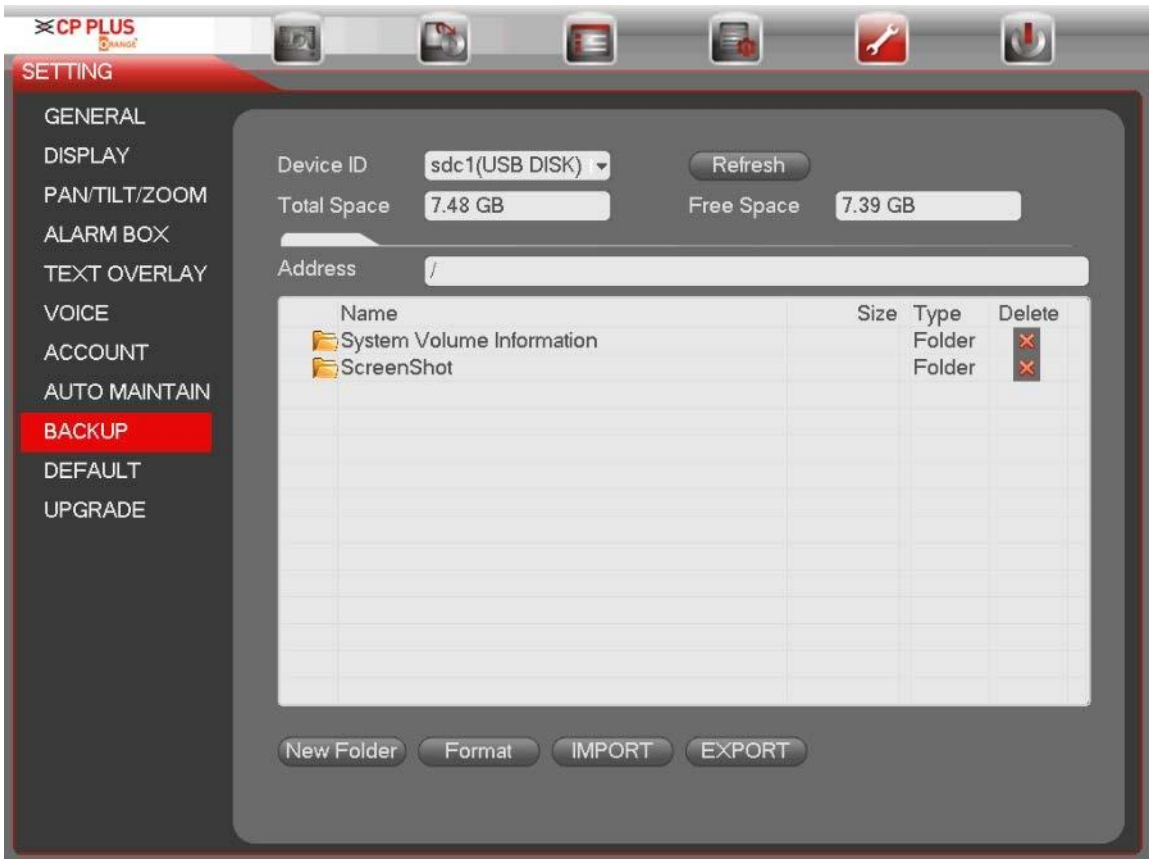


Figure 2-152

2.14.4.9 Default

Click default icon, system pops up a dialogue box. You can highlight to restore default factory setup. See Figure 2-153.

- Camera
- Network
- Event
- Storage
- System

Please highlight icon to select the corresponding function. Click factory default button, you can restore factory default setup. After all the setups please click save button, system goes back to the previous menu.

Warning!

System menu color, language, time display mode, video format, IP address, user account will not maintain previous setup after default operation!

Figure 2-153

2.14.4.10 Update

Here is for you to view hardware features, software version, built date, release SN information etc. You can also update system here. See Figure 2-154.

- **Start:** Please insert the USB device that have the update file to the device and then click the Start button to begin the update.

Important

Please make sure the upgrade file name shall be update.bin.

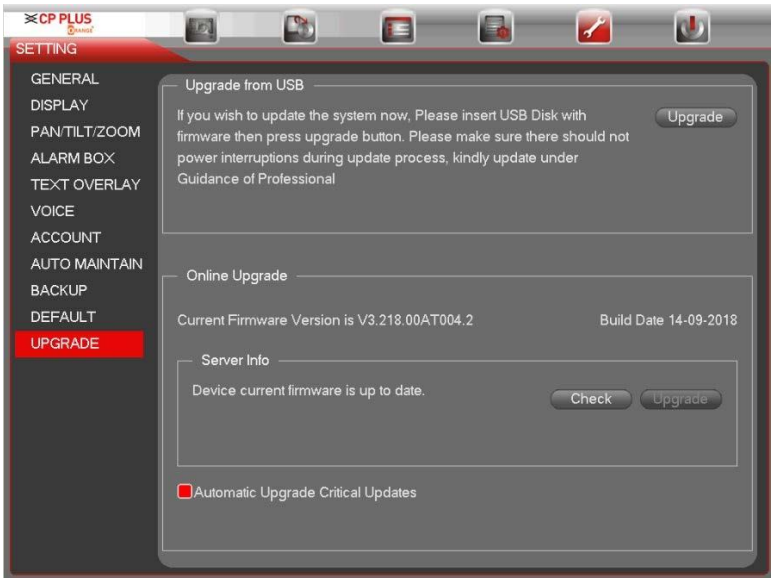


Figure 2-154

2.15 Shut Down

In Figure 2-155, select Shut Down, you can go to the following interface. See Figure 2-155. There are three options: Shutdown/logout/reboot. For the user who does not have the shut down right, please input corresponding password to shut down.

Figure 2-155

3 WEB OPERATION

Slightly difference may be found in the interface due to different series.

3.1 Network Connection

Before web client operation, please check the following items:

- Network connection is right
- DVR and PC network setup is right. Please refer to network setup(main menu->Setting->Network)
- Use order ping ***.***.***.***(* DVR IP address) to check connection is OK or not. Usually the return TTL value should be less than 255.
- Current series product supports various browsers such as Safari, fire fox browser, Google browser. Device supports multiple-channel monitor, PTZ control, DVR parameter setup on the Apple PC.

3.2 Login

Open IE and input DVR address in the address column. For example, if your DVR IP is 10.10.3.16, then please input http:// 10.10.3.16 in IE address column.
System pops up warning information to ask you whether install control or not. Please click Install button. See Figure 3-1.

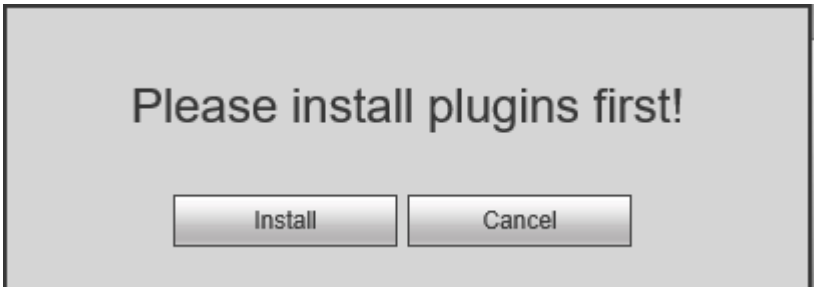


Figure 3-1

After installation, the interface is shown as below. See Figure 3-2. Please input your user name and password. Default factory name is admin and password is admin.

Note: For security reasons, please modify your password after you first login.

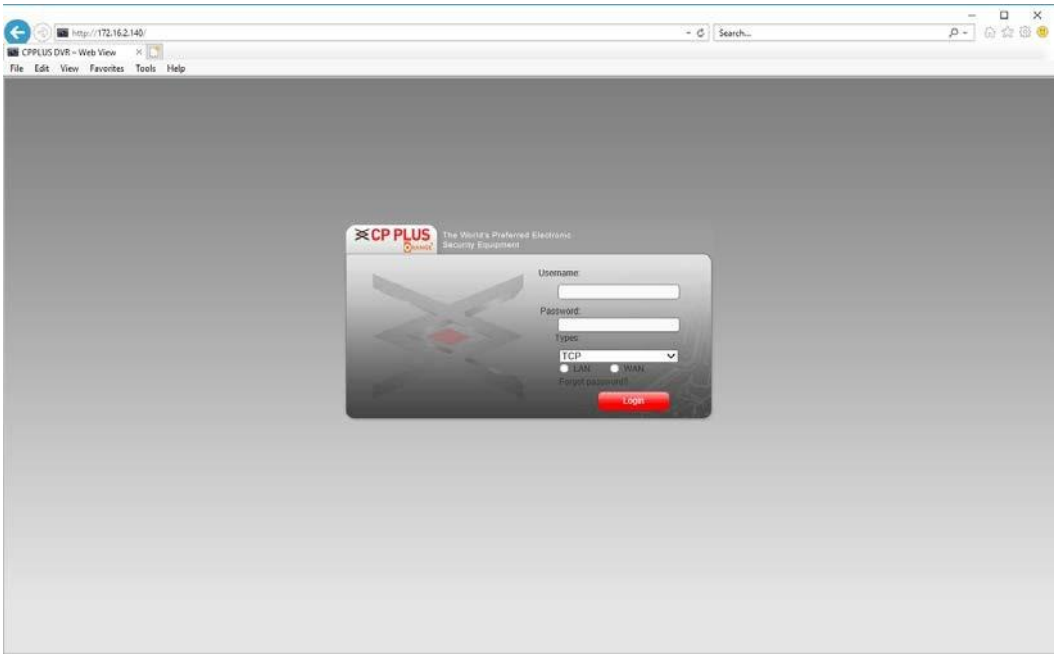


Figure 3-2

System pops up the following dialogue box for you to change default administrator password. See Figure 3-3.

Figure 3-3

For you own safety, please change the default password after you first login. Click Cancel button, system pops up the following dialogue box to confirm the exit. See Figure 3-4. Check the box here, system will not pop up the change password interface the next time.

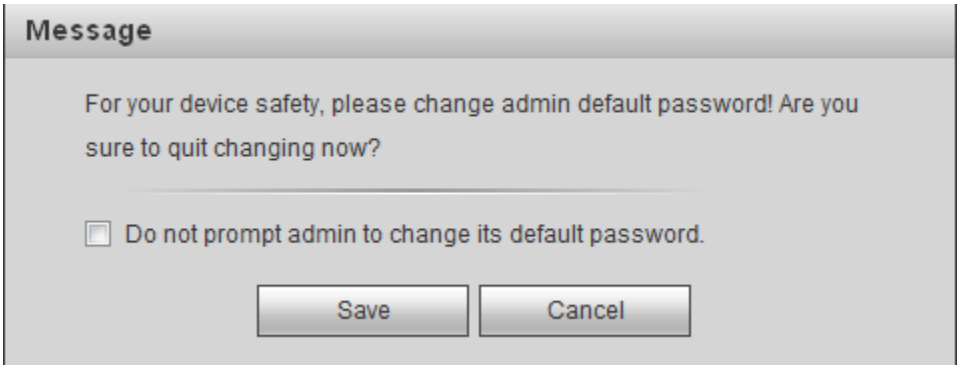


Figure 3-4

3.3 LAN Mode

For the LAN mode, after you logged in, you can see the main window. See Figure 3-5.

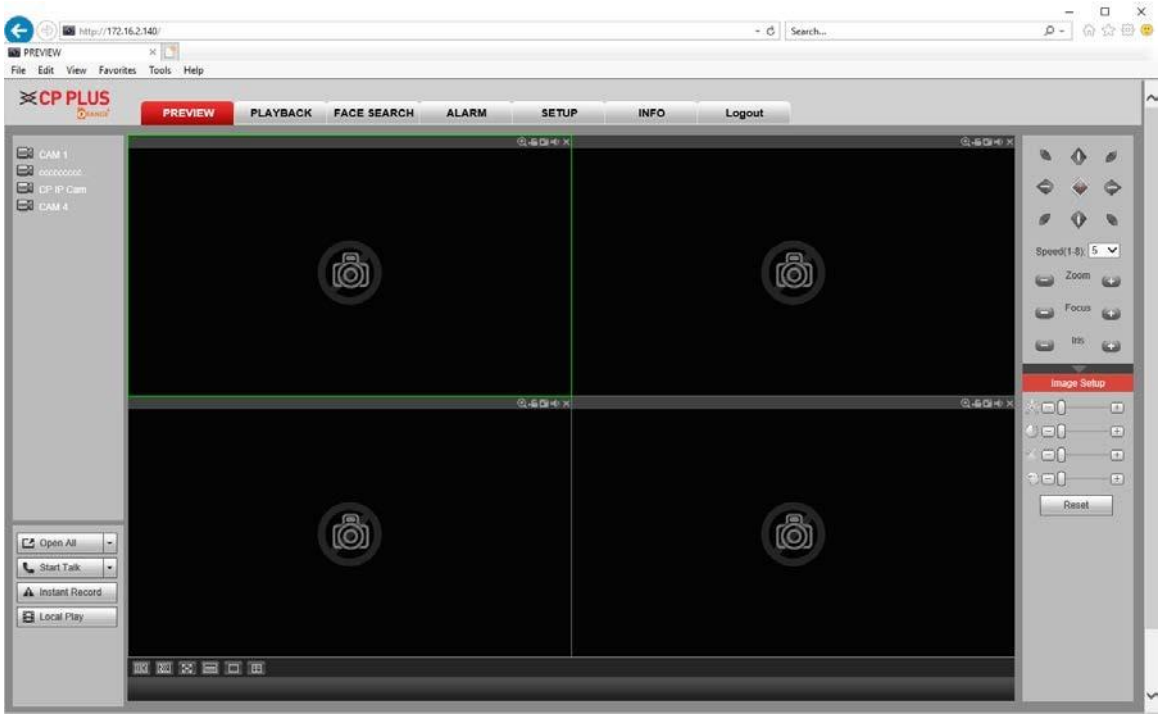


Figure 3-5

4 FAQ

1. DVR cannot boot up properly. There are following possibilities:

- Input power is not correct.
- Power connection is not correct.
- Power switch button is damaged.
- Program upgrade is wrong.
- HDD malfunction or something wrong with HDD ribbon.
- Seagate DB35.1， DB35.2， SV35 or Maxtor 17-g has compatibility problem. Please upgrade to the latest version to solve this problem.
- Front panel error.
- Main board is damaged.

2. DVR often automatically shuts down or stops running. There are following possibilities:

- Input voltage is not stable or it is too low.
- HDD malfunction or something wrong wit the ribbon.
- Button power is not enough.
- Front video signal is not stable.
- Working environment is too harsh, too much dust.
- Hardware malfunction.

3. System cannot detect hard disk. There are following possibilities:

- HDD is broken.
- HDD ribbon is damaged.
- HDD cable connection is loose.
- Main board SATA port is broken.

4. There is no video output whether it is one-channel, multiple-channel or all-channel output. There are following possibilities:

- Program is not compatible. Please upgrade to the latest version.
- Brightness is 0. Please restore factory default setup.
- There is no video input signal or it is too weak.
- Check privacy mask setup or your screen saver.
- DVR hardware malfunctions.

5. Real-time video color is distorted. There are following possibilities:

- When using BNC output, NTSC and PAL setup is not correct. The real-time video becomes black and white.
- DVR and monitor resistance is not compatible.
- Video transmission is too long or degrading is too huge.

- DVR color or brightness setup is not correct.

6. Cannot search local records. There are following possibilities:

- HDD ribbon is damaged.
- HDD is broken.
- Upgraded program is not compatible.
- The recorded file has been overwritten.
- Record function has been disabled.

7. Video is distorted when searching local records. There are following possibilities:

- Video quality setup is too low.
- Program read error, bit data is too small. There is mosaic in the full screen. Please restart the DVR to solve this problem.
- HDD data ribbon error.
- HDD malfunction.
- DVR hardware malfunctions.

8. There is no audio when monitor. There are following possibilities:

- It is not a power picker.
- It is not a power acoustics.
- Audio cable is damaged.
- DVR hardware malfunctions.

9. There is audio when monitor but there is no audio when system playback. There are following possibilities:

- Setup is not correct. Please enable audio function
- Corresponding channel has no video input. Playback is not continuous when the screen is blue.

10. Time display is not correct. There are following possibilities:

- Setup is not correct
- Battery contact is not correct or voltage is too low.
- Crystal is broken.

11. DVR cannot control PTZ. There are following possibilities:

- Front panel PTZ error
- PTZ decoder setup, connection or installation is not correct.
- Cable connection is not correct.
- PTZ setup is not correct.

- PTZ decoder and DVR protocol is not compatible.
- PTZ decoder and DVR address is not compatible.
- When there are several decoders, please add 120 Ohm between the PTZ decoder A/B cables furthest end to delete the reverberation or impedance matching. Otherwise the PTZ control is not stable.
- The distance is too far.

12. Motion detection function does not work. There are following possibilities:

- Period setup is not correct.
- Motion detection zone setup is not correct.
- Sensitivity is too low.
- For some versions, there is hardware limit.

13. Cannot log in client-end or web. There are following possibilities:

- For Windows 98 or Windows ME user, please update your system to Windows 2000 sp4. Or you can install client-end software of lower version. Please note right now, our DVR is not compatible with Windows VISTA control.
- ActiveX control has been disabled.
- No dx8.1 or higher. Please upgrade display card driver.
- Network connection error.
- Network setup error.
- Password or user name is invalid.
- Client-end is not compatible with DVR program.

14. There is only mosaic no video when preview or playback video file remotely. There are following possibilities:

- Network fluency is not good.
- Client-end resources are limit.
- There is multiple-cast group setup in DVR. This mode can result in mosaic. Usually we do not recommend this mode.
- There is privacy mask or channel protection setup.
- Current user has no right to monitor.
- DVR local video output quality is not good.

15. Network connection is not stable. There are following possibilities:

- Network is not stable.
- IP address conflict.
- MAC addresses conflict.
- PC or DVR network card is not good.

16. Burn error /USB back error.

There are following possibilities:

- Burner and DVR are in the same data cable.
- System uses too much CPU resources. Please stop record first and then begin backup.
- Data amount exceeds backup device capacity. It may result in burner error.
- Backup device is not compatible.
- Backup device is damaged.

17. Keyboard cannot control DVR. There are following possibilities:

- DVR serial port setup is not correct
- Address is not correct
- When there are several switchers, power supply is not enough.
- Transmission distance is too far.

18. Alarm signal cannot been disarmed. There are following possibilities:

- Alarm setup is not correct.
- Alarm output has been open manually.
- Input device error or connection is not correct.
- Some program versions may have this problem. Please upgrade your system.

19. Alarm function is null.
There are following possibilities:

- Alarm setup is not correct.
- Alarm cable connection is not correct.
- Alarm input signal is not correct.
- There are two loops connect to one alarm device.

20. Remote control does not work. There are following possibilities:

- Remote control address is not correct.
- Distance is too far or control angle is too small.
- Remote control battery power is low.
- Remote control is damaged or DVR front panel is damaged.

21. Record storage period is not enough. There are following possibilities:

- Camera quality is too low. Lens is dirty. Camera is installed against the light. Camera aperture setup is not correct.
- HDD capacity is not enough.
- HDD is damaged.

22. Cannot playback the downloaded file. There are following possibilities:

- There is no media player.
- No DXB8.1 or higher graphic acceleration software.
- There is no DivX503Bundle.exe control when you play the file transformed to AVI via media player.
- No DivX503Bundle.exe or ffdshow-2004 1012 .exe in Windows XP OS.

23. Forget local menu operation password or network password
Please contact your local service engineer or our sales person for help. We can guide you to solve this problem.

24. When I login via HTTPS, a dialogue says the certificate for this website is for other address. Please follow chapter 3.8.2.17.1 to create server certificate.

25. When I login via HTTPS, a dialogue says the certificate is not trusted. Please follow chapter 3.8.2.17.2 to download root certificate.

26. When I login via HTTPS, a dialogue says the certificate has expired or is not valid yet. Please make sure your PC time is the same as the device time.

27. I connect the general analog camera to the device, there is no video output. There are following possibilities:
- Check camera power supplying, data cable connection and etc.
- This series device does not support the analog camera of all brands. Please make sure the device supports general standard definition analog camera.

28. I connect the standard definition analog camera or the HDCVI camera to the device, there is no video output.
There are following possibilities:
- Check camera power supplying, or camera data cable connection.
- For the product supports analog standard definition camera/HD camera, you need to go to the main menu->Setting->Camera->Channel type to select corresponding channel type and then restart the DVR.

29. I cannot connect to the IP channel. There are following possibilities:
- Check the camera is online or not.
- Check IP channel setup is right or not (such as IP address, user name, password, connection protocol, port number.).
- The camera has set the whitelist (Only the specified devices can connect to the camera).

30. After I connected to the IP channel, there one-window output is OK, but there is no multiple-window output.
There are following possibilities:
- Check the sub stream of the camera has been enabled or not.

- Check the sub stream type of the camera is H.264 or not.
- Check the device supports camera sub stream resolution or not (such as 960H, D1, HD1 and etc.).

31. After I connected to the IP channel, there multiple-window output is OK, but there is no one-window output.
There are following possibilities:
- Check there is video from the IP channel or not. Please go to the main menu->info->System->BPS to view bit stream real-time information.
- Check the main stream of the camera has been enabled or not.
- Check the main stream type of the camera is H.264 or not.
- Check the device supports camera main stream resolution or not (such as 960H, D1, HD1 and etc.).
- Check camera network transmission has reached the threshold or not. Please check the online user of the camera.

32. After I connected to the IP channel, there is no video output in the one-window or the multiple-window mode. But I can see there is bit stream.
There are following possibilities:
- Check the main stream/sub stream type of the camera is H.264 or not.
- Check the device supports camera main stream/sub stream resolution or not (such as 1080P, 720P, 960H, D1, HD1 and etc.).
- Check the camera setup. Please make sure It supports the products of other manufacturers.

33. DDNS registration failed or can not access the device domain name. There are following possibilities:
- Check the device is connected to the WAN. Please check the device has got the IP address if the PPPoE can dial. If there is a router, please check the router to make sure the device IP is online.
- Check the corresponding protocol of the DDNS is enabled. Check the DDNS function is OK or not.
- Check DNS setup is right or not. Default Google DNS server is 8.8.8.8, 8.8.5.5. You can use different DNS provided by your ISP.

34. I can not use the INSTAON function on my cell phone or the WEB. There are following possibilities:
- Check the device INSTAON function is enabled or not. (Main menu->Setting->Network->INSTAON)
- Check the device is in the WAN or not.
- Check cell phone INSTAON login mode is right or not.
- It is the specified device INSTAON login port or not when you are using INSTAON client.
- Check user name or password is right or not.
- Check INSTAON SN is right or not. You can use the cell phone to scan the QR code on the

device INSTAON interface (Main menu->Setting->Network->INSTAON), or you can use the version information of the WEB to confirm. (For some previous series products, the device SN is the main board SN, it may result in error.)

35. I connect the standard definition camera to the device, there is no video output. There are following possibilities:

- Check the DVR supports standard definition signal or not. Only some series product supports analog standard definition signal, HDCVI signal input.
- Check channel type is right or not. For the product supports analog standard definition camera/HD camera, you need to go to the main menu->Setting->Camera->Channel type to select corresponding channel type (such as analog) and then restart the DVR. In this way, the DVR can recognize the analog standard definition.
- Check camera power supplying, or camera data cable connection.

36. I cannot connect to the IP camera. There are following possibilities:

- Check DVR supports IP channel or not. Only some series products support A/D switch function, it can switch analog channel to the IP channel to connect to the IP camera. From Setting->Camera->Channel Type, select the last channel to switch to the IP channel. Some series product products support IP channel extension, it supports N+N mode.
- Check the IPC and the DVR is connected or not. Please go to the main menu->Setting->Camera->Remote to search to view the IP camera is online or not. Or you can go to the main menu->Info->Network->Test, you can input IP camera IP address and then click the Test button to check you can connect to the IP camera or not.
- Check IP channel setup is right or not (such as IP address, manufacturer, port, user name, password, remote channel number and etc.).

Daily Maintenance

- Please use the brush to clean the board, socket connector and the chassis regularly.
- The device shall be soundly earthed in case there is audio/video disturbance. Keep the device away from the static voltage or induced voltage.
- Please unplug the power cable before you remove the audio/video signal cable, RS232 or RS485 cable.
- Do not connect the TV to the local video output port (VOUT).It may result in video output circuit.
- Always shut down the device properly. Please use the shutdown function in the menu, or you can press the power button in the front pane for at least three seconds to shut down the device. Otherwise it may result in HDD malfunction.
- Please make sure the device is away from the direct sunlight or other heating sources. Please keep the sound ventilation.
- Please check and maintain the device regularly.

5 Appendix A HDD Capacity Calculation

Calculate total capacity needed by each DVR according to video recording (video recording type and video file storage time).

Step 1: According to Formula (1) to calculate storage capacity q_i that is the capacity of each channel needed for each hour, unit Mbyte.

$$q_i = d_i \times 8 \times 3600 \div 1024 \quad (1)$$

In the formula: d_i means the bit rate, unit Kbit/s

Step 2: After video time requirement is confirmed, according to Formula (2) to calculate the storage capacity m_i, which is storage of each channel needed unit Mbyte.

$$m_i = \frac{q_i \times h_i \times}{D_i} \quad (2)$$

In the formula:

h_i means the recording time for each day (hour)

D_i means number of days for which the video shall be kept

Step 3: According to Formula (3) to calculate total capacity (accumulation) q_T that is needed for all channels in the DVR during **scheduled video recording**.

$$q_T = \sum_{i=1}^{c} m_i \quad (3)$$

In the formula: c means total number of channels in one DVR

Step 4: According to Formula (4) to calculate total capacity (accumulation) q_T that is needed for all channels in DVR during **alarm video recording (including motion detection)**.

$$q_T = \sum_{i=1}^{c} m_i \times a\% \quad (4)$$

In the formula：$a\%$ means alarm occurrence rate

You can refer to the following sheet for the file size in one hour per channel. (All the data listed below are for reference only.)

Bit stream size（max）	File size	Bit stream size（max）	File size
96K	42M	128K	56M
160K	70M	192K	84M
224K	98M	256K	112M
320K	140M	384K	168M
448K	196M	512K	225M
640K	281M	768K	337M

896K	393M	1024K	450M
1280K	562M	1536K	675M
1792K	787M	2048K	900M

6 Appendix B Compatible backup devices

6.1 Appendix B-1 Compatible USB list

Manufactory	Model	Capacity
Sandisk	Cruzer Micro	512M
Sandisk	Cruzer Micro	1G
Sandisk	Cruzer Micro	2G
Sandisk	Cruzer Freedom	256M
Sandisk	Cruzer Freedom	512M
Sandisk	Cruzer Freedom	1G
Sandisk	Cruzer Freedom	2G
Kingston	DataTraveler Ⅱ	1G
Kingston	DataTraveler Ⅱ	2G
Kingston	DataTraveler	1G
Kingston	DataTraveler	2G
Maxell	USB Flash Stick	128M
Maxell	USB Flash Stick	256M
Maxell	USB Flash Stick	512M
Maxell	USB Flash Stick	1G
Maxell	USB Flash Stick	2G
Kingax	Super Stick	128M
Kingax	Super Stick	256M
Kingax	Super Stick	512M
Kingax	Super Stick	1G
Kingax	Super Stick	2G
Netac	U210	128M
Netac	U210	256M
Netac	U210	512M
Netac	U210	1G
Netac	U210	2G
Netac	U208	4G
Teclast	Ti Cool	128M
Teclast	Ti Cool	256M
Teclast	Ti Cool	512M
Teclast	Ti Cool	1G
SanDisk	cruzer mirco	2G
SanDisk	cruzer mirco	8G
SanDisk	Ti Cool	2G
SanDisk	Hongjiao	4G
Lexar	Lexar	256MB
Kingston	Data Traveler	1G
Kingston	Data Traveler	16GB

Kingston	Data Traveler	32GB
Aigo	L8315	16GB
Sandisk	250	16GB
Kingston	Data Traveler Locker+	32GB
Netac	U228	8GB

6.2 Appendix B-2 Compatible SD Card list

Brand	Standard	Capacity	Card type
Transcend	SDHC6	16GB	Big
Kingston	SDHC4	4GB	Big
Kingston	SD	2GB	Big
Kingston	SD	1GB	Big
Sandisk	SDHC2	8GB	Small
Sandisk	SD	1GB	Small

6.3 Appendix B-3 Compatible Portable HDD list

Brand	Model	Capacity
YDStar	YDstar HDD box	40G
Netac	Netac	80G
Iomega	Iomega RPHD-CG" RNAJ50U287	250GB
WD Elements	WCAVY1205901	1.5TB
Newsmy	Liangjian	320GB
WD Elements	WDBAAR5000ABK-00	500GB
WD Elements	WDBAAU0015HBK-00	1.5TB
Seagate	FreeAgent Go(ST905003F)	500GB
Aigo	H8169	500GB

6.4 Appendix B-4 Compatible USB DVD List

Brand	Model
Samsung	SE-S084
BenQ	LD2000-2K4

6.5 Appendix B-5 Compatible SATA DVD List

Brand	Model
LG	GH22NS30
Samsung	TS-H653 Ver.A
Samsung	TS-H653 Ver.F

Samsung	SH-224BB/CHXH
SONY	DRU-V200S
SONY	DRU-845S
SONY	AW-G170S
Pioneer	DVR-217CH

6.6 Appendix B-6 Compatible SATA HDD List

NOTE: Please upgrade the DVR firmware to latest version to ensure the accuracy of the table below. Here we recommend HDD of 500G to 4T capacity.

Manufacturer	Series	Model	Capacity	Port Mode
Seagate	Seagate SV35.1	ST3250824SV	250G	SATA
Seagate	Seagate SV35.1	ST3500641SV	500G	SATA
Seagate	Seagate SV35.2	ST3250820SV	250G	SATA
Seagate	Seagate SV35.2	ST3320620SV	320G	SATA
Seagate	Seagate SV35.2	ST3500630SV	500G	SATA
Seagate	Seagate SV35.2	ST3750640SV	750G	SATA
Seagate	Seagate SV35.3	ST3250310SV	250G	SATA
Seagate	Seagate SV35.3	ST3500320SV	500G	SATA
Seagate	Seagate SV35.3	ST3750330SV	750G	SATA
Seagate	Seagate SV35.3	ST31000340SV	1T	SATA
Seagate	Seagate SV35.4	ST3320410SV	320G	SATA
Seagate	Seagate SV35.4	ST3250311SV	250G	SATA
Seagate	Seagate SV35.5	ST3500410SV	500G	SATA
Seagate	Seagate SV35.5	ST3500411SV	500G	SATA
Seagate	Seagate SV35.5	ST31000525SV	1T	SATA
Seagate	Seagate SV35.5	ST31000526SV	1T	SATA
Seagate	Seagate SV35.5	ST1000VX000	1T	SATA
Seagate	Seagate SV35.5	ST2000VX003	2T	SATA
Seagate	Seagate SV35.5	ST2000VX002	2T	SATA
Seagate	Seagate SV35.5	ST2000VX000	2T	SATA
Seagate	Seagate SV35.5	ST3000VX000	3T	SATA
Seagate	Seagate Pipeline HD	ST3320410CS	320G	SATA
Seagate	Seagate Pipeline HD	ST3320310CS	320G	SATA
Seagate	Seagate Pipeline HD	ST3500422CS	500G	SATA
Seagate	Seagate Pipeline HD	ST3500321CS	500G	SATA
Seagate	Seagate Pipeline HD2	ST3250412CS	250G	SATA
Seagate	Seagate Pipeline HD2	ST3320311CS	250G	SATA
Seagate	Seagate Pipeline HD2	ST3500414CS	500G	SATA
Seagate	Seagate Pipeline HD2	ST3500312CS	500G	SATA
Seagate	Seagate Pipeline HD2	ST31000424CS	1T	SATA
Seagate	Seagate Pipeline HD2	ST31000322CS	1T	SATA

Seagate	Seagate Pipeline HD2	ST1000VM002	1T	SATA
Seagate	Seagate Pipeline HD2	ST1500VM002	1T	SATA
Seagate	Seagate Pipeline HD2	ST2000VM002	2T	SATA
Seagate	Seagate Pipeline HD2	ST2000VM003	2T	SATA
Seagate	Seagate Constellation ES	ST3500514NS	500G	SATA
Seagate	Seagate Constellation ES	ST31000524NS	1T	SATA
Seagate	Seagate Constellation ES	ST32000644NS	2T	SATA
Seagate	Seagate Constellation ES	ST2000NM0011	2T	SATA
Seagate	Seagate Constellation ES	ST1000NM0011	1T	SATA
Seagate	Seagate Constellation ES	ST500NM0011	500G	SATA
Seagate	Seagate Constellation ES	ST2000NM0031	2T	SATA
Seagate	Seagate Constellation ES	ST1000NM0031	1T	SATA
Seagate	Seagate Constellation ES	ST500NM0031	500G	SATA
Seagate	Seagate Constellation ES	ST2000NM0051	2T	SATA
Seagate	Seagate Constellation ES	ST1000NM0051	1T	SATA
Seagate	Seagate Constellation ES	ST500NM0051	500G	SATA
Seagate	Seagate Constellation ES.2	ST33000650NS	3T	SATA
Seagate	Seagate Constellation ES.2	ST32000645NS	2T	SATA
Seagate	Seagate Constellation ES.2	ST33000651NS	3T	SATA
Seagate	Seagate Constellation ES.2	ST32000646NS	2T	SATA
Seagate	Seagate Constellation ES.2	ST33000652NS	3T	SATA
Seagate	Seagate Constellation ES.2	ST32000647NS	2T	SATA
Westem Digital	Cariar SE	WD3200JD	320G	SATA
Westem Digital	Cariar SE	WD3000JD	300G	SATA
Westem Digital	Cariar SE	WD2500JS	250G	SATA
Westem Digital	Cariar SE16	WD7500KS	750G	SATA
Westem Digital	Cariar SE16	WD5000KS	500G	SATA
Westem Digital	Cariar SE16	WD4000KD	400G	SATA
Westem Digital	Cariar SE16	WD3200KS	320G	SATA
Westem Digital	Cariar SE16	WD2500KS	250G	SATA
Westem Digital	WD Caviar SE16	WD2500YS-01SHB0	250G	SATA

Westem Digital	WD Caviar RE16	WD3200YS-01PGB0	320G	SATA
Westem Digital	WD Caviar RE2	WD5000YS-01MPB0	500G	SATA
Westem Digital	WD AV—AVJS	WD2500AVJS-63WDA0	500G	SATA
Westem Digital	WD AV—AVJS	WD3200AVJS-63WDA0	320G	SATA
Westem Digital	WD AV—AVJS	WD5000AVJS-63YJA0	500G	SATA
Westem Digital	WDAV-GP—AVCS	WD5000AVCS-63H1B1	500G	SATA

Westem Digital	WDAV-GP—AVCS	WD7500AVCS-63ZLB0	750G	SATA
Westem Digital	WDAV-GP—AVCS	WD3200AVCS	320G	SATA
Westem Digital	WDAV-GP—AVCS	WD2500AVCS	250G	SATA
Westem Digital	WDAV-GP—EVCS	WD10EVCS-63ZLB0	1T	SATA
Westem Digital	WDAV-GP—EVCS	WD20EVCS-63ZLB0	2T	SATA
Westem Digital	WDAV-GP—AVVS	WD3200AVVS-63L2B0	320G	SATA
Westem Digital	WDAV-GP—AVVS	WD5000AVVS-63ZWB0	500G	SATA
Westem Digital	WDAV-GP—AVVS	WD7500AVVS-63E1B1	750G	SATA
Westem Digital	WDAV-GP—AVVS	WD7500AVVS-63E1B1	750G	SATA
Westem Digital	WDAV-GP—EVVS	WD10EVVS-63E1B1	1T	SATA
Westem Digital	WDAV-GP—EVDS	WD10EVDS-63N5B1	1T	SATA
Westem Digital	WDAV-GP—EVDS	WD15EVDS-63V9B0	1.5T	SATA
Westem Digital	WDAV-GP—EVDS	WD20EVDS-63T3B0	2T	SATA
Westem Digital	WDAV-GP—AVDS	WD5000AVDS-63U7B0	500G	SATA
Westem Digital	WD AV-GP	WD30EURS	3T	SATA
Westem Digital	WD AV-GP	WD25EURS	2.5T	SATA
Westem Digital	WD AV-GP	WD20EURS	2T	SATA
Westem Digital	WD AV-GP	WD15EURS	1.5T	SATA
Westem Digital	WD AV-GP	WD10EURS	1T	SATA
Westem Digital	WD AV-GP	WD10EURX	1T	SATA
Westem Digital	WD AV-GP	WD7500AURS	750G	SATA
Westem Digital	WD AV-GP	WD7500AVDS	500G	SATA
Westem Digital	WD AV-GP	WD500AVDS	500G	SATA
Westem Digital	WD AV-GP	WD10EUCX	1T	SATA
Samsung	Samsung—HA	HA500LJ/CE	500G	SATA
Samsung	Samsung—HA	HA751LJ	750G	SATA
Samsung	Samsung—HA	HA101UJ/CE	1T	SATA
Samsung	Samsung—HD	HD502HI/CEC	500G	SATA
Samsung	Samsung—HD	HD103SI/CEC	1T	SATA
Samsung	Samsung—HD	HD154UI/CE	1.5T	SATA
Hitachi	HitachiCinemaStar™ 5K500	HCP725050GLA380	500G	SATA
Hitachi	HitachiCinemaStar™ 7K1000.B	HCT721050SLA360	500G	SATA
Hitachi	HitachiCinemaStar™ 7K1000.B	HCT721075SLA360	750G	SATA
Hitachi	HitachiCinemaStar™ 7K1000.B	HCT721010SLA360	1T	SATA
Maxtor	DiamondMax 20	STM3320820AS	320G	SATA
Maxtor	DiamondMax 20	STM3250820AS	250G	SATA

7 Appendix C Compatible CD/DVD Burner List

NOTE: Please upgrade the DVR firmware to latest version to ensure the accuracy of the table below. And you can use the USB cable with the model recommended to set USB b

Manufacturer	Model	Port Type	Type
Sony	DRX-S50U	USB	DVD-RW
Sony	DRX-S70U	USB	DVD-RW
Sony	AW-G170S	SATA	DVD-RW
Samsung	TS-H653A	SATA	DVD-RW
Panasonic	SW-9588-C	SATA	DVD-RW
Sony	DRX-S50U	USB	DVD-RW
BenQ	5232WI	USB	DVD-RW

8 Appendix D Compatible Displayer List

Please refer to the following sheet form compatible displayer list.

Brand	Model	Dimension (Unit: inch)
BENQ（LCD）	ET-0007-TA	19-inch (wide screen)
DELL（LCD）	E178FPc	17-inch
BENQ（LCD）	Q7T4	17-inch
BENQ（LCD）	Q7T3	17-inch
HFNOVO（LCD）	LXB-L17C	17-inch
SANGSUNG（LCD）	225BW	22 寸(wide screen)
HFNOVO(CRT)	LXB-FD17069HB	17 -inch
HFNOVO(CRT)	LXB-HF769A	17-inch
HFNOVO(CRT)	LX-GJ556D	17-inch
Samsung (LCD)	2494HS	24-inch
Samsung (LCD)	P2350	23-inch
Samsung (LCD)	P2250	22-inch
Samsung (LCD)	P2370G	23-inch
Samsung (LCD)	2043	20-inch
Samsung (LCD)	2243EW	22-inch
Samsung (LCD)	SMT-1922P	19-inch
Samsung (LCD)	T190	19-inch
Samsung (LCD)	T240	24-inch
LG (LCD)	W1942SP	19-inch
LG (LCD)	W2243S	22-inch
LG (LCD)	W2343T	23-inch
BENQ (LCD)	G900HD	18.5-inch
BENQ(LCD)	G2220HD	22-inch
PHILIPS (LCD)	230E	23-inch
PHILIPS (LCD)	220CW9	23-inch
PHILIPS (LCD)	220BW9	24-inch
PHILIPS (LCD)	220EW9	25-inch

9 Appendix E Compatible Switcher

Brand	Model	network working mode
D-LinK	DES-1016D	10/100M self-adaptive
D-LinK	DES-1008D	10/100M self-adaptive
Ruijie	RG-S1926S	Five network modes 1. AUTO 2. HALF-10M 3. FULL-10M 4 .HALF- 100M 5. FULL-100M
H3C	H3C-S1024	10/100M self-adaptive
TP-LINK	TL-SF1016	10/100M self-adaptive
TP-LINK	TL-SF1008+	10/100M self-adaptive

10 Appendix F Compatible Wireless Mouse List

Please refer to the following sheet for compatible SD card brand.

Brand	Model
SUNT讯拓	V80
Rapoo	3500
Logitech	M215
Shuangfeiyan	Tianyao G7-630

11 Appendix G Earthing

1. What is the surge?

Surge is a short current or voltage change during a very short time. In the circuit, it lasts for microsecond. In a 220V circuit, the 5KV or 10KV voltage change during a very short time (about microseconds) can be called a surge. The surge comes from two ways: external surge and internal surge.

- The external surge: The external surge mainly comes from the thunder lightning. Or it comes from the voltage change during the on/off operation in the electric power cable.
- The internal surge: The research finds 88% of the surge from the low voltage comes from the internal of the building such as the air conditioning, elevator, electric welding, air compressor, water pump, power button, duplicating machine and other device of inductive load.

The lightning surge is far above the load level the PC or the micro devices can support. In most cases, the surge can result in electric device chip damage, PC error code, accelerating the part aging, data loss and etc. Even when a small 20 horsepower inductive engine boots up or stops, the surge can reach 3000V to 50000V, which can adversely affect the electronic devices that use the same distribution box.

To protect the device, you need to evaluate its environment, the lighting affection degree objectively. Because surge has close relationship with the voltage amplitude, frequency, network structure, device voltage-resistance, protection level, ground and etc. The thunder proof work shall be a systematic project, emphasizing the all-round protection (including building, transmission cable, device, ground and etc.). There shall be comprehensive management and the measures shall be scientific, reliable, practical and economic. Considering the high voltage during the inductive thundering, the International Electrotechnical Committee (IEC) standard on the energy absorbing step by step theory and magnitude classification in the protection zone, you need to prepare multiple precaution levels.

You can use the lightning rod, lightning strap or the lightning net to reduce the damage to the building, personal injury or the property,

- The lightning protection device can be divided into three types:
  Power lightning arrester: There are 220V single-phrase lightning arrester and 380V three-phrase lightening arrester (mainly in parallel connection, sometimes use series connection) You can parallel connect the power lightning arrester in the electric cable to reduce the short-time voltage change and release the surge current. From the BUS to the device, there are usually three levels so that system can reduce the voltage and release the current step by step to remove the thunderstorm energy and guarantee the device safety. You can select the replaceable module type, the terminal connection type and portable socket according to your requirement.
- Signal lightning arrester: This device is mainly used in the PC network, communication system. The connection type is serial connection. Once you connected the signal lightning arrestor with the signal port, it can cut the channel of the thunderstorm to the device, and on the other hand,

it can discharge the current to the ground to guarantee the device proper work. The signal lightning arrester has many specifications, and widely used in many devices such as telephone, network, analog communication, digital communication, cable TV and satellite antenna. For all the input port, especially those from the outdoor, you need to install the signal lightning arrester.

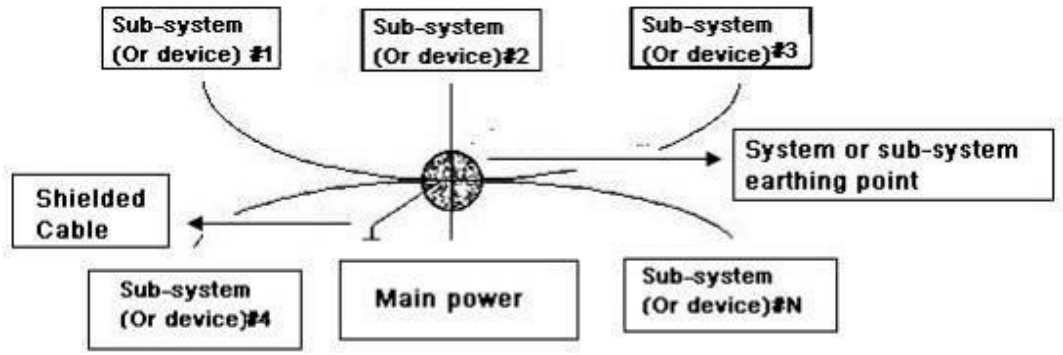
- Antenna feed cable lightning arrester: It is suitable for antenna system of the transmitter or the device system to receive the wireless signal. It uses the serial connection too.

Please note, when you select the lighting arrester, please pay attention to the port type and the earthing reliability. In some important environment, you need to use special shielded cable. Do not parallel connect the thunder proof ground cable with the ground cable of the lightning rod. Please make sure they are far enough and grounded respectively.

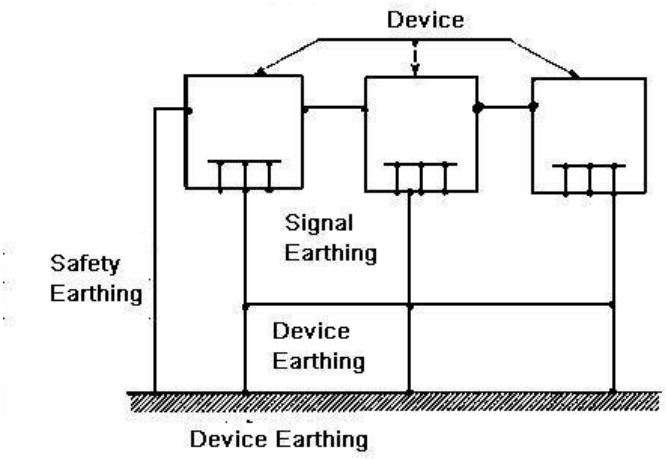
2. The earthing modes

We all know the earthing is the most complicated technology in the electromagnetism compatibility design since there is no systematic theory or module. The earthing has many modes, but the selection depends on the system structure and performance. The following are some successfully experience from our past work.

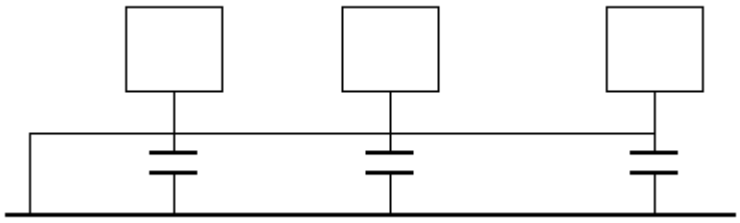
One-point ground: In the following figure you can see there is a one-point ground. This connection provides common port to allow signal to be transmitted in many circuits. If there is no common port, the error signal transmission occurred. In the one-point ground mode, each circuit is just grounded only and they are connected at the same port. Since there is only one common port, there is no circuit and so, there is no interference.



Multiple-point ground: In the following figure, you can see the internal circuit uses the chassis as the common point. While at the same time, all devices chassis use the earthing as the common port. In this connection, the ground structure can provide the lower ground resistance because when there are multiple-point grounds; each ground cable is as short as possible. And the parallel cable connection can reduce the total conductance of the ground conductor. In the high-frequency circuit, you need to use the multiple-point ground mode and each cable needs to connect to the ground. The length shall be less than the 1/20 of the signal wavelength.



Mixed ground: The mix ground consists of the feature of the one-point ground and multiple-point ground. For example, the power in the system needs to use the one-point ground mode while the radio frequency signal requires the multiple-point ground. So, you can use the following figure to earth. For the direct current (DC), the capacitance is open circuit and the circuit is one-point ground. For the radio frequency signal, the capacitance is conducive and the circuit adopts multiple-point ground.



When connecting devices of huge size (the device physical dimension and connection cable is big comparing with the wave path of existed interference), then there are possibility of interference when the current goes through the chassis and cable. In this situation, the interference circuit path usually lies in the system ground circuit.

When considering the earthing, you need to think about two aspects: The first is the system compatibility, and the other is the external interference coupling into the earth circuit, which results in system error. For the external interference is not regular, it is not easy to resolve.

3. Thunder proof ground method in the monitor system

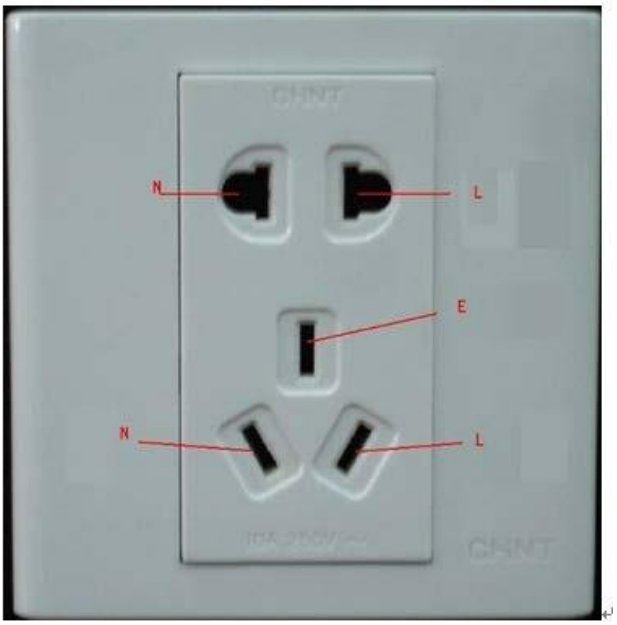
- The monitor system shall have sound thunder proof earthing to guarantee personnel safety and device safety.
- The monitor system working ground resistance shall be less than 1Ω.
- The thunder proof ground shall adopt the special ground cable from the monitor control room to the ground object. The ground cable adopts copper insulation cable or wire and its ground section shall be more than 20mm2.
- The ground cable of the monitor system can not short circuit or mixed connected with the strong alternative current cable.
- For all the ground cables from the control room to the monitor system or ground cable of other

monitor devices, please use the copper resistance soft cable and its section shall be more than 4mm2.

- The monitor system usually can adopt the one-point ground.
- Please connect the ground end of 3-pin socket in the monitor system to the ground port of the system (protection ground cable)

4. The shortcut way to check the electric system using the digital multimeter

For 220V AC socket, from the top to the bottom, E (ground cable), N (neutral cable), L(live cable). Please refer to the following figure.



There is a shortcut way to check these thee cables connection are standard or not (not the accurate check).

Importance

In the following operations, the multimeter range shall be at 750V!

For E (earth cable)

Turn the digital multimeter to 750V AC, use your one hand to hold the metal end, and then the other hand inserts the pen to the E port of the socket. See the following figure. If the multimeter shows 0, then you can see current earth cable connection is standard. If the value is more than 10, then you can see there is inductive current, and the earth cable connection is not proper.

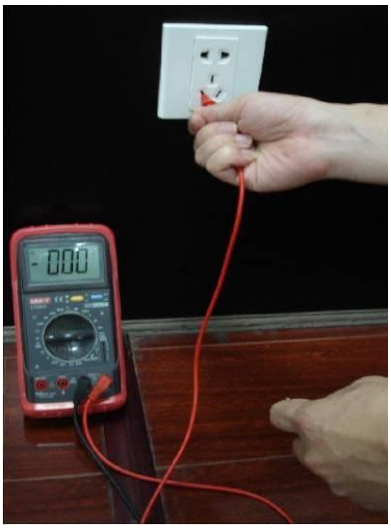
For L (live cable)

Turn the digital multimeter to 750V AC, use your one hand to hold the metal end, and then the other hand insert the pen to the L port of the socket. See the following figure. If the multimeter shows 120, then you can see current live cable connection is standard. If the value is less than 60, then you can see current live cable connection is not proper or it is not

the live cable at all.

For N (Neutral cable)

Turn the digital multimeter to 750V AC, use your one hand to hold the metal end, and then the other hand insert the pen to the N port of the socket. See the following figure. If the multimeter shows 0, then you can see current N cable connection is standard. If the value is more than 10, then you can see there is inductive current and the neutral cable connection is not proper. If the value is 120, then you can know misconnected the neutral cable to the live cable.



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.
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- If there is any uncertainty or controversy, please refer to the final explanation of us.
- Please visit our website or contact your local retailer for more information.

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