

DVR User Manual

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1 Production Introduction

1.1 5 IN1 DVR Overview

The 5 IN 1 DVR is designed specially for security and defense field which is an outstanding digital surveillance product. It introduces embedded LINUX operating system which is more stable. It introduces standard H.264 video compressed format and G.711A audio compressed format which insures the high quality image, low error coding ratio and single frame playing. It introduces TCP/IP network technology which achieves the strong network communication ability and telecommunication ability.

The series DVR can be used individually or online applied as a part of a safety surveillance network. With the professional network video surveillance software it achieves the strong network communication ability and telecommunication ability.

The series DVR can be applied in the bank, telecom, electric power system, judicial system, transportation, intelligent housing, factory, storehouse, water conservancy and so on.

1.2 Main Functions

Real-time surveillance

·Spot interface, analog interface, VGA interface and HDMI interface, surveillance function through monitor or display.

Storage

·Non-working hard disk dormancy processing which is convenient to radiate heat, reduce power and extend the life-span

·Special storage format which insures the data safety

Compression

·Real-time compression by individual hard disk which insures the audio and video signal stable synchronization

Backup

·Through SATA interface and USB interface such as USB equipment, removable hard disk and so on

·Through net download the files in the hard disk

Playback

- Individual real-time video recording as well as searching, playback, network surveillance, recording check, downloading and so on
- Multi-playback mode
- Zoom at arbitrary region

Net operating

- Through net surveillance in the real time
- Remote PTZ control (the camera must support this function)
- Remote recording check and real-time playback

Alarm linkage

- Alarm activated video record, tour ,message, buzzer, e-mail, ftp
- Motion detection
- Video loss/hard drive error,etc.

Communication interface

- RS485 interface which fulfills the alarm input and PTZ control
- Standard Ethernet interface which fulfills the telecommuting function

Intelligent operating

- Mouse action function
- Fast copy and paste operating for the same setting

2 Open-package Check and Cable Connections

2.1 Open-package Check

When you receive the DVR, please check first.

First, please check whether there is any visible damage to the package appearance. The protective materials used for the package of the DVR can protect most accidental clashes during transportation.

Then, please open the box and get rid off the plastic protective materials. Check whether there is any visible damage to the DVR appearance.

At last, please open the machine crust and check the data wire in the front panel, power wire, the connection between the fan power and the main board.

1. Front panel and rear panel

- ◆ The key function specification in the front panel and the interface specification in the rear panel are in the specification.
- ◆ Please check the product type in the front panel whether is accordant with the product type you ordered.

2. Check

After open the cover, you should check if it has obvious damage trace, also please check the front panel data cable, power cord and motherboard's connection are loose or not.

2.2 Hard Disk Installation

For the first use, please install the hard disk, this machine box can install two hard disk (no limited capacity).



Take off the screw and open cover



Connect HDD power and data cable



Fix the HDD and cover

2.3 Shelf Installation

This product chassis specification for the standard 1u, so it can be installed in the standard shelf.

Installation steps and attention items:

1. Make sure the temperature in the room lower than 35°C (95°F).
2. Keep the equipment have 15cm (6 inches) space around in order to air's circulation.
3. From bottom to shelf installation.
4. When multiple components install in the frame, please take preventive measures to avoid power socket overload.

2.4 Front Panel

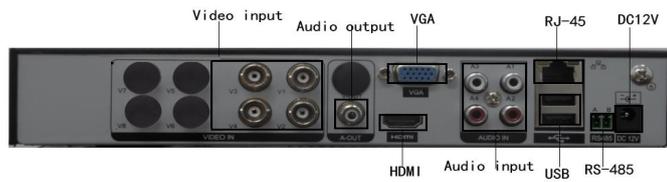


4/8CH

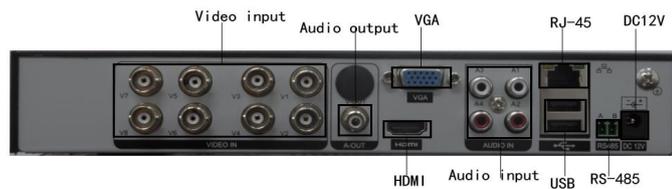


16CH

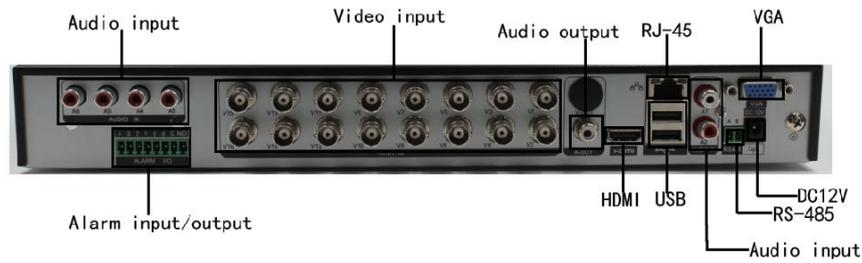
2.5 Rear Panel



4CH



8CH



16CH

(Notice: Pictures for reference only please prevail in kind)

2.6 Audio and Video Input and Output Connections

2.6.1 Video Input Connections

The video input port is BNC connector plug. The demand of input signal is PAL/NTSC BNC(1.0V_{P-P},75Ω).

The video signal must be accorded with the state standard which has the high signal to noise ratio, low aberration and low interference. The image must be clear and has natural color in the appropriate brightness.

Insure the video signal stable and credible

The video should be installed in the appropriate location where is away from backlight and low illumination or adopts the better backlight and low illumination compensation.

The ground and power supply of the video and the DVR should be shared and stable.

Insure the transmission line stable and credible

The video transmission line should adopt high quality coaxial pair which is chosen by the transmission distance. If the transmission distance is too far, it should adopt shielded twisted pair, video compensation equipment and transmit by fiber to insure the signal quality.

The video signal line should be away from the electromagnetic interference and other equipment signal lines. The high voltage current should be avoided especially.

Insure the connection stable and credible

The signal and shield lines should be firm and connected credible which avoid false and joint welding and oxidation.

2.6.2 Video Output Connections and Options

The video output is divided into PAL/NTSC BNC(1.0V_{P-P},75Ω) and VGA output(selective configuration).

There are some issues to notice when the monitor replaced by the computer display:

1. Do not stay in the turn-on state for a long time.
2. Keep the computer display normal working by demagnetizing regularly.
3. Stay away from the electromagnetic interference.

2.6.3 Audio Signal Input

Audio port is RCA connection.

The input impedance is high so the tone arm must be active.

The audio signal line should be firm and away from the electromagnetic Interference and connected credible which avoid false and joint welding and oxidation. The high voltage current should be avoided especially.

2.6.4 Audio Signal Output

Commonly the output parameter of DVR audio signal is greater than 200mv 1KΩ(BNC) which can connect the low impedance earphone and active sound box or other audio output equipment through power amplifier. If the sound box and the tone arm can't be isolated, howling phenomena is often existed. There are some methods to deal with the above phenomena.

1. Adopt better directional tone arm.
2. Adjust the sound box volume to be under the threshold that produces the howling phenomena.
3. Use fitment materials that absorb the sound to reduce reflection of the sound.
4. Adjust the layout of the sound box and the tone arm.

2.7 PTZ Decoder Connections

A. The grounding of the PTZ decoder and DVR must be shared otherwise the common-mode voltage will lead to the PTZ control failure. The shielded twisted pair is recommended.

B. Avoid the entrance of high voltage. Make the layout reasonably. Take precaution from the thunder.

C. In the outlying end connect 120Ω resistance paralleled to reduce the inflection and insure the

signal quality.

D. The 485 +/- lines of DVR can't connect with other 485 output equipment paralleled.

E. The voltage between the +/- lines of the decoder must be less than 5V.

3 Basic Operation

Note: The button in gray display indicates nonsupport.

3.1 Turn On

Plug the power supply and press the power switch, after the startup you will hear a beep. The default setting of video output is multiple-window output mode. If the startup time is within the video setting time, the timing video recording function will start automatically. Then the video indicator light of corresponding channel is shining and the DVR is working normally.

Note: 1. Make sure that the input voltage corresponds with the switch of the DVR power supply.

2. Power supply demands: $DC12V\pm 10\%$.

3. Suggest using the UPS to protect the power supply under allowable conditions.

3.2 Turn Off

There are two methods to turn off the DVR. Entering [main menu] and choosing [Logout]-[Shutdown], the option is called soft switch. Press power switch to turn off DVR is called hard switch.

Illumination:

1. Auto resume after power failure

If the DVR is shut down abnormally, it can automatically backup video and resume previous working status after power failure.

2. Replace the hard disk

Before replacing the hard disk, the power supply switch in the real panel must be turned off.

3. Replace the battery

Before replacing the battery, the setting information must be saved and the power supply switch in the real panel must be turned off. The DVR uses button battery. The system time must be checked regularly. If the time is not correct you must replace the battery, we recommend replacing the battery every year and using the same battery type.

Note: The setting information must be saved before replacing the battery otherwise information will lose.

3.3 System Login

When the DVR boots up, the user must login and the system provides the corresponding functions with the user right. There are two user settings: **Admin** and **Default**. **Admin** is the super account and default no password. User can set a new password in Account management. **Default** is the common users at the factory presetting.



Picture 3.1 System Login

Password protection: If the password is continuous wrong three times, the alarm will start. If the password is continuous wrong five times, the account will be locked. Then restart the DVR and input right password to login.

For your system security, please modify the password after first login.

3.4 Preview

You can right click mouse to choose the switch between the windows.

The system date, time and channel name are shown in each viewing window. The surveillance video and the alarm status are shown in each window.

1		Recording Status	2		Motion Detect
3		Audio			

Table 3.1 Preview Icon

3.5 Desktop Shortcut Menu

In preview mode you can right click mouse to get a desktop shortcut menu, as the Picture 3.2 shows. The menu includes: **Main Menu, Guide, Record Mode, Playback, PTZ Control, Coaxial Control, TVI & AHD, High Speed PTZ, Color Setting, Output Adjust, Logout, View.**



Picture 3.2 Shortcut Menu

3.5.1 Main Menu

When you login, the system main menu is shown as below.

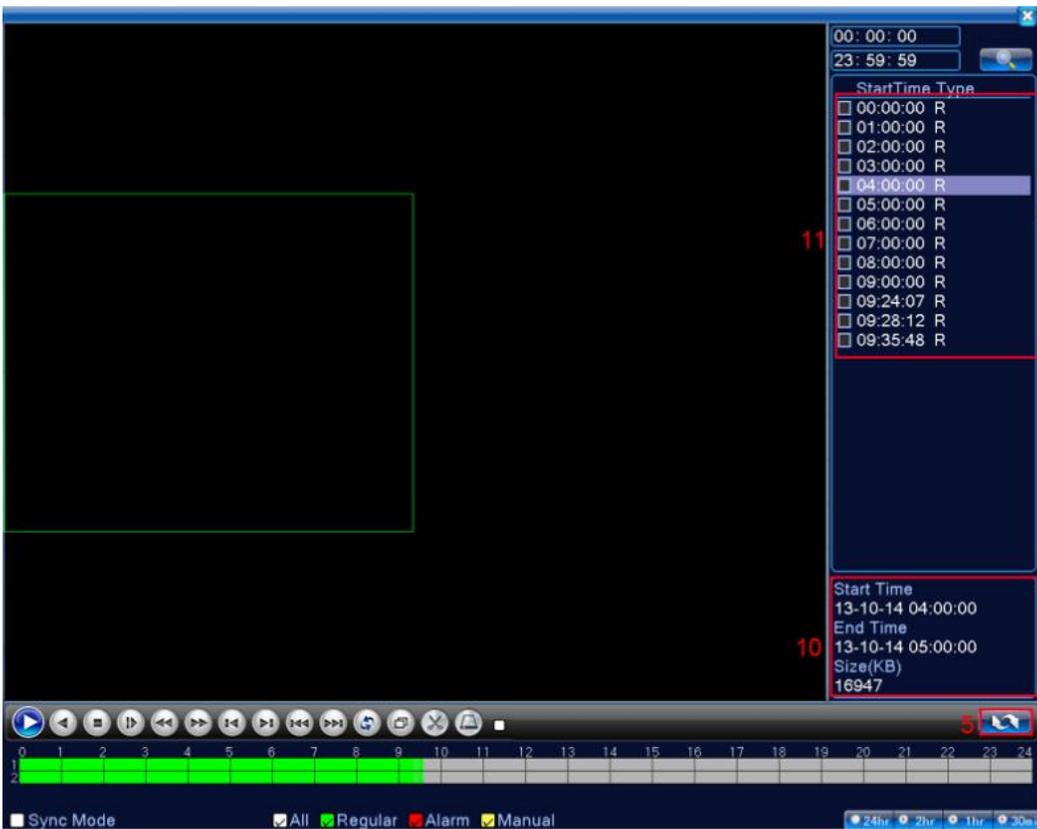
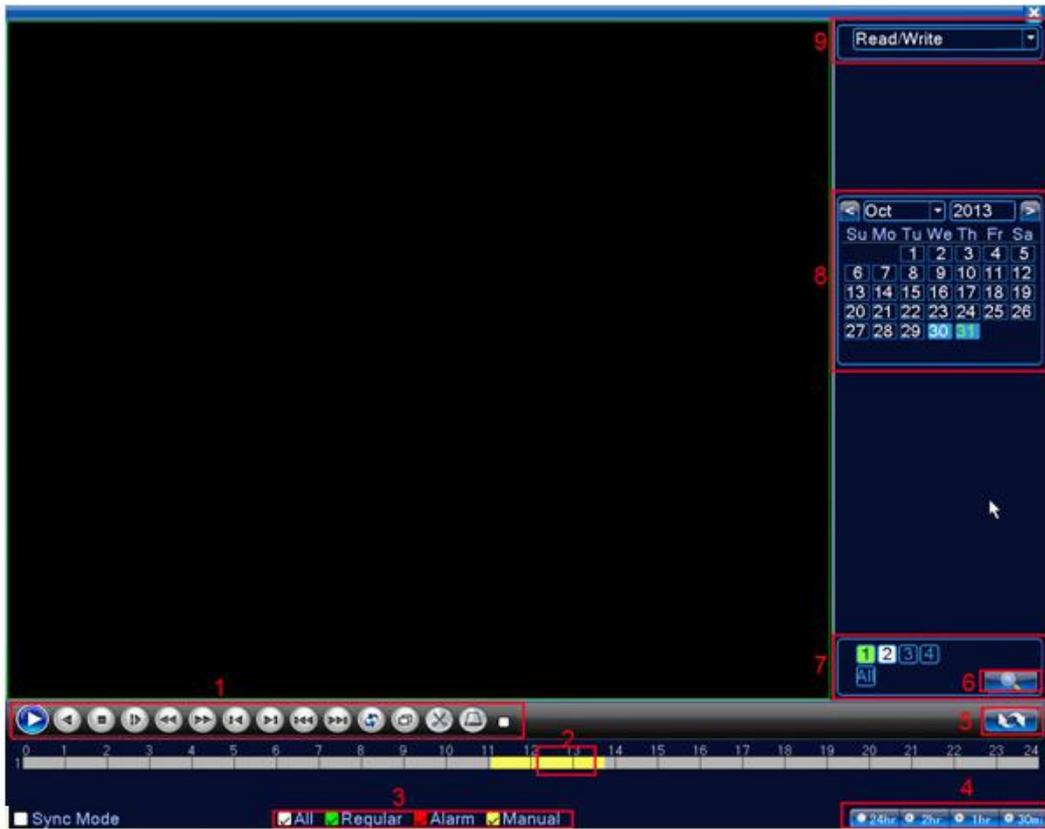


Picture 3.3 Main Menu

3.5.2 PlayBack

There are two methods for you to play the video files in the hard disk.

1. In the desktop shortcut menu.
2. Main Menu> Record> PlayBack.



Picture 3.4 Video Playback

1	Playback control	2	Operation hint	3	Record mode	4	Time interval choosing
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5	Switch by time, file mode	6	File searching	7	Channel choosing	8	Date choosing
9	Storage device choosing	10	File information	11	Listed files	12	Time searching

Table 3.2 Listed Files

[Listed Files] Look up the listed files that accord with the searching criteria.

[File Information] Look up the found file information.

[Playback Control] See detail in below chart.

Key	Function	Key	Function
	Play/Pause		Backward play
	Slow forward		Fast forward
	Previous frame		Next frame
	Previous file		Next file
	Round play		Full screen
	Stop		

Table 3.3 Playback Control Key

Note: Play under frame by frame, the playback status should be paused firstly.

[Operation Tips] Show function of the key that cursor placed.

Special functions:

Accurate Playback: Input time (h/m/s) in the time column and then click play  button. The system can operate accurate playback according to the searching time.

Local Zoom: You can drag your mouse in the screen to select a section and then left click mouse to realize local zoom. Double left click to exit.

3.5.3 Record Control

Please check current channel status: “○” means it is not in recording status, “●” means it is in

recording status.

You can use desktop shortcut menu or click [Main Menu]> [Recording Function]> [Recording Set] to enter the recording control interface.



Picture 3.5 Record Mode

[Schedule] Record according to the configuration.

[Manual] Click the all button and the according channel is recording no matter the channel in any state.

[Stop] Click the stop button and the according channel stops recording no matter the channel in any state.

3.5.4 Alarm Output

Please check current channel status: “o” means it is not in alarming status, “●” means it is in alarming status.

You can use desktop shortcut menu or click [Main Menu]> [Alarm Function]> [Alarm Output] to enter the alarm output interface.



Picture 3.6 Alarm Output

[Schedule] Alarm is on according to the configuration.

[Manual] Click the all button and the according channel is alarming no matter the channel in any state.

[Stop] Click the stop button and the according channel stops alarming no matter the channel in any state.

3.5.5 PTZ Control

Interface operation are as follows. The functions include: PTZ direction control, zoom, focus, iris, setup operation, tour between spots, trail tour, boundary scan, assistant switch, light switch, level rotation and so on.

Note:1. Decoder A(B) line connects with DVR A(B) line. The connection is right.

2. Click [Main Menu]> [System Configuration]> [PTZ Control] to set the PTZ parameters.

3. The PTZ functions are decided by the PTZ protocols.



Picture 3.7 PTZ Control

[Speed] Set the PTZ rotation range. Default range: 1~8.

[Zoom] Click  /  button to adjust the zoom multiple of the camera.

[Focus] Click  /  button to adjust the focus of the camera .

[Iris] Click  /  button to adjust the iris of the camera.

[Hide] Current interface will be temporarily hidden after click it.

[Direction Control] Control the PTZ rotation. 8 directions control is supportive (4 directions in Front panel is supportive).

[High Speed PTZ] Full-screen show channel image. Left press mouse and control PTZ to rotate orientation. Left press mouse and then rotate the mouse to adjust the zoom multiple of the camera.

[Set] Enter the function operation menu.

[Page Switch] Switch between different pages.

Special functions:

1. Preset

Set the location for the preset, that's the preset points, PTZ automatically turns to the setting position.

1) Preset Option

Set the location for the preset, procedures are as follows:

Step1: In Picture 3.7, click the Direction button will turn into preset position, click the Settings button to enter Picture 3.8.

Step 2: Click the Preset button, then write the preset points in the input blank.

Step 3: Click Settings button, return to the Picture 3.7 to complete setup, that is the preset points and preset position corresponds.

Clear Preset: Input preset points, click Remove button, remove the preset.



Picture 3.8 Preset Settings

2) Preset Point Calls

In Picture 3.7, click "Page Switch" button, enter PTZ control interface. In the input blank, write the preset points, then click Preset button, PTZ turn to the corresponding preset point.

2. Tour between Points

Multiple preset points connected tour lines, that's tour between points, the PTZ run around on the line.

1) Tour between Points Settings

Tour lines is connected by multiple preset points, setting procedures are all as follows:

Step 1: In Picture 3.7, the Direction Key will turn PTZ to designated location, click “Settings” button to enter Picture 3.9.

Step 2: Click “Tour” buttons, write proper value into the Tour Line and Preset Points blank, and then click “Add Preset Points” button, setting is completed (also can add and delete tour line which has been set up).

Step 3: Repeat step1 and step 2, until set out all the preset designated tour lines.

Remove Preset: Please input preset value in the blank, click “Remove Preset” button, then remove the preset points.

Remove Cruise Line: Input the number of tour line, click “Remove Tour Lines” button, then remove the tour lines set.



Picture 3.9 Cruise between Points Settings

2) The Calls of Tour between Points

In Picture 3.7, click “Page Switch” button, enter PTZ control menu as shown in Picture 3.9. Please input the number of tour in the value blank, then click “AutoScan” button. PTZ begins to work on the tour line. Click “Stop” button to stop tour.

3. Scan

PTZ also can work on the preset scan line repeatedly.

1) Scan Setup

Setting steps:

Step 1: Click “Setup” button;

Step 2: Click “Scan” button, the input proper value in the scan value blank;

Step 3: Click “Start” button, here you can set the following items: Zoom, Focus, Aperture,

Direction and so on. Click Setup button to go back;

Step 4: Click “End” button to complete setup. Click the right button of the mouse to exit.



Picture 3.10 Scan Setup

2) AutoScan

In Picture 3.7, click “Page Switch” button, then enter PTZ configuration menu as shown in Picture 3.10. Please input the number of scan in the value blank, then click “AutoScan” button, PTZ begins to work on the scan line. Click “Stop” button to stop.

3.5.6 Color Setting

Set the selective image parameters (current channel for single window display and cursor place for multi-window display). You can use the desktop shortcut menu and enter the interface. The image parameters include: Period, Brightness, Contrast, Saturation, Hue, Gain, Horizon Sharpness, Vertical Sharpness. You can set different parameters at different time sections.



Picture 3.11 Color Setting

3.5.7 Output Adjust

Adjust TV output area parameters. You can use the desktop shortcut menu or enter [Main Menu]> [Management Tools]> [Output Adjust].



Picture 3.12 Output Adjust

3.5.8 Logout

Logout, shut down the system or reboot up. You can use the desktop shortcut menu or enter [Main Menu].



Picture 3.13 Logout/Shutdown/Reboot the System

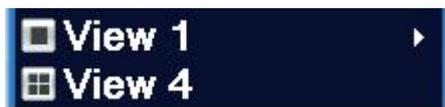
[Logout] Exit the menu. Offer password to entrance.

[Shutdown] Exit the system. Turn off the power supply.

When press the shut down button, there is schedule hint. After three seconds, the system is shut down. Cancel midway is of no effect.

[Reboot] Exit the system. Reboot up the system.

3.5.9 Window Switch



Preview in single window/four windows/eight windows/nine windows/sixteen windows according to your DVR.

4 Main Menu

4.1 Main Menu



Main Menu	Sub Menu	Function
Record	Record Config	Set the recording configuration, recording type, recording time section.
	PlayBack	Set recording search, recording play, video file storage.
	Backup	Detect backup device, format device, back the selective files.
Alarm	Motion Detection	Set motion detect alarm channel, sensitivity, area, linkage parameters: defending time section, alarm output, screen hint, recording, screen shot, PTZ, patrol, buzz, email and FTP upload.
	Video Blind	Set camera mask alarm channel, sensitivity, linkage parameters: defending time section, alarm output, screen hint, recording, screen shot, PTZ, patrol, buzz, email and FTP upload.
	Video Loss	Set video loss alarm channel, linkage parameters: defending time section, alarm output, screen hint, recording, screen shot, PTZ, patrol, buzz, email and FTP upload.
	Alarm Input	Set alarm input channel, equipment type, linkage parameters: defending time section, alarm output, screen hint, recording, screen shot, PTZ, patrol, buzz, email and FTP upload.

	Alarm Output	Set alarm mode: configuration, manual, shut down.
	Abnormality	No disk, storage device error, disk no space, net disconnection, IP conflicted.
System configuration	General	Set system time, data format, language, hard disk full time operation, machine number, video format, output mode, summertime, stay time.
	Encode	Set main (extra) coding parameter: code mode, resolving ability, frame rate, code stream control, image quality type, code stream value, frame between value, video/audio enable.
	Network	Set basic network parameters, DHCP and DNS parameters, network high speed download.
	NetService	PPPOE, NTP, Email, IP purview, DDNS parameter.
	Display	Set channel title, preview hint icon state, transparency, cover area, time title, channel title fold.
	PTZ Config	Set channel, PTZ protocol, address, baud rate, date bit, stop bit, check.
	PTZ Config	Set serial port function, baud rate, date bit, stop bit, check.
	Tour	Set patrol mode and interval time.
	Digital	Set channel mode, check channel status and configure the digital channel, etc.
Advanced	Storage	Set appointed hard disk as read-write disc, read-only disc or redundant disc, clear data, resume date and so on.
	Account	Modify user, team or password. Add user or team. Delete user or team.
	Online User	Break the connection with the already login user. Lock the account after break until booting up again.
	Output Adjust	Adjust upside, downside, nearside, starboard distance, black margin vertical & horizontal.
	Auto Maintain	Set automatic reboot system and automatic deleting files.

	Restore	Resume setup state: common setup, code setup, recording setup, alarm setup, network setup, network service, preview playback, serial port setup, user management.
	Upgrade	Upgrade with external device(like USB).
	Device Info	Device hardware configuration and message.
	Import/Export	Export the device's log or configuration to external device(like USB flash disk);Input the configuration with external device(like USB flash disk).
Info	HDD Info	Display hard disk capability and recording time.
	BPS	Display code stream information.
	LOG	Clear all log information according to the log video and time.
	Version	Display edition information.
Logout		Logout, shut down or reboot.

4.2 Record

Operations related to record, including: Record, PlayBack, Backup.

4.2.1 Record Configuration

Set the recording parameters in the surveillance channel. The system is set 24 hours consecutive recording in the first startup. You can enter [Main Menu]> [Recording Function]> [Recording Setup] to set.

Note: There is at least one read-write hard disk (Refer to chapter 4.5.1).



Picture 4.1 Record Configuration

[Channel] Choose the corresponding channel number to set the channel. Choose the all option to set the entire channels.

[Redundancy] Choose the redundancy function option to implement the file double backup function. Double backup is writing the video files in two hard disks. When you do the double backup, make sure that there are two hard disks installed. One is read-write disk and the other is redundant disk (Refer to chapter 4.5.1).

[Length] Set the time length of each video file. 60 minutes is default value.

[Pre-Record] Record 1-30 seconds before the action (time length is decided by the code stream).

[Record Mode] Set video state: schedule, manual or stop.

Schedule: Record according to the set video type (common, detection and alarm) and time section.

Manual: Click the button and the according channel is recording no matter the channel in any state.

Stop: Click the button and the according channel stops recording no matter the channel in any state.

[Period] Set the time section of common recording, The recording will start only in the set range.

[Record Type] Set recording type: regular, detect or alarm.

Regular: Perform the regular recording in the set time section. The video file type is "R".

Detect: Trigger the "motion detect", "camera mask" or "video loss" signal. When above alarm is set as opening recording, the "detection recording" state is on. The video file type is "M".

Alarm: Trigger the external alarm signal in the set time section. When above alarm is set as opening recording, the "detection recording" state is on. The video file type is "A".

Note: Refer to chapter 4.3 to set corresponding alarm function.

4.2.2 Playback

Refer to chapter 3.5.2.

4.2.3 Backup

You can backup the video files to external storage through setup.

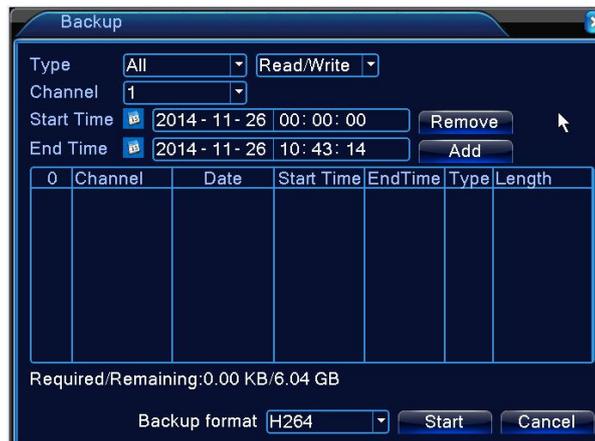
Note: The storage must be installed before the file backup. If the backup is terminated, the already backup can playback individually.



Picture 4.2 Backup

[Detect] Detect the storage connected with the DVR such as hard disk or universal disk.

[Backup] Click “Backup” button and the dialog box is popped up. You can choose the backup file according to the type, channel and time.



Picture 4.3 Backup

Remove: Clear the file information.

Add: Show the file information satisfying the set file attributes.

Backup Format: Configure the backup file format according to require, can choose H264 AVI

Start/Pause: Click the “Play” button to start the backup and click the “Pause” button to stop the backup.

Note: During backup you can exit the page layout to carry out other functions.

[Burning] The file will be burned synchronously after click it.

[Erase] Choose the file to delete and click “Erasure” to delete the file.

[Stop] Stop the backup.

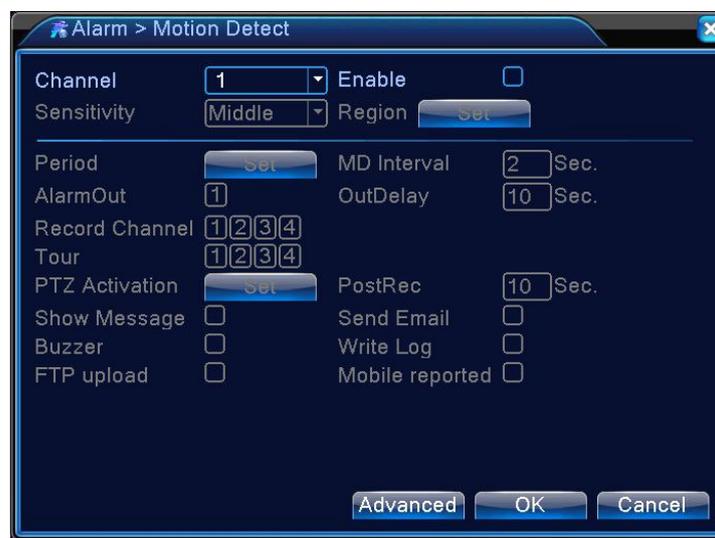
4.3 Alarm Function

Alarm functions include: motion detect, video blind, video loss, alarm input and alarm output, abnormality, intelligent analysis.

4.3.1 Motion Detect

When system detects the motion signal that reaches the set sensitivity, the motion detect alarm is on and the linkage function is turned on.

Note: "Advanced" button is the same as right click.



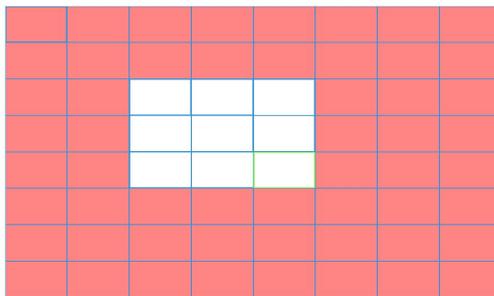
Picture 4.4 Motion Detect

[Channel] Choose the set motion detect channel.

[Sensitivity] Choose in the six options according to the sensitivity.

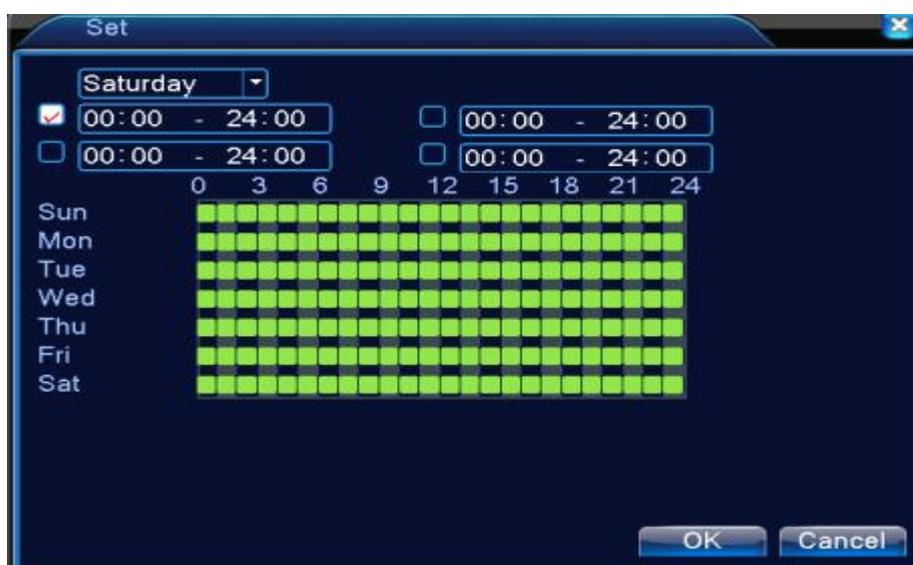
Lowest
Lower
Middle
High
Higher
Highest

[Region] Click "Set" to enter the set area. The area is divided into PAL22X18. Red block means the motion detect defensive area. White block means the unfenced area. You can set the area as followed. Drag the mouse and draw the area. Default: all selected blocks are detection area.



Picture 4.5 Region

[Period] Trigger the motion detect signal in the set time section. You can set according to week or set uniformly. Each day is divided into four time sections. ■ means the set valid.



Picture 4.6 Set the Time Section

[MD Interval] Only one alarm signal is turned on even there are several motion detect signals in the set interval.

[AlarmOut] Start the external equipment of corresponding linkage alarm when the motion detect alarm is turned on.

[OutDelay] Delay a few moments and stop when the alarm state is turned off. The range is 10~300 seconds.

[Record Channel] Choose the recording channel (multiple option supportive). Trigger the video signal when the alarm is turned on.

Note: Set in the “Recording Setup” and perform the linkage recording. Start detecting video files in the corresponding time section.

[Tour] ■ means that the selective channel is single window alternate tour preview. The interval is set

in the [Main Menu]>[System] > [Tour].

[PTZ Activation] Set the PTZ activation when the alarm is turned on.

Note: To link PTZ, need in the [Shortcut Menu]> [PTZ Control] to set preset point, cruise between points & interval time,etc.



Picture 4.7 PTZ Activation under Hybrid Mode

[Delay] When alarm is over, recording will last some seconds(10~300s), then stop.

[Show Message] Pop the alarm information dialog box in the local host computer screen.

[Send Email] ■ means sending an email to user when the alarm is turned on.

Note: Set in the “NetService” and send email.

[FTP Upload] To tick it, the video & picture of related record channel & snapshot channel will be uploaded to assigned position.

Note: FTP upload need to be set at “Netservice”.

[Buzz] When alarm happens, device will come out with buzz.

[Mobile Reported] Push alarm message to mobile phone.

4.3.2 Video Blind

When the video image is influenced by the environment such as bad brightness or reaching the set sensitivity parameter, the camera mask function is turned on and the linkage function is turned on.

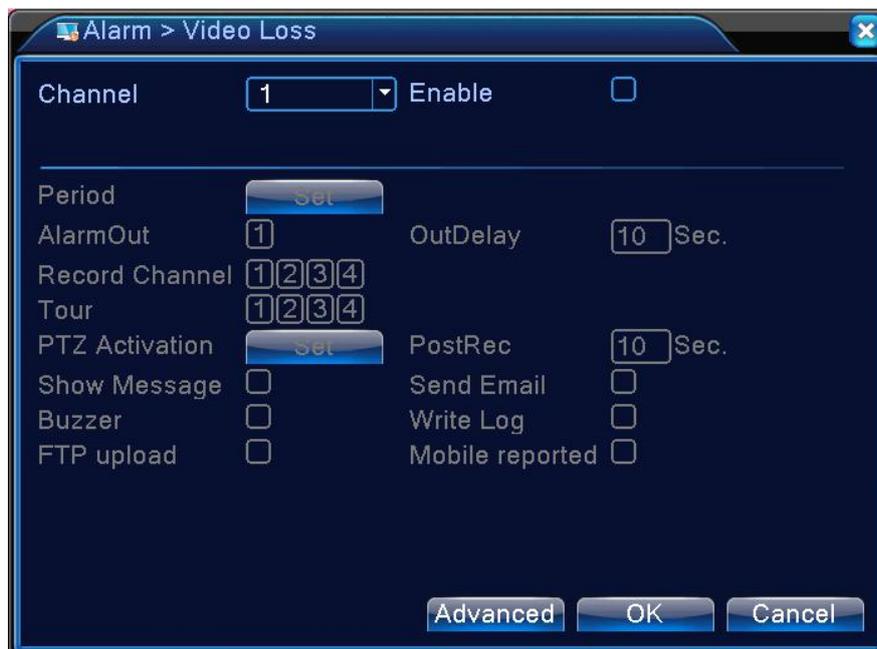


Picture 4.8 Video Blind

Set method: Refer to chapter 4.3.1. Motion detect.

4.3.3 Video Loss

When the equipment can't obtain the channel video signal, the video loss alarm is turned on and the linkage function is turned on.



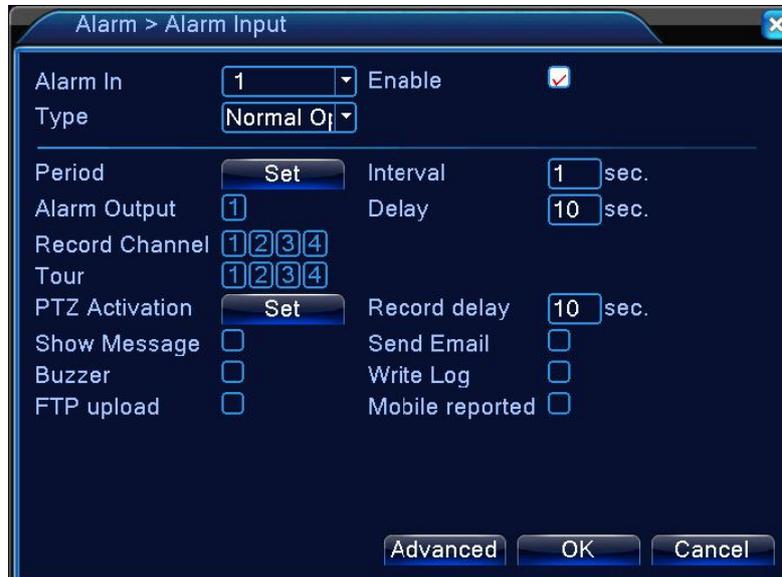
Picture 4.9 Video Loss

Set method: Refer to chapter 4.3.1. Motion detect.

4.3.4 Alarm Input

When the equipment obtains the external alarm signal, the alarm function is turned on.

Note: "Advanced" button is the same as right click.



Picture 4.10 Alarm Input

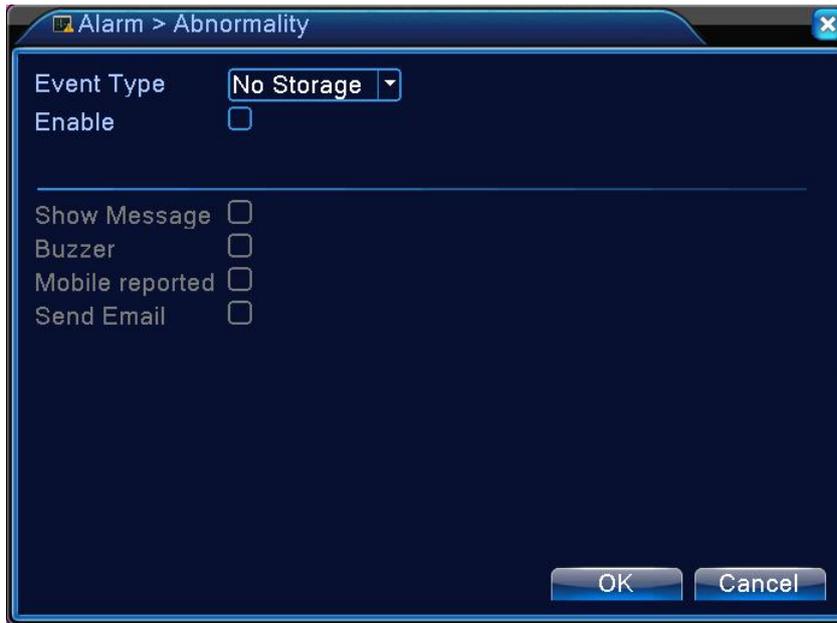
Set method: Refer to chapter 4.3.1. Motion detect.

4.3.5 Alarm Output

Refer to chapter 3.5.4.

4.3.6 Abnormality

The system analyses and inspect current software and hardware of the device: When some abnormal events happen, the device will make a relative answer such as show message and buzzer.



Picture 4.11 Abnormality



[Event Type] Selecting abnormality you want to inspect

[Enable] Select it to make sure abnormal function workable.

[Show Message] Automatically alarm cue dialog box come out of the main screen.

[Buzzer] Device will have one long noise “di” while alarm is happening.

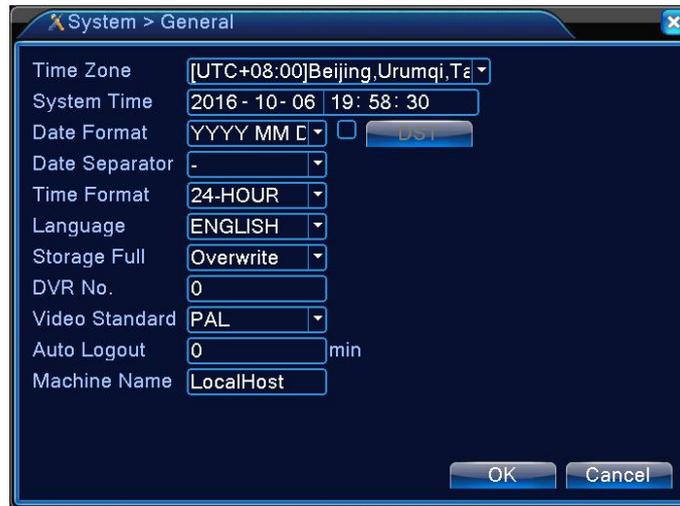
[Mobile Reported] Push alarm message to mobile phone.

[Send Email] Send alarm email.

4.4 System Setup

Set the system parameters such as **General, Encode, Network, Net Service, Display, PTZ Configure, RS232, Tour Setup, Digital.**

4.4.1 General



Picture 4.12 General Setup

[Time Zone] Set time zone.

[System Time] Set the system data and time.

[Date Format] Choose the data format: YMD, MDY, DMY.

[Date Separator] Choose list separator of the data format.

[Time Format] Choose time format: 24-hours or 12-hours.

[Language] Support multiple language.

[Storage Full] Choose stop record: Stop recording when the hard disk is full. Choose overwrite: Cover the earliest recording files and continue recording when the hard disk is full.

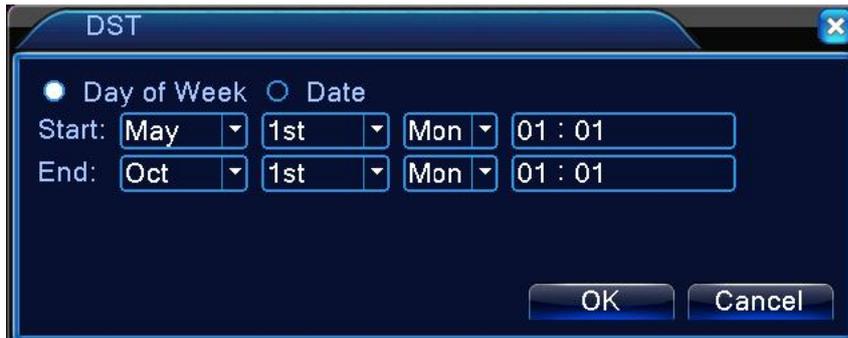
[DVR No.] Only when the address button in the remote controller and the corresponding DVR number is matched, the remote operation is valid.

[Video Standard] PAL or NTSC.

[Auto Logout] Set the latency time in 0-60. 0 means no latency time.

[Machine Name] Can setting the device's name.

[DST] Choose the summer time option and pop the dialog box as followed.



Picture 4.13 DST (Week)



Picture 4.14 DST (Date)

4.4.2 Encode

Set the video/audio code parameter: video file, remote monitoring and so on. Set every main stream parameter in the left part, and set the extra stream parameter in the right part.

Note: Extra stream introduces video compression technique which was applying for multi-channel playback simultaneously, Dial-up multi-channel real-time monitor under poor bandwidth, or mobile monitor and so on.



Picture 4.15 Encode Setup

Independent Channel Code Setting

[Channel] Choose the channel number.

[Compression] Standard H.264 main profile.

[Resolution] Video resolution.

[Frame Rate] Set video frame rate.

[Bit Rate Type] You can choose limited code stream or variable code stream. When you choose the variable code stream there are six image quality options. Under the limited code stream, you can choose the code stream manually.

[Bit Rate] Set the code stream value to modify the image quality. The larger code stream value the better image quality.

[Frame Interval] Can choose the range 2~12s.

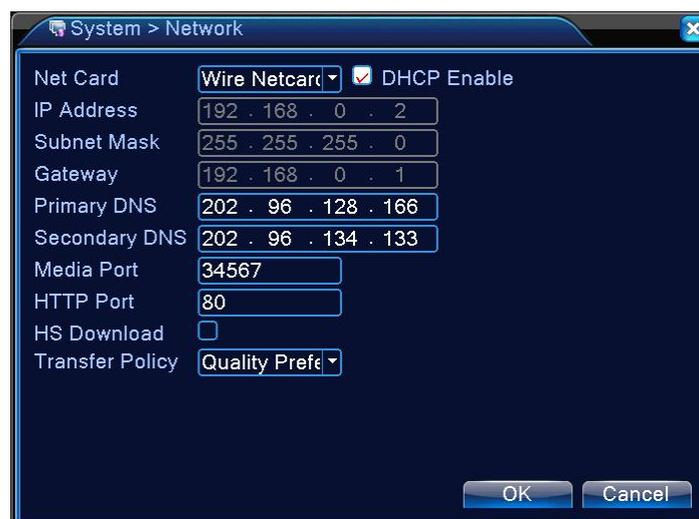
[Video/Audio] When the icons are all in reverse displayed, the video file is video and audio multiplex stream.

Extra Stream Settings

[Extra Stream] Be used for client side monitoring & mobile monitoring.

[Channel Title] Select channel title and then to choose whether need enable video & audio. The resolution, frame rate, bit rate type settings is the same as main stream.

4.4.3 Network



Picture 4.16 Network

[DHCP Enable] Obtain IP address automatically (not suggested).

[IP Address] Set the IP address. Default: 192.168.1.10.

[Subnet Mask] Set the subnet mask code. Default: 255.255.255.0.

[Gateway] Set the default gateway. Default: 192.168.1.1.

[DNS Setup] Domain Name Server. It translates the domain name into IP address. The IP address is offered by network provider. The address must be set and reboot then it works.

[Media Port] Default: 34567.

[HTTP Port] Default: 80.

[HS Download] High speed download file.

[Transfer Policy] There are three strategies: self-adaption, image quality precedence and fluency precedence. The code stream will adjust according to the setup. Self-adaption is the tradeoff between the image quality precedence and fluency precedence. Fluency precedence and self-adaption are valid only when the assistant code stream is turned on. Otherwise image quality precedence is valid.

4.4.4 NetService

Choose the network service option and click the set button to configure the advanced network functions or double click the service button to configure the parameters.



Picture 4.17 NetService

[PPPoE]



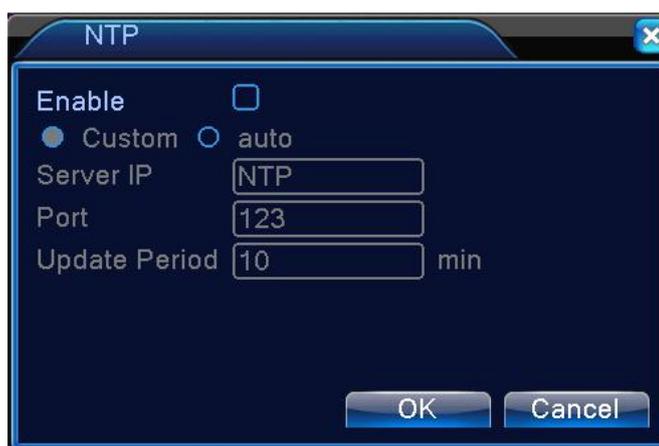
Picture 4.18 PPPOE

Enable: Reverse means choose, setting can become effective.

Input the user name and password that ISP (Internet Service Provider) provides. After saving it reboot up your system. Then the DVR will build a network connection based on PPPoE. The IP address will change into dynamic IP address after above operation is well done.

Operation: After PPPoE dialing successfully look up the IP address in the IP address and obtain the current IP address. Then use this IP address to visit the DVR through user port.

[NTP]



Picture 4.19 NTP

The NTP server must be installed in the PC.

Server IP: Input the IP address installed NTP server.

Port: Default: 123. You can set the port according to NTP server.

Update Period: The same with the NTP server check interval. Default: 10minutes.

[EMAIL]

If the alarm is turned on or the alarm linkage photos are taken, it will send an email about the alarm information and the photos to appointed address.



Picture 4.20 EMAIL

SMTP Server: Email server address. It could be an IP address or domain name. Domain name can be translated only if it is the correct DNS configuration.

Port: Email server port number (Usually the send port of Gmail is 465).

Need SSL: Using Secure Socket Layer protocol to login (Usually it need to be enabled).

User Name: Apply the email server user name.

Password: Input the password corresponding to the user.

Sender: Set the email sender address.

Receiver: Send the email to appointed receivers when the alarm is turned on. You can set three receivers at most.

Title: Email title.

[IP Filter]

When choosing the white list, only the listed IP address can connect the DVR. The 64 IP addresses are supportive in the list.

When choosing the black list, the listed IP address can't connect the DVR. The 64 IP addresses are supportive in the list.

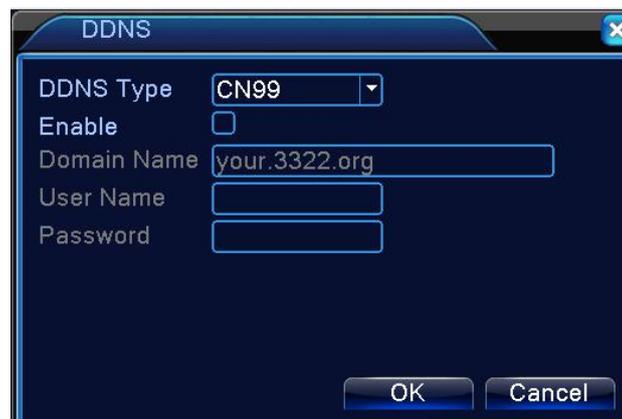
You can delete the set IP address by $\sqrt{\quad}$ in the options.

Note: When the same IP address is in the white and black list at the same time, the black list precedence is higher.



Picture 4.21 IP FILTER

[DDNS]



Picture 4.22 DDNS Setup

It is the abbreviation of dynamic domain name server.

Domain Name: Provide the domain name registered by DDNS.

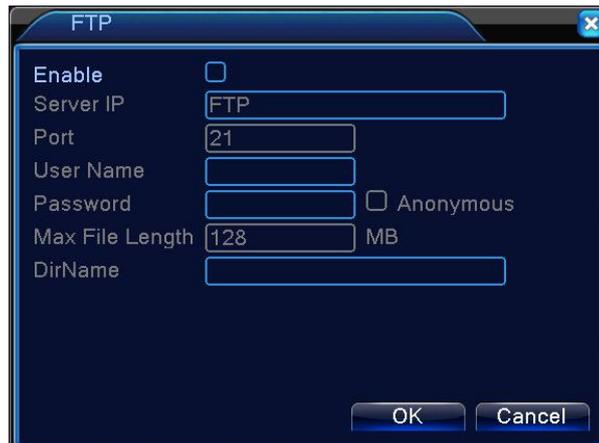
User Name: Provide the account registered by DDNS.

Password: Provide the password registered by DDNS.

When the DDNS is successfully configured and start, you can connect the domain name in the IE address column to visit.

[FTP]

FTP is available only when alarm happens, or alarm activates record and snapshot, it will upload related record and snapshot pictures to FTP server.



Picture 4.23 FTP Setup

[Enable] Click Enable, then all settings will be available.

[Server IP] IP address for FTP server.

[Port] Domain Port of FTP, default 21.

[User Name] User name of FTP.

[Password] Password of user.

[Anonymous] Enable anonymous, no need setting user name and password.

[Max File Length] Max length for upload files at every packed, default 128M.

[DirName] The directory of upload file.

[ARSP]

Startup DDNS server to add devices and manage it in the DDNS server.



Picture 4.24 ARSP

[Type] Choose "DNS".

[Sever IP] IP address of DDNS server.

[Port] Port No. of device, related DDNS server listen port.

[User Name] The user name that device can log in DDNS server.

[Password] The password related to the user name.

[Update Period] Time interval between device and DDNS when update.

[AlarmServer]

When alarm occurring, report alarm information to alarm server.



Pic: 4.25 Alarm Server Setting

[Protocol Type] GENERAL.

[Server Name] IP address of Alarm Server.

[Port] Device Port No.

[Alarm Report] Tick it means to report alarm information to server.

[Log Report] Tick it means to report log to server.

[Wireless Config]

ADSL through 3G net card, use CMS to visit and config the device.



Picture 4.26 Wireless Config

[Enable] Choose Enable to make all settings available.

[Type] Dial type, default AUTO.

[Wireless AP] 3G access point.

[Dial Number] 3G Dial Number.

[User Name] User name of 3G.

[Password] Password of dial user.

[IP Address] IP address, got from dial.

[Mobile Monitor]

To visit the device by mobile, please make a router mapping of this port and use CMS to monitor and operate it by protocol.



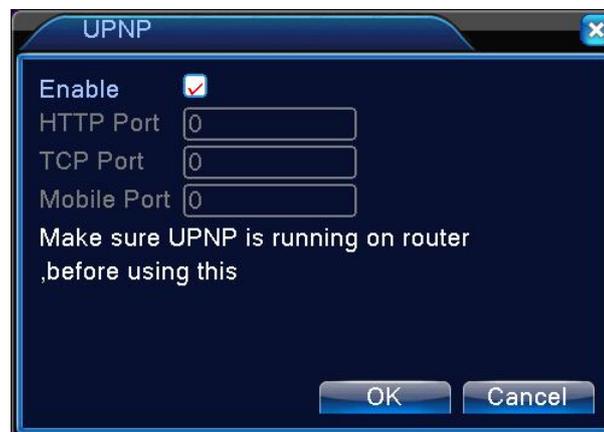
Picture 4.27 Mobile Monitor Setup

[Enable] Select it to make sure abnormal function workable.

[Port] It's a port of mobile monitoring which you need to make a router mapping of if want to visit it by mobile.

[UPNP]

UPNP protocol is to realize auto port forwarding on router, precondition of using this function is to make sure the UPNP function of router is enabled.



Picture 4.28 UPNP

[Enable] Choose Enable to make sure all UPNP settings available.

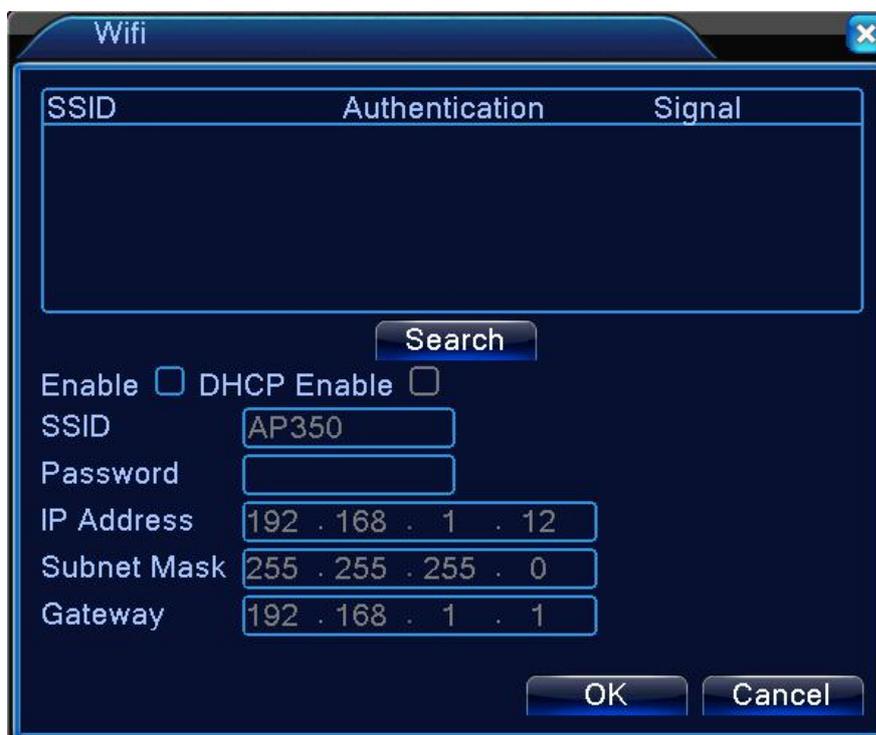
[HTTP Port] Router will automatically distribute HTTP port for the device, when IE viewing, it needs this port.

[TCP Port] Router will automatically distribute TCP port for the device, when monitoring via CMS, it needs this port.

[Mobile Port] Router will automatically distribute Mobile Port for the device, when mobile monitor, it needs this port.

[WIFI]

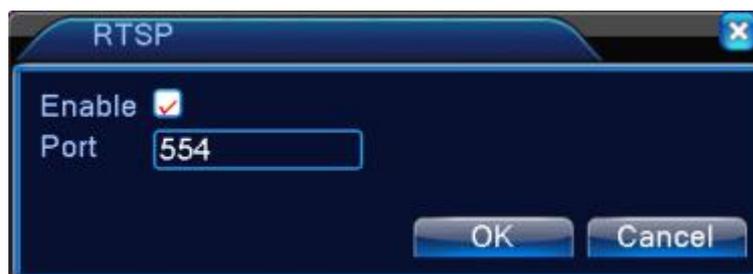
DVR support connect external USB wireless card.



Picture 4.29 WIFI Setting

[RTSP]

To do surveillance via cross-browser (Safari, Firefox, Google chrome) and VLC software. **This function only for monitor but can't control the device.**

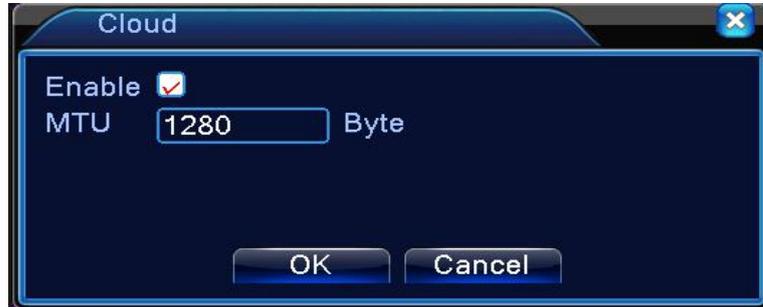


Picture 4.30 RTSP Setting

[Port] The default port is 554

[Cloud]

[Enable] The user can enter <http://www.xmeye.net> to login device by serial number.



Picture 4.31 Cloud

[Mobile Reported]

Push alarm message to mobile phone.

4.4.5 Display

Configure the video output parameters including the front output mode and encode output mode.

Front output: In the local preview mode include: channel title, time display, channel display, record status, alarm status, transparency and region cover.

Encode output: In the network surveillance and video file mode include: channel title, time display, channel display, record status, alarm status, transparency and region cover.



Picture 4.32 Display

[Channel Title] Click the channel name modify button and enter the channel name menu. Modify the channel name. The 16 Chinese characters and 25 letters are supportive.

[Time Display] Means the selective state. Display the system data and time in the surveillance

window.

[Channel Display] Means the selective state. Display the system channel number in the surveillance window.

[Record Status] Means the selective state. Display the system recording status in the surveillance window.

[Alarm Status] Means the selective state. Display the system alarm status in the surveillance window.

[Transparency] Choose the background image transparency. The range is 128~255.

[Resolution] Set display resolution.

[Channel] Choose the set code output channel number.

[Region Cover] Means the selective state. Click the cover area button and enter the corresponding channel window. You can cover the arbitrary using mouse (Black region is for output).

[Time Display] and **[Channel Display]** set the display position of channel title and time title.

4.4.6 PTZ Config



Picture 4.33 PTZ Configure

[Channel] Choose the dome camera input channel.

[Protocol] Choose the corresponding dome protocol (PELCOD as an example).

[Address] Set as the corresponding dome address. Default: 1.(Note: The address must be

consistent with the dome address.)

[Baudrate] Choose the corresponding dome baud rate length.

[Data Bits] Include 5-8 options. Default: 8.

[Stop Bits] Include 2 options. Default: 1.

[Parity] Include odd check, even check, sign check, blank check. Default: void.

4.4.7 RS232



Picture 4.34 Serial Port Setting

[Function] Common serial port is used to debug and update program or set up specific serial port.

[Baudrate] Choose the corresponding baud rate length.

[Data Bits] Include 5-8 options.

[Stop Bits] Include 2 options.

[Parity] Include odd, even, mark, space, default is none.

4.4.8 Tour

Set the patrol display. You can choose 1/4 channel view.



Picture 4.35 Tour Configure

[Interval] Set the patrol switch interval. The set range is 5-120 seconds.

[Alarm Tour Type] Set the interval to shift alarm tour, range is 5-120 seconds, choose return when alarm ends, when alarm link to tour, system will auto shift to six-view after alarm finished.

Remark: At preview mode, click upper right icon  /  can turn on / off tour ( mean turn on,  mean turn off).

4.4.9 Digital

Digital manage including digital channel, channel status, and channel mode.



Picture 4.36 Channel Manage Interface

Channel Type:



Picture 4.37 Channel Type

4.5 Advanced

Manage tools menu including: **Storage, Account Manage, Online User, Output Adjust, Auto Maintain, Restore, Upgrade, Device Info, Import/Export.**

4.5.1 Storage

Configure and manage the hard disk. The menu displays current hard disk information: hard disk number, input port, type, status and overall capability. The operation include: setup the write-read disk, read-only disk, redundant disk, hard disk format, resume default. Choose the hard disk and click the right function button to execute.

Note: Read/Write Disk: The equipment can write or read data.

Read only Disk: The equipment can read data but can't write data.

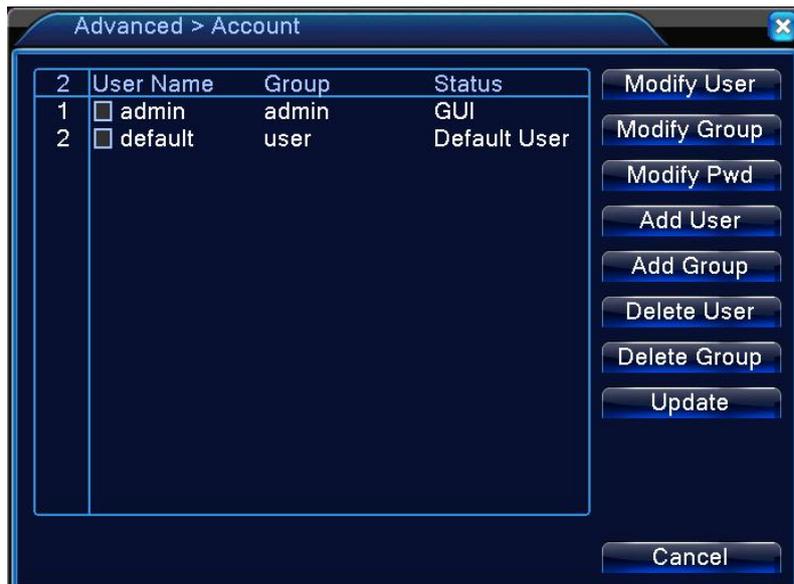


Picture 4.38 HDD Manage

4.5.2 Account

Manage the user purview.

- Note:** 1. The character length is 8 bytes at most for the following user and user team name. The blank ahead or behind the character string is invalid. The middle blank in the character string is valid. Legal characters include: letter, number, underline, subtraction sign, dot.
2. There is no limit in the user and user group. You can add or delete the user group according to user definition. The factory setup include: user\admin. You can set the team as you wish. The user can appoint the purview in the group.
3. The user management include: group/ user. The group and user name can't be the same. Each user only belongs to one group.

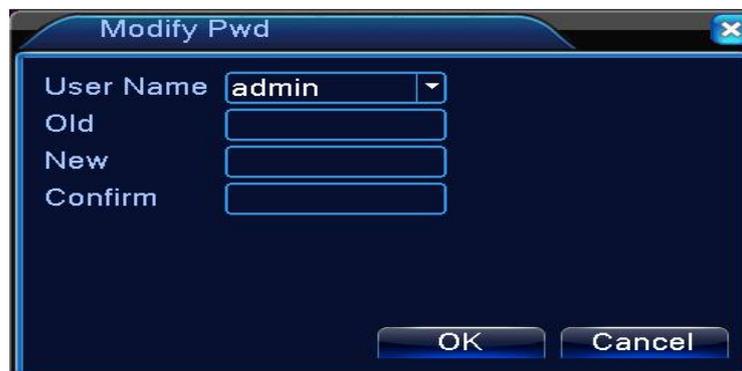


Picture 4.39 Account Management

[Modify User] Modify the existed user attribute.

[Modify Group] Modify the existed team attribute.

[Modify Password] Modify the user password. You can set 1-6 bit password. The blank ahead or behind the char string is invalid. The middle blank in the char string is valid.

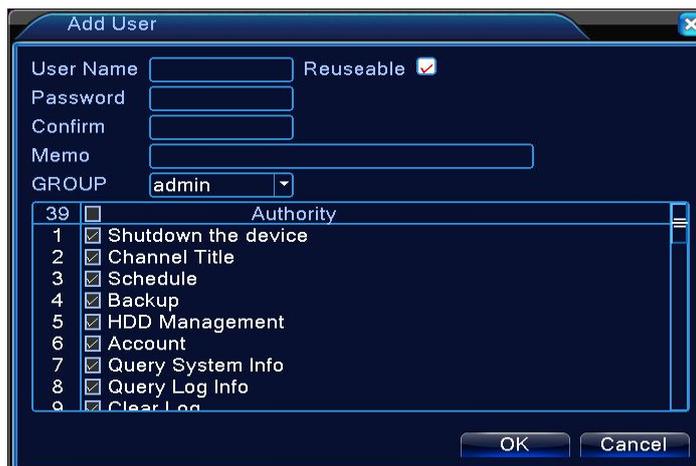


Picture 4.40 Modify Password

[Add User] Add a user in the group and set the user purview. Enter the menu interface and input the user name and password. Choose the team and choose whether cover using the user. Cover using means that the account can be used by multiple users at the same time.

Once choose the team the user purview is the subclass of the team.

We recommend that the common user's purview is lower than the advanced user.



Picture 4.41 Add User

[Add Group] Add a user group and set the purview. There are 33 different purviews: shut down the equipment, real time surveillance, playback, record setting, video backup and so on.



Picture 4.42 Add Group

[Delete User] Delete the current user. Choose the user and click delete user button.

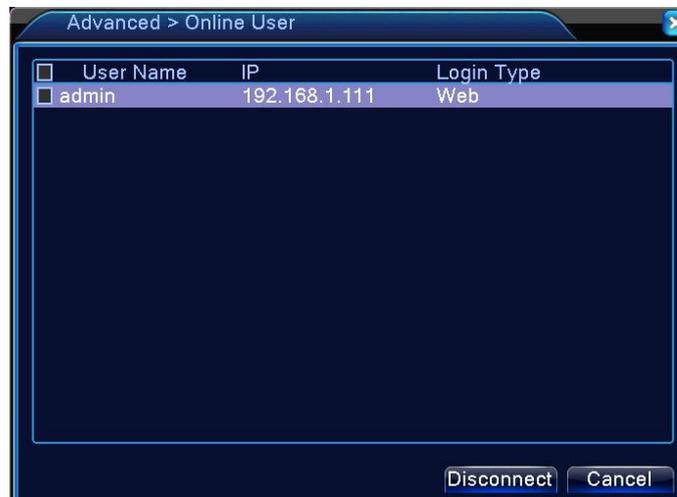
[Delete Group] Delete the current group. Choose the group and click delete group button.



Picture 4.43 Delete Group

4.5.3 Online User

To check the information of network user that connected with local device, also can tick the selected user to break up connection, then the user will be frozen after connection stopped, and will not log in until device reboot.



Picture 4.44 Online User

4.5.4 TV Adjust

Refer to chapter 3.5.7 .

4.5.5 Auto Maintain

The user can set the time to auto reboot and auto delete file.



Picture 4.45 Auto Maintain

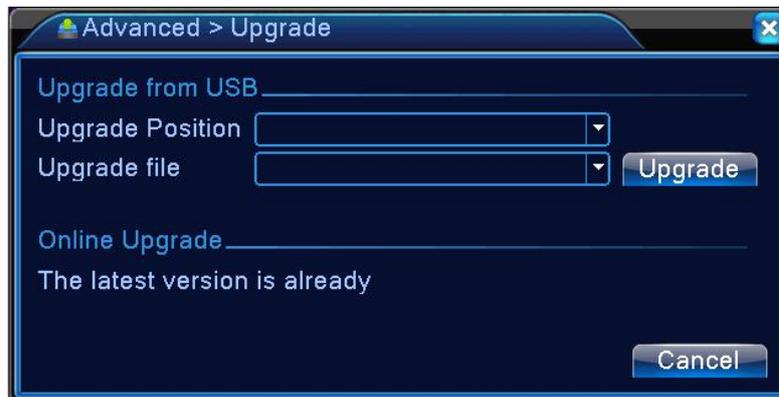
4.5.6 Restore

The system restore to the default. You can choose the items according to the menu.



Picture 4.46 Restore to Default

4.5.7 Upgrade



Picture 4.47 Upgrade

[Upgrade Position] Choose USB interface.

[Upgrade File] Choose the upgrade file.

4.5.8 Device Info

Provide device interface info like audio in, alarm in/out to be conveniently used for user.



Picture 4.48 Device Info

4.5.9 Import/Export

Users can export the log info and the configure file from device to connected flash stick, and also can import related configure file from flash stick to settings, which greatly bring convenience to the customers.



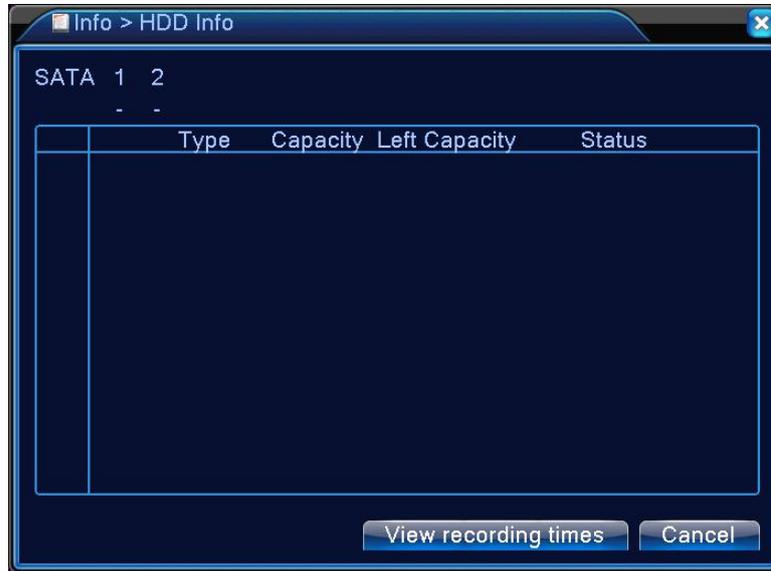
Picture 4.49 Import/Export Interface

4.6 Info

Display the hard disk information, including HDD info, code stream statistic, log info, version info.

4.6.1 HDD Info

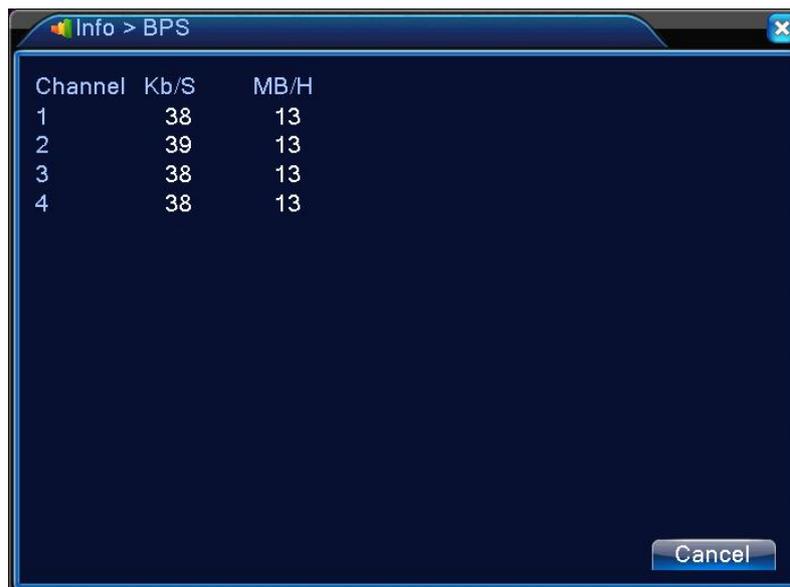
Display the hard disk state: hard disk type, overall capability, residual capability, the recording time and so on.



Picture 4.50 HDD Info

4.6.2 BPS

Display the code stream (Kb/S) and hard disk capability (MB/H) in real time. It displays as the wave sketch map.

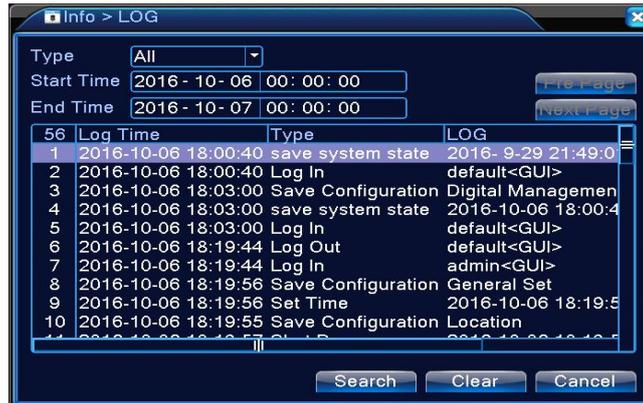


Picture 4.51 BPS

4.6.3 LOG

To search log information base on the set search mode.

Log Information include: system operation, configuration operation, data management, alarm affair, recording operation, user management, file management and so on. Set the time section to look up and click the look up button. The log information will display as a list. (one page is 128 items) Press **Page Up** or **Page Down** button to look up and press **Delete** button to clear all the log information.



Picture 4.52 Log Information

4.6.4 Version

Display the basic information such as hardware information, software version, issue date, serial number , NAT status and so on.



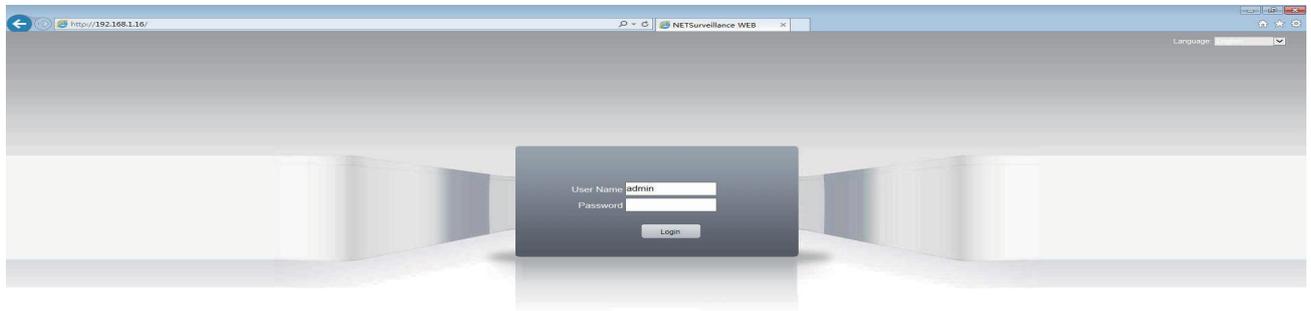
Picture 4.53 Version Information

4.7 Logout

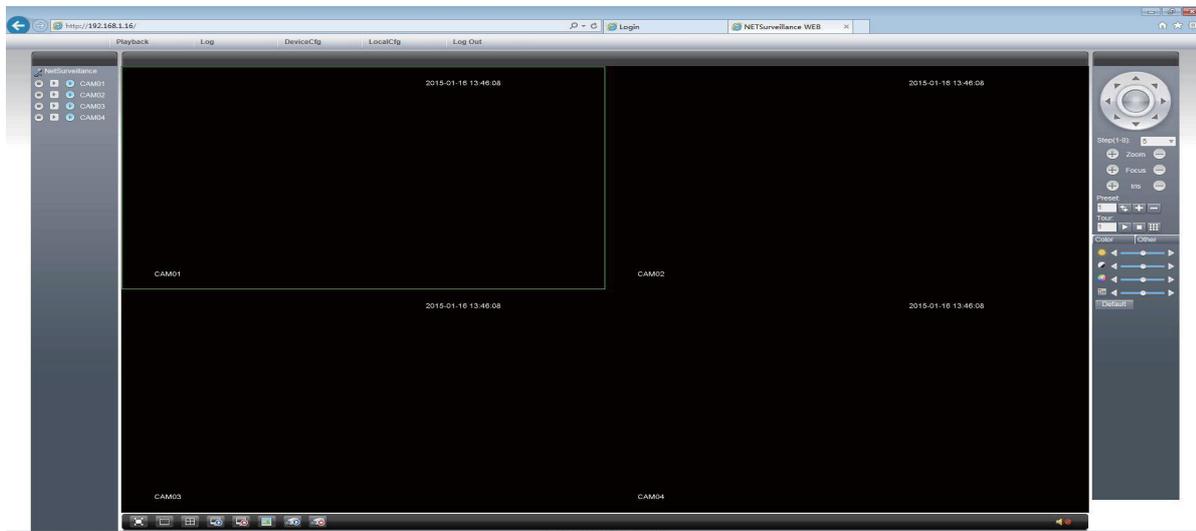
Refer to chapter 3.5.8.

5 IE Web Viewing

Open IE browser and enter IP address (Locate it at Main Menu> System-Network-IP address, example 192.168.1.16), login with user name and password.

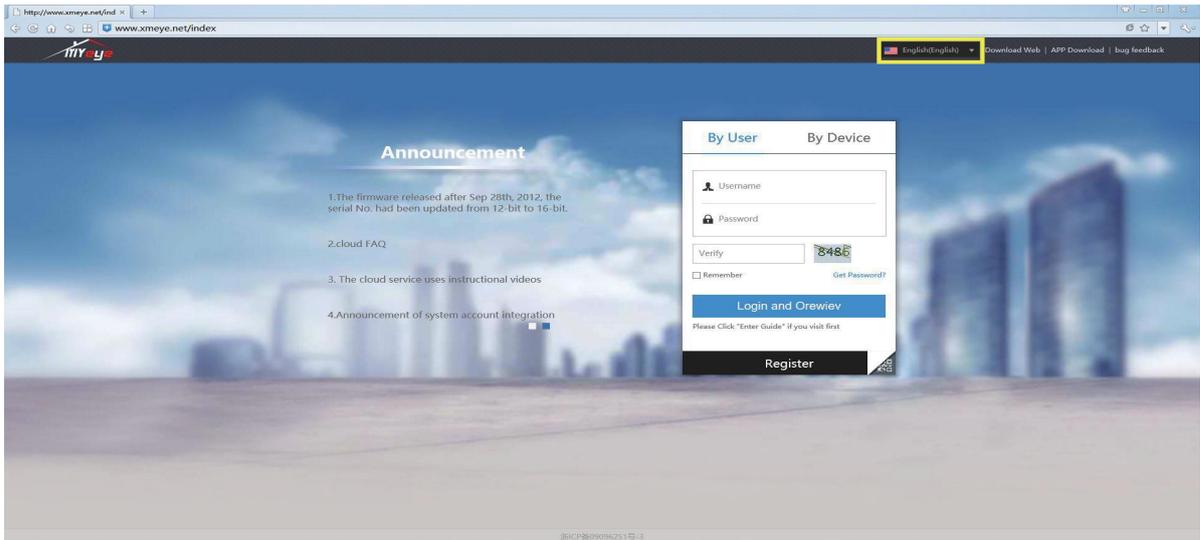


User name and password is just the same as your DVR, Default user name is admin , no password. After login, you will enter the interface as below , then you can see live image. If cameras are connected, cameras image will also show on.(In the example , no camera is connected to DVR).



IE Remote Login

Visit the website: <http://www.xmeye.net> via IE explorer on windows PC, as shown below.



On the up right side, choose the website language.

At first visit, ActiveX plug-in is required to install, Click "Install ActiveX" to download and install it.

Login by user or by device

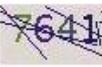
By user: Register a user name, then log in, click " Register" and follow the guide until you get a new account.

By User By Device

 Username

 Password

Verify



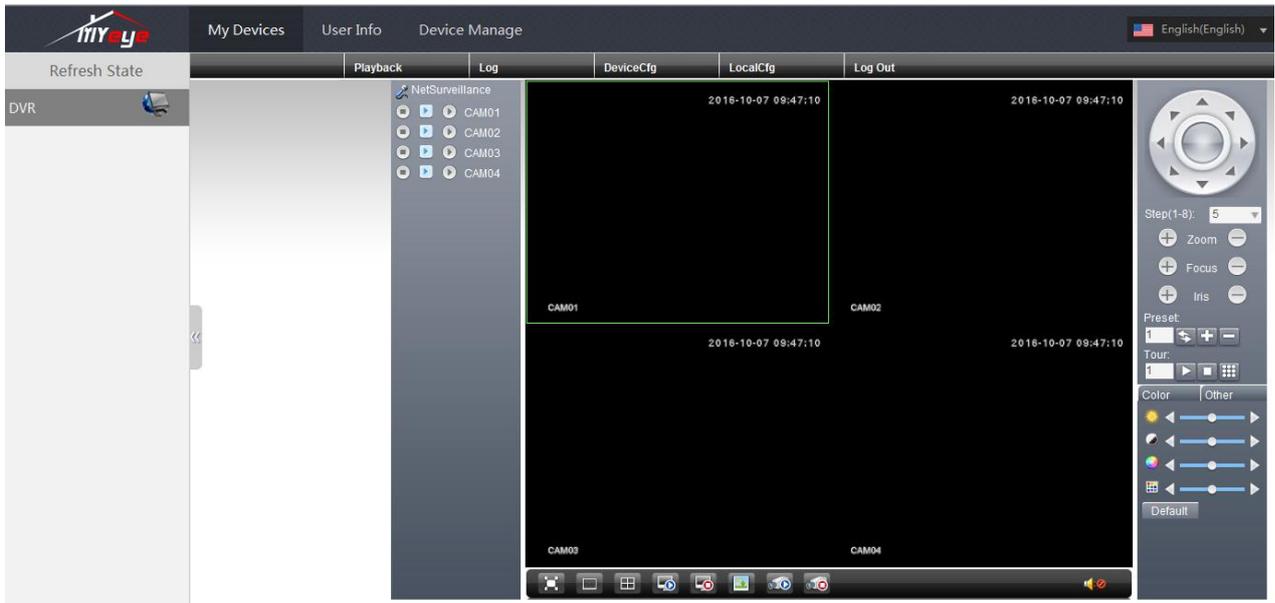
Remember
 [Forget Password?](#)

Login and Preview

Please Click "Enter Guide" if you visit first

Register





By device: Input your DVR's ID, you can get it at.

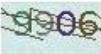
Main Menu-Info-Version-Serial No.

By User **By Device**

SerialNO.

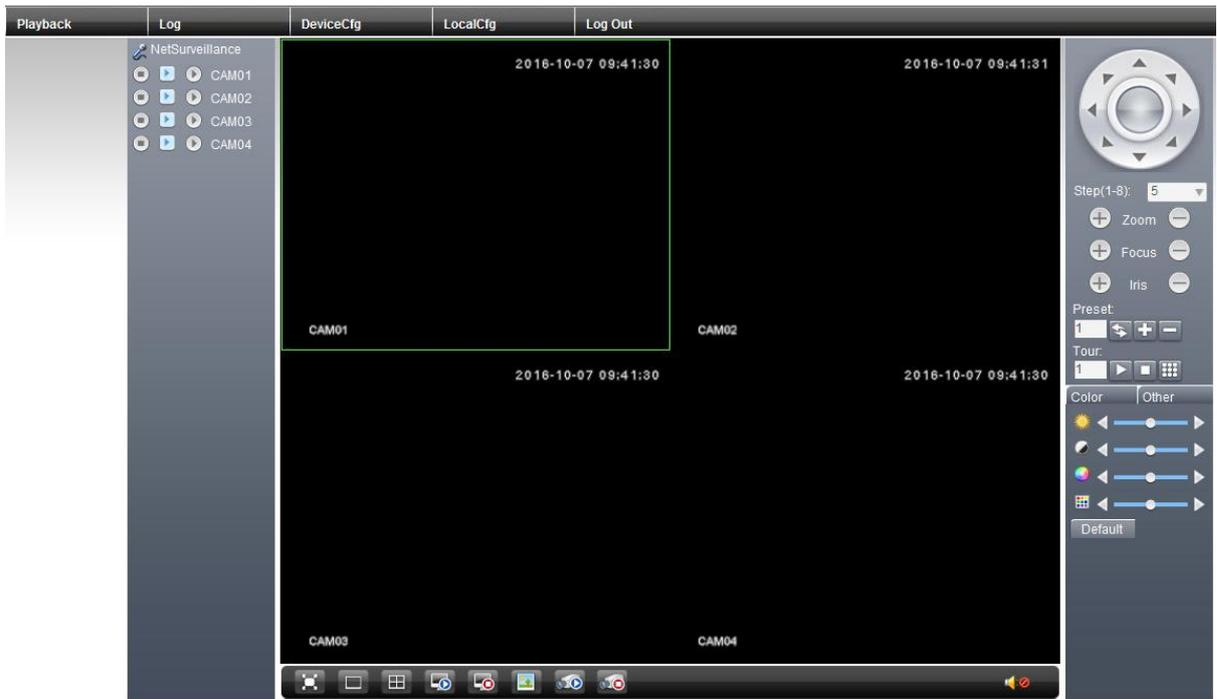
Username

Password



Please Click "Enter Guide" if you visit first





6 Mobile Phone Connection

Download APP “XMEYE” in APPLE APP store and Google play store, or try to scan the **QR CODE** in DVR guide to download.



iPhone: Scan the QR code to download the app for iPhone.

Android: Scan the QR code to download the app for android phones.

SN: The serial number of the DVR. After install the app, scan the code to log in.

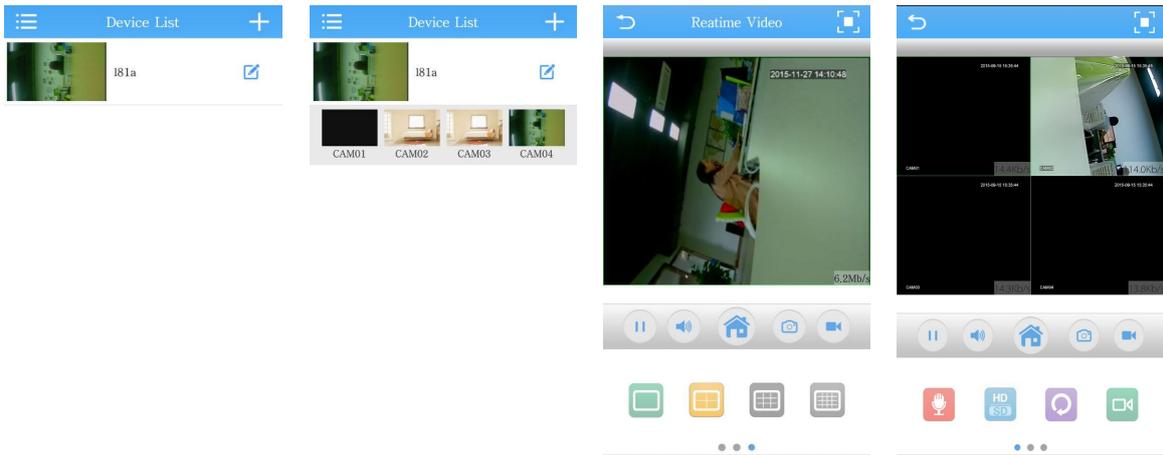
Here in the example, it is via Android phone.

After finish the installation, click “Local login”, click plus icon at the top right and give a name of system, input serial number manually or scan by the QR code. If you changed default password, click advanced and input new password.

You can also click register user to use your email account to register an account for app and use that account to use cloud login.



Click system on device list and select one camera to view. If you want to view more cameras in one screen, click grid box at the bottom.



7 FAQ

1. The DVR can't boot up normally.

Possible reasons are as followed:

- 1) The power supply is not correct.
- 2) Switch power supply line is not in good connection.
- 3) The program updating is wrong.
- 4) The hard disk is damaged or the hard disk lines are broken.
- 5) The front panel is damaged.
- 6) The main board of the DVR is damaged.

2. The DVR reboots automatically or stops working after boot up a few minutes.

Possible reasons are as followed:

- 1) The input voltage is not stable or too low.
- 2) The hard disk is damaged or the hard disk lines are broken.
- 3) The power of the switch power supply is low.
- 4) Frontal video signal is not stable.
- 5) Bad heat radiator or too much dust or bad running circumstance for the DVR.
- 6) The hardware of the DVR is damaged.

3. System can't detect hard disk.

Possible reasons are as followed:

- 1) The hard disk power supply line is not connected.
- 2) The cables of the hard disk are damaged.
- 3) The hard disk is damaged.
- 4) The SATA port of main board is damaged.

4. There are no video outputs in single channel, multiple channels and all channels.

Possible reasons are as followed:

- 1) The program is not matched. Please update the program.
- 2) The image brightness is all 0. Please restore the default setup.
- 3) There is no video input signal or the signal is too weak.
- 4) The channel protection or the screen protection is set.

5) The hardware of the DVR is damaged.

5. Real-time image problems such as the image color or the brightness distortion.

Possible reasons are as followed:

1) When using the BNC output, the option between the N mode or PAL mode is wrong and the image becomes black and white.

2) The DVR is not matched the monitor impedance.

3) The video transmission distance is too far or the loss of the video transmission line is too large.

4) The color and brightness setting of the DVR is wrong.

6. I can't find the video files in local playback mode.

Possible reasons are as followed:

1) The data line of the hard disk is damaged.

2) The hard disk is damaged.

3) Update the different program with the origin program files.

4) The video files to look up are covered.

5) The recording is not on.

7. The local video is not clear.

Possible reasons are as followed:

1)The image quality is too bad.

2)The reading program is wrong. Reboot up the DVR.

3)The data line of the hard disk is damaged.

4)The hard disk is damaged.

5)The hardware of the DVR is damaged.

8. There is no audio signal in the surveillance window.

Possible reasons are as followed:

1) It is not an active tone arm.

2) It is not an active sound box.

3) The audio lines are damaged.

4) The hardware of the DVR is damaged.

9. There is audio signal in the surveillance window but no audio signal in the playback state.

Possible reasons are as followed:

- 1) Setting issues: the audio option is not chosen.
- 2) The according channel is not connected with the video.

10. The time is wrong.

Possible reasons are as followed:

- 1) Setting is wrong..
- 2) The battery is in bad connection or the voltage is too low.
- 3) The oscillation is damaged.

11. The DVR can't control the PTZ.

Possible reasons are as followed:

- 1) There is something wrong with the frontal PTZ.
- 2) The setting, connection or the installation of the PTZ decoder is not correct.
- 3) The connections are not correct.
- 4) The PTZ setting of the DVR is not correct.
- 5) The protocols of the PTZ decoder and the DVR are not matched.
- 6) The address of the PTZ decoder and the DVR are not matched.
- 7) When multiple decoders are connected, the far port of the PTZ decoder line A(B) must connect a 120Ω resistance to reduce the reflection otherwise the PTZ control is not stable.
- 8) The distance is too far.

12. The motion detect is not working,

Possible reasons are as followed:

- 1) The time range set is not correct.
- 2) The motion detect area set is not correct.
- 3) The sensitivity is too low.
- 4) Limited by some hardware edition.

13. I can't login via web or CMS.

Possible reasons are as followed:

- 1) The system is windows 98 or win me. We recommend updating to windows 2000sp4 or higher Version or installing the software for low edition.
- 2) ActiveX is hold back.
- 3) The version is not exceeded dx8.1. Update the display card driver.

- 4) Network connection failure.
- 5) Network setting issues.
- 6) Invalid password or user name.
- 7) The CMS is not matched the DVR program version.

14. The image is not clear or there is no image in network preview state or video file playback state.

Possible reasons are as followed:

- 1) Network is not stable.
- 2) The user machine is resource limited.
- 3) Choose the play-in-team mode in the network setup of DVR.
- 4) The region shelter or channel protection is set.
- 5) The user has no surveillance purview.
- 6) The real-time image of the hard disk recording machine itself is not clear.

15. Network connection is not stable.

Possible reasons are as followed:

- 1) Network is not stable.
- 2) IP address is conflicted.
- 3) MAC address is conflicted.
- 4) The net card of the DVR is bad.

16. There is something wrong with the USB backup or writing a CD.

Possible reasons are as followed:

- 1) The rewritable machine and the hard disk are shared the same data lines.
- 2) The data is too much. Please stop recording and backup.
- 3) The data exceeds the backup storage.
- 4) The backup equipment is not compatible.
- 5) The backup equipment is damaged.

17. The remote controller is not working,

Possible reasons are as followed:

- 1) The remote control address is not correct.
- 2) The remote control distance is too far or the angle is too large.

3) The battery is used up.

4) The remote controller or the front panel of the recording machine is damaged.

18. The storage time is not enough.

Possible reasons are as followed:

1) Front video quality is bad. The lens is too dirty. The video is in backlighting installation.

2) The hard disk capability is not enough.

3) The hard disk is damaged.

19. The downloading files can't play.

Possible reasons are as followed:

1) There is no media player.

2) There is no DX8.1 software or higher edition.

3) There is no DivX503Bundle.exe file to play AVI video files.

4) The DivX503Bundle.exe and ffdshow-2004 1012 .exe files must be installed in the windows xp system.

5) output circuit easily.

6) Do not turn off the switch directly. Please use the turn-off function in the menu or press the turn-off button in the panel (3 seconds or longer) to protect the hard disk.

7) Please keep the DVR away from heat resource.

8) Please keep the DVR ventilated for better heat radiator.