

User's Installation and Operation Manual

Important Safeguards and Warnings

Do not place heavy objects on the DVR.

Do not let any solid or liquid fall into or infiltrate the DVR.

Please brush printed circuit boards, connectors, fans, machine box and so on regularly. Before cleaning the dust, please switch off the power and unplug it.

Do not disassemble or repair the DVR by yourself. Do not replace the components by yourself.

Environment

Please place and use the DVR between 0°C and 40°C. Avoid direct sunlight. Stay away from heat sources.

Do not install the DVR in a damp environment.

Do not use the DVR in smoky or dusty environment.

Avoid collision or dropping the DVR.

Please insure the DVR is installed in a level, stable workplace.

Please install in ventilated place. Keep the vents clean and free from dust.

Use within the rating input and output scope.

1 Production Introduction

1.1 Product overview

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

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.

The DVR can be applied in banks, telecommunications, electric power systems, judicial systems, transportation, intelligent housing, factories, storehouses, water conservancy and so on.

1.2 Main functions

Real-time surveillance

Analog interface, VGA and HDMI interfaces, 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 of the storage device.

Special storage format which insures the data's safety and integrity.

Compression

Real-time compression by individual hard disk which insures the audio and video signal is stable and synchronized.

Backup

Through USB interface such as USB drive, removable hard disk and through network download.

Playback

Individual channel playback as well as synchronous playback.

Network operation

Real-time surveillance, PTZ control, playback and DVR management.

Alarm linkage

Alarm activated video recording, tour, message, buzzer, e-mail, FTP.

Communication interface

RS485 interface which fulfills the PTZ control.

RS232 interface which can extend keyboard connection for system maintenance and upgrade, and matrix control and so on using standard Ethernet network interface which fulfills the telecommuting function.

Intelligent operations

Mouse action function.

Fast copy and paste operation for using the same settings.

2 Open-package check and cable connections

2.1 Open-package check

When you receive the DVR, please check that all items and accessories are present.

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 remove the plastic protective materials. Check whether there is any visible damage to the DVR itself.

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

2.2 Front panel and rear panel

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

The label in the rear panel is very important for service. Please protect it carefully. When you contact us for service, please provide the product type and serial number on the label.

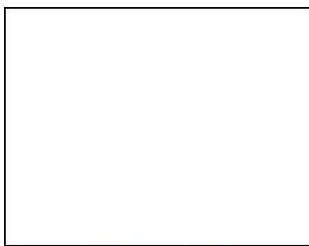
2.3 Check

After opening the cover, you should check the board for obvious damage, also please check the front panel data cable, power cord and motherboard's connections.

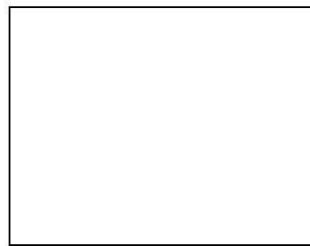
2.4 Hard disk installation

For the first use, please install the hard disk, this machine can install one hard disk.

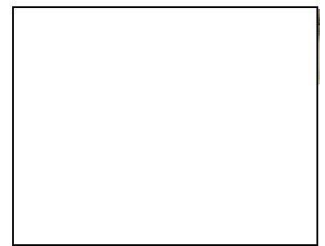
Before installing or replacing the hard disk, the DVR must be turned off.



①disassemble the screw hard disk



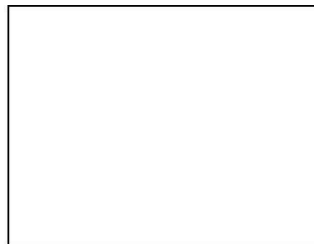
②disassemble the cover



③fix the screw of



④fix the screw of hard disk wire



⑤connect the data wire



⑥connect the power



⑦cover the machine



⑧fix the cover

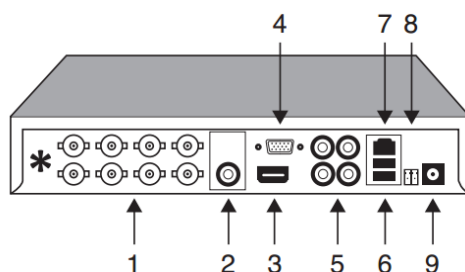
2.5 Shelf installation

This product chassis specification is standard 1u, so it can be installed in the standard shelf. Installation steps and attention items:

1. Make sure the temperature in the room is lower than 35°C (95°F).
2. Keep the equipment 15cm (6 inches) space around the DVR for air circulation.
3. When installing multiple components, please take preventive measures to avoid power socket overload.

2.6 Understanding the Rear Panel

Note: The rear panel descriptions are only for reference; please regard the actual product as the truth.



Picture 2.1

Item	Name	Description
1	BNC Video Input	Connect to analog camera.
2	Audio Output	Connect to sound box and other audio output equipment.
3	HDMI Output	Connect to HDMI monitor.
4	VGA Output	Connect to VGA monitor.
5	Audio Input	Connect to pickup and other audio collecting equipment.
6	USB Ports	Connect to USB mouse, USB disk, mobile HDD, etc.
7	Network Port	Network connector.
8	RS485	Connect to PTZ, keyboard, etc.
9	DC 12V	Power input.

2.7 Audio and video input and output connections

2.7.1 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 backlighting and low illumination or adopts the better backlighting 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 equipments 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.

2.7.2 Video output connections and options

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

When replace the monitor by the computer display, there are some issues to notice

- 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.

TV is not a credible replacement as a video output. It demands reducing the use time and control the power supply and the interference introduced by the nearby equipments strictly. The creepage of low quality TV can lead to the damage of other equipments.

2.7.3 Audio signal input

Audio port is BNC 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.

2.7.4 Audio signal output

Commonly, the output parameter of DVR audio signal is greater than 200mv 1K Ω (BNC) which can connect low impedance earphone, active sound box or other audio output equipment through a power amplifier. If the sound box and the tone arm cannot 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.

2.7.5 Alarm input and output connections

Before connecting the device, please pay attention to follow situations:

***Note: T series have no alarm input/output functions.**

- A. Alarm input is grounding alarm input.
- B. Alarm input demand is grounding voltage signal.
- C. When the alarm is connected with two DVRs or connected with DVR and other equipments, it should be isolated by relay.

2.7.6 Alarm output

Alarm output cannot be connected with high-power load (no more than 1A). When forming the output loop it must prevent high current from relay damage. Use the contact isolator when there is a high-power load.

2.7.7 Alarm input port specification

The grounding and the com port of the alarm sensor are parallel (The alarm sensor is on external power supply).

The grounding of the alarm and the DVR should be shared.

The NC port of the alarm sensor must be connected with the DVR alarm input port.

The grounding of the power supply and the alarm sensor must be shared when used in external power supply.

2.7.8 Alarm output port specification

There is external power supply when using the external alarm equipment.

Please refer to the relay relevant parameters to avoid the overload that damages main machine.

2.7.9 Alarm output port relay parameters

Type: JRC-27F		
Interface material	Silver	
Rating (resistance load)	Rating switch capacity	30VDC 2A, 125VAC 1A
	Maximal switch power	125VA 160W
	Maximal switch voltage	250VAC, 220VDC
	Maximal switch current	1A
Isolation	Homo-polarity interface	1000VAC 1minute
	Inhomo-polarity	1000VAC 1 minute
	Interface and winding	1000VAC 1 minute
Surge voltage	Homo-polarity interface	1500VAC (10×160us)
Turn-on time	3ms max	
Turn-off time	3ms max	
longevity	Mechanical	50×106 MIN (3Hz)
	Electric	200×103 MIN (0.5Hz)
Environment	-40~+70°C	

3. PTZ connections

- A. The grounding of the PTZ and DVR must be shared otherwise the common-mode voltage will lead to PTZ control failure. The shielded twisted pair style is recommended.
- B. Avoid the introduction of high voltage. Take precaution from lightning strikes.
- C. In the outlying end connect 120Ω resistance paralleled to reduce the inflection and insure the signal quality.
- D. The RS485 AB lines of the DVR cannot connect with other RS485 output equipment paralleled.

- E. The voltage between the AB lines of the decoder must be less than 5V.
- F. Bad grounding can lead to the burnout of the chip.

3.1 PTZ RS485 connections

1. Connect the RS485 line A of the speed dome with the DVR RS485 line A interface.
2. Connect the RS485 line B of the speed dome with the DVR RS485 line B interface.

4 Basic operation

Note: buttons in gray indicates nonsupport or disabled feature.

4.1 Turn on

Plug in the power supply into an empty electrical outlet. The DVR will turn on automatically. The power supply LED indicator light shining indicates the adaptor is supplying power. After applying power the DVR you will hear a beep. The default setting of displaying camera video is multiple-window layout. Time-lapse video recording (24 hour) schedule is enabled by default. Then the video recording indicator icon of corresponding channel is on indicates the DVR is working and recording normally.

Note:

1. Make sure that the input voltage corresponds with the switch of the DVR power supply.
2. Power supply demands: 110VAC±10%@60Hz.

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

4.2 Turn off

There are two methods to turn off the DVR:

1. Entering [main menu] and choosing [turn off] in the [turn off the system] options.
2. Unplugging the power supply.

The DVR, while plugged into a power outlet, will restart after power failure automatically. If the DVR is shut down abnormally, it can automatically backup video and resume previous working status after power failure.

4.3 System Login

When the DVR boots up, the user must login. **Admin** is the default super user account. The **default password is "123456"** and can be changed after logging in. Changing the default password is highly recommended and use a strong password that cannot be easily guessed.



System Login





Password protection: If the password is entered wrong three times in a row, the alarm will start. If the password is entered wrong five times, the account will be locked. (Through reboot or after half an hour, the account will be unlocked automatically).

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

4.4 Preview

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

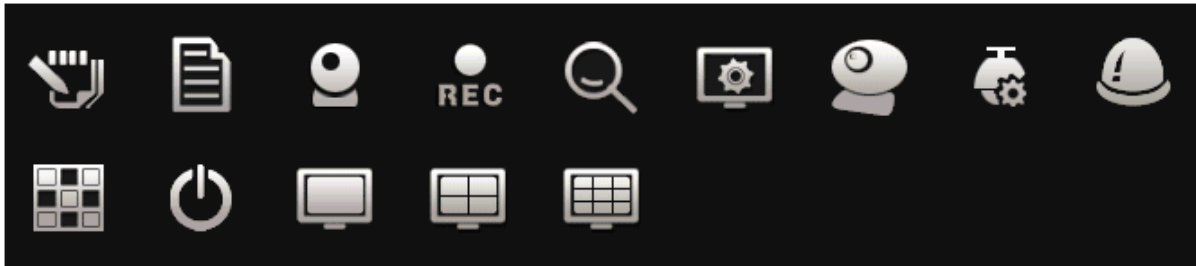
The system date, time and channel name are shown in each viewing window. The surveillance video and the alarm status are shown in each window.

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

Preview icon

4.5 Menu bar

The menu bar includes: **Main Menu, Guide, Record Mode, PlayBack, Output Adjust, PTZ Control, XVI Control, XVI&AHD, Color Setting, Logout and channel layout buttons.**



Menu Bar

4.6 Main menu

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



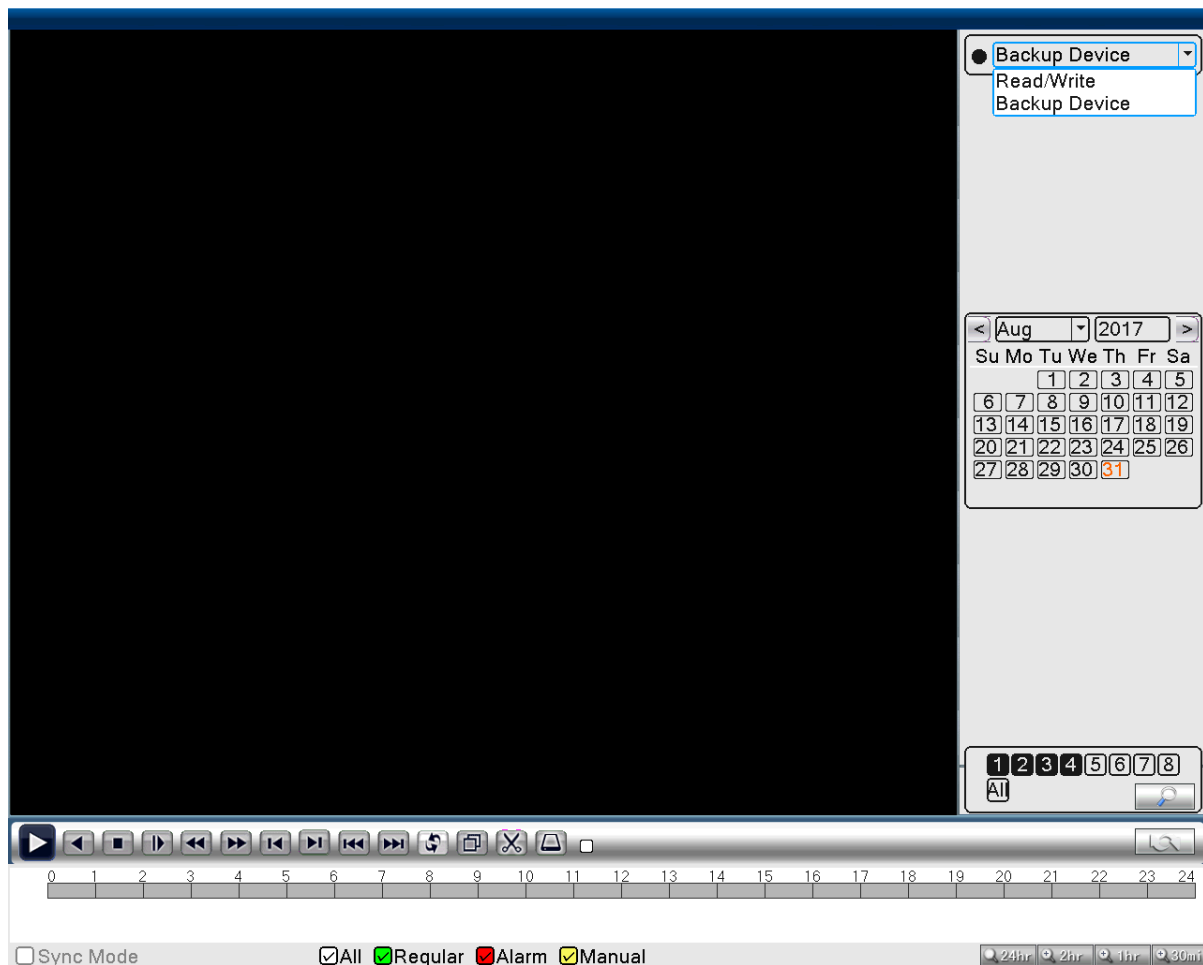
Main Menu

4.7 Playback

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

1. In the main menu toolbar.
2. [Main menu]>[PlayBack]

Note: The hard disk that saves the video files must be set as read-write.














Video Playback

【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		

Playback control key

Note: to play frame by frame, the playback should be paused first.

【Operation tips】 Hovering the mouse cursor over an icon will show the function of the key.

Special functions:

Accurate playback: Input time (h/m/s) in the time column and then click play  button.

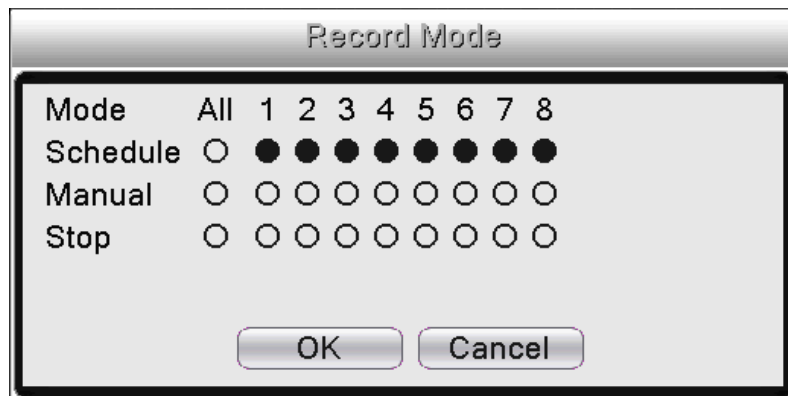
Local digital zoom: When the system is in single-window (full-screen) playback mode, you can drag your mouse in the screen to select a section to zoom in on. You can right click mouse to exit digital zoom.

Note: When current resolution of the channel is over the maximum supported resolution, the channel will show a Red “X”.

4.8 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.



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.

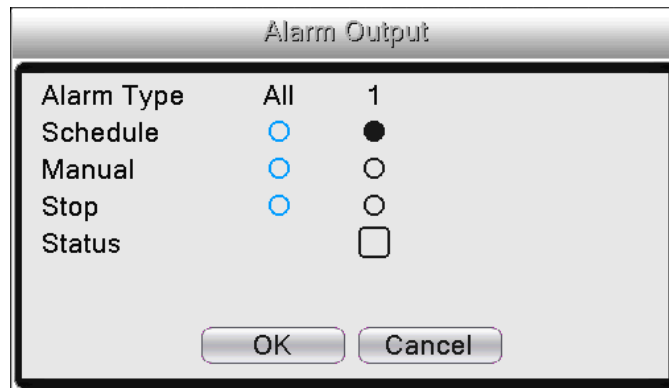
【Stop】 Click the stop button and the according channel stops recording no matter the channel in any state.

4.9 Alarm output

Please check current channel status: “○” 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.

*T series no alarm output



Alarm output

【Configuration】 Alarm is on according to the configuration.

【Manual】 Click the all button to set the configuration to all alarm outputs.

【Stop】 Click the stop button to stop the alarming no matter the alarm state.

4.10 PTZ control



Operation interface is as followed. The functions include: PTZ direction control, step, zoom, focus, iris, setup operation, patrol between spots, trail patrol, boundary scan, assistant switch, light switch, level rotation and so on.



1. A(B)line connects with DVR A(B)line.
2. Click **[Main Menu] > [System Configuration] > [PTZ Setup]** to set the PTZ parameters.
3. The PTZ functions are decided by the PTZ protocols.





PTZ Config

【Speed】 Set the PTZ rotation speed. Default range: 1 ~ 8.

【Zoom】 Click  /  button to adjust the zoom 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.

【Direction control】 Control the PTZ rotation. 8 directions control is supported by the user interface (4 directions with Front panel is supported).

【High speed PTZ】 In Full-screen mode, press and hold mouse left click to control PTZ moving the mouse. Use the mouse wheel to adjust the zoom of the camera.

【Set】 Enter the function operation menu.

【Page switch】 Switch between different pages.

Special functions:

1. Preset

Set a location for the preset, calls the preset points, PTZ automatically turns to the setting

position

1) Preset option

Set a location for the preset, procedure is as follows:

Step1: in Picture 3.10, click the Direction button will turn into preset position , click the Settings button to enter Picture 3.11.

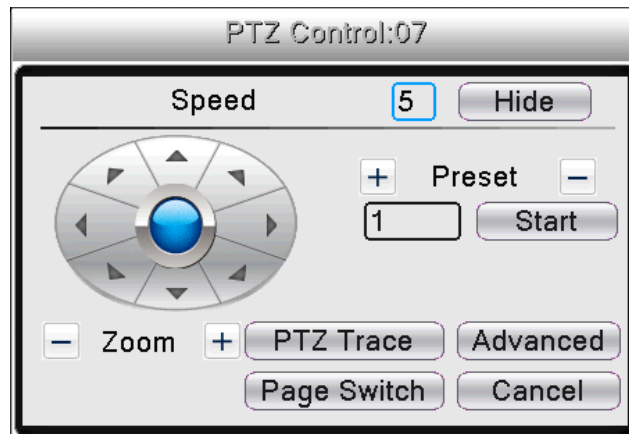
Step 2: click the Preset button , then write the preset points in the input blank,

Step 3: click Settings button, return the Picture 3.10 Complete setup, that is the preset points and preset position corresponds.

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

2) Preset Point Calls

In Picture, click Page Shift button, enter PTZ control interface as shown in Picture 3.12. In the input blank, write the preset points, then click Preset button, PTZ turn to the corresponding preset point.



PTZ Control

2. Cruise between Points

Multiple preset points connected cruise lines, call cruise between points, the PTZ run around on the line.

1) Cruise Between Points Settings

Cruise lines is connected by multiple preset points, setting procedure is as follows:

Step1: In Picture 3.10, the Direction key will turn PTZ to designated location.

Step 2: Click Cruise buttons, the write proper value into the Cruise Line and Preset Points. Then click Add Preset Points button, complete setting (also can add and delete cruise line which has been set up)

Step 3: repeat step1 and step2 , until set out all the preset designated cruise 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 cruise line, click Remove Cruise Lines button, then remove the cruise lines set.

2) The Calling of Cruise between Points

In Picture, click Page Shift button, enter PTZ control menu as shown in Picture 4.9. Please input the number of cruise in the value blank, then click Cruise between Points button, PTZ begins to work on the cruise line. Click Stop button to stop cruise.

3. Scan

PTZ also can work on the preset scan line repeatedly.

1) Scan setup

Setting steps:

Step1: In Picture 3.10, click Setup button, enter Picture 4.11.

Step2: Click Scan button, then input proper value in the scan value.

Step3: Click Start button, enter Picture3.10, here you can set the following items:

Zoom, Focus, Aperture, Direction and so on. Click Setup button to go back Picture 3.14

Step4: Click End button to complete setup. Click the right button of the mouse to exit.

2) Calling a Scan

In Picture 3.10, click Page Shift button, then enter PTZ control menu as shown in Picture 3.12.

Please input the number of scan in the value blank, then click Scan button, PTZ begins to work on the scan line. Click Stop button to stop.

4. Boundary Scan

In a horizontal line, set up a line, call scan, PTZ repeat operation according to the route

1) Boundary Scan setup

Set a period of horizontal curve for PTZ search path, the steps are as follows:

Step1: In Picture 3.10, click Direction button to turn the PTZ to preset direction, then click Setup button enter Picture 3.15, select the left boundary, return to Picture 3.10;

Step2: Please click direction arrows to adjust PTZ direction, click Setup button enter Picture3.15, then select the right boundary, return to Picture 3.10;

Step3: Complete setup, that is the position of left and right boundary

2) Boundary Scan Calls

In Picture, click Page Shift button, then enter PTZ control menu as shown in Picture 3.12.

Please input the number of scan in the value blank, then click Scan button, PTZ begins to work on the scan line. Click Stop button to stop.

5. Horizontal Rotating

Click Horizontally Rotating button, PTZ begins to rotate horizontally (relative to the original position of the camera). Click the Stop button to stop.

6. Rotate

Click on horizontal Rotating button, PTZ turn around.

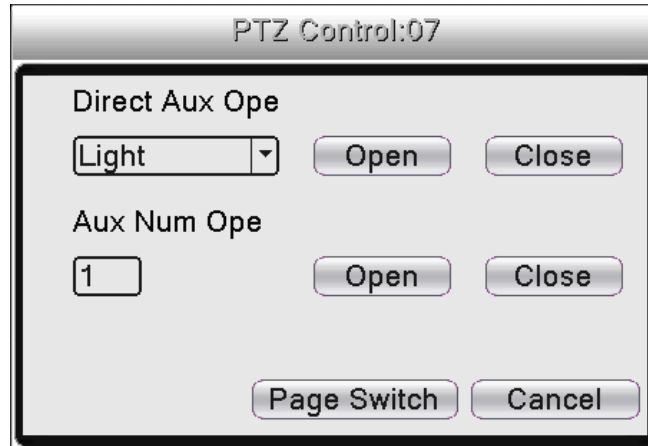
7. Reset

All the data clears to 0.

8. Page Shift

In Picture 3.12, click Page Shift button into Picture3.16, setting auxiliary function.

Auxiliary number corresponding to auxiliary switch on the decoder.



Auxiliary Function Control

【 Intuitive Auxiliary Operation 】 Choose auxiliary equipment, select Open or Close button, switch control.

【 Auxiliary Number 】 The operation of corresponding auxiliary switch according to PTZ agreement.

【 Page Switch 】 click Page Switch button, the menu itself can be controlled by the menu control buttons.

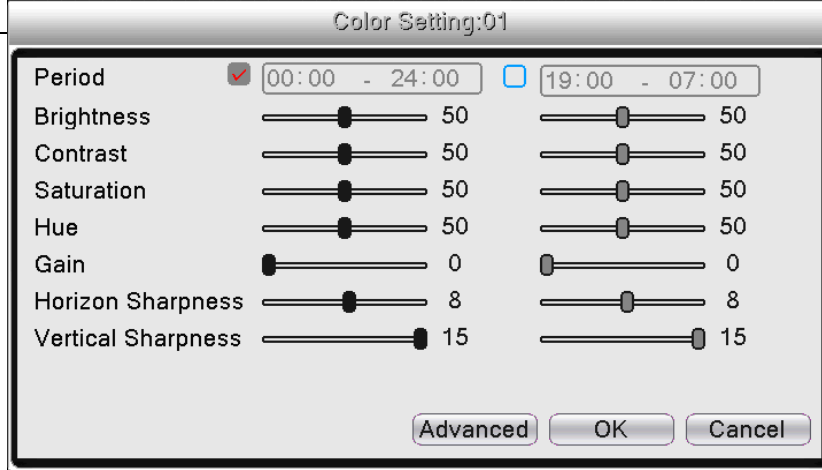
4.11 Color setting

Set the image color parameters (current channel for single window display and cursor place for multi-window display). You can use the menu bar and enter the interface.

You can set different parameters at different time sections.

4.12 Adjust

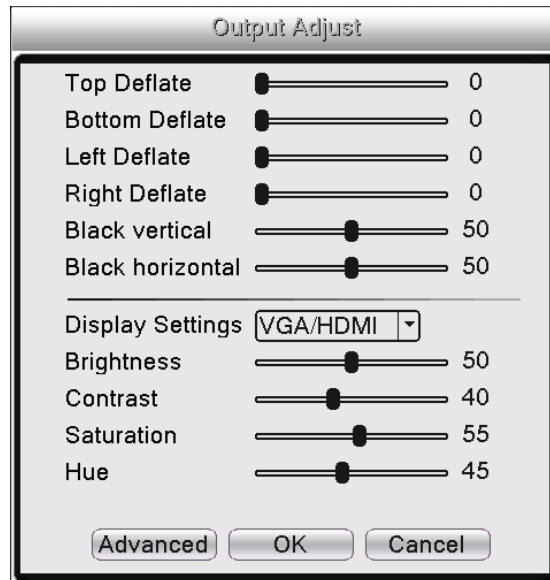
Color



Setting

Output

You can use the menu. Enter [Main menu]> [Management tools]> [Output adjust].



Output Adjust

4.13 Logout

Logout, shut down the system or reboot. Logout is located in the menu bar with the live video.



Logout/Shutdown/Reboot the system

【logout】 Quit the menu. Offer password next entrance.

【shut down】 Quit the system. Turn off the power supply.

【reboot】 Quit the system. Reboot up the system.

4.14 Window switch

View live video in single, four, eight, nine, or sixteen windows. Available layout vary according to DVR model.

4.15 Spot

Only certain models support this function. The user can switch to Spot output image segmentation mode through the menu after connecting to the BNC interface to a BNC monitor. Spot operation only outputs the device's live video, **no GUI interface**.

5 Main menu

5.1 Main menu navigation

Main menu	Sub menu	Function
Record	Config	Set the recording configuration, recording type, recording time section
	PlayBack	Set recording search, recording play, video file storage
	Storage	Set screen capture period, type ,etc. Note: T series and 6000 series have no this function
	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 Note: T series have no this function
	Alarm Output	Set alarm mode: configuration, manual, shut down Note: T series have no this function
	Exception Handling	No HDD, HDD error, HDD capacity not enough, network cut, IP Conflict, linkage parameters, screen hint or buzz.



	Intelligent analysis	Set algorithm rule: trajectory display、sensitivity、minimum pixel、alert mode, and setting linkage parameters:period、alarm output、the screen prompt、record、PTZ、tour、buzzer、EMAIL、FTP upload. Note: 6000 series support this function
System configuration	General configuration	Set system time, data format, language, hard disk full time operation, machine number, video format, output mode, summertime, stay time
	Encode configuration	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. Note : only Hybrid mode and full analog mode have encode configuration.
	Network configuration	Set basic network parameters, DHCP and DNS parameters, network high speed download
	NetService	PPPOE、NTP、Email、IP purview、DDNS parameter
	GUI display	Set channel title, preview hint icon state, transparency, cover area, time title, channel title fold. Note : only analog channel can set channel name, region cover , time title, channel title fold.
	PTZ configuration	Set channel, PTZ protocol, address, baud rate, date bit, stop bit, check Note: Hybrid mode shows PTZ configuration, T series have no this function.
	RS485 Device	Set serial port function, baud rate, date bit, stop bit, check Note: Full digital mode shows : RS485 Device
	Serial port Configuration (RS232)	Set serial port function, baud rate, date bit, stop bit, check Note: T series have no this function
	Tour	Set patrol mode and interval time
	Spot	Set Spot tour mode and time interval Note: only partial products of 6000 series support.

	Digital	Set channel mode, check channel status and configure the digital channel, etc. Note: only HVR and 6000 series support
Management tools	Hard disk management	Set appointed hard disk as read-write disc, read-only disc or redundant disc, clear data, resume date and so on
	User management	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 Note: only analog channel have black margin vertical & horizontal
	Automatic maintenance	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).
System information	Hard disk information	Display hard disk capability and recording time
	BPS	Display code stream information
	Log information	Clear all log information according to the log video and time
	Edition information	Display edition information
Shut down		Logout, shut down or reboot

5.2 Record

Operations related to recording includes: **Record, Playback, Backup, Screen shot**
(only available on certain models)

5.2.1 Record Configuration

The system is set to 24 hour recording by default. You can enter [main menu]> [recording function]> [recording setup] to setup different parameters.

Note: There must at least one read-write hard disk installed and formatted.

Channel	1	Redundancy	<input type="checkbox"/>
Length	60 min	PreRec	5 Sec.
Mode	<input checked="" type="radio"/> Schedule	<input type="radio"/> Manual	<input type="radio"/> Stop
Week	All	Regular	Detect
Period 1	00:00 - 24:00	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Period 2	00:00 - 00:00	<input type="checkbox"/>	<input type="checkbox"/>
Period 3	00:00 - 00:00	<input type="checkbox"/>	<input type="checkbox"/>
Period 4	00:00 - 00:00	<input type="checkbox"/>	<input type="checkbox"/>

Buttons: Advanced, OK, Cancel, Apply

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 (only available on certain models).

【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 stop 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, detection 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”.

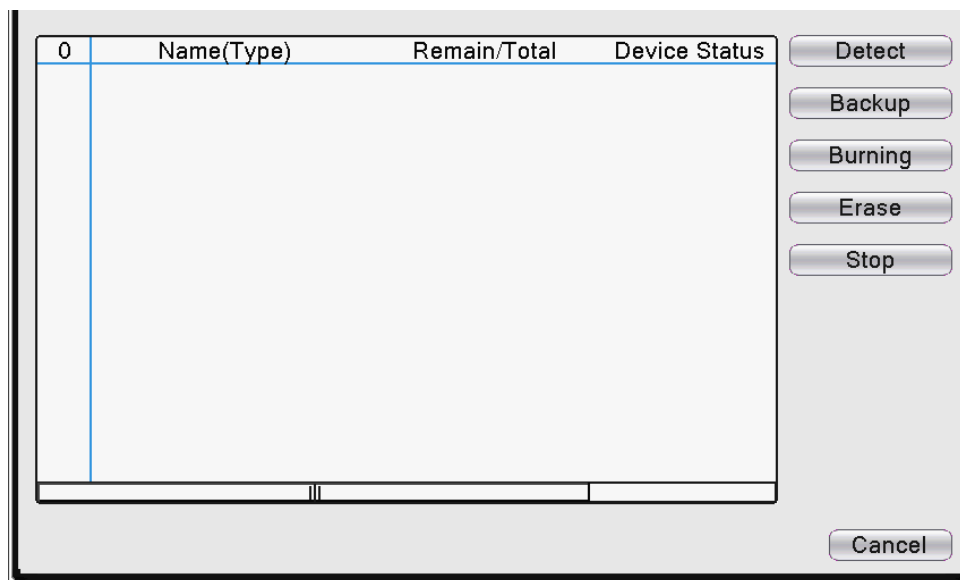
5.3 Playback

No configurable "settings". Selecting PlayBack will load the playback screen. Refer to chapter 4.7 for playback operation.

5.4 Backup

You can make a backup of the video files to an external storage through USB.

Note: The storage must be connected before backup is started.



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.

Remove: Clear the file information.

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

Backup format: configurate the backup file format, according to require, can choose

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 to carry out other functions.

【Burning】 The file will be written.

【Erase】 Choose the file to delete and click erase to delete the file.

【Stop】 Stop the backup.

5.5 Snapshot Storage

Note: Only certain models have this function.

Setup snapshot parameters for different channels. By default its set for 24 hours continuous, please go to [Main Menu]>[Record]>[Snapshot Storage] to view or configure settings.

【Channel】 Select the related channel to set,click"all"to set all channels.

【Presnap】 Setup presnap picture quantity before recording,default is 5 pieces

【Record】 Set record status."Schedule","Manual"and"Stop".

Schedule: Set snapshot according to record type (regular, detect and alarm) and time period.

Manual: No matter what state the present channel is in, it will snapshot all related channels.

Stop: No matter what state the present channel is in, it will stop snapshot all related channels.

【Period】 Set normal record period, it only startup Snapshot Storage at set period.

【Type】 Three types: regular, detect and alarm.

Regular: snapshot at set period.

Detect: snapshot at set period when motion detect, video blind and video loss which are preset for snapshot enable.

Alarm: snapshot at set period when alarm in is activated.

5.6 Alarm Function

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

Note: available options will vary depending on model.

5.7 Motion Detect

When system detects a motion signal that reaches the set sensitivity, a motion detect alarm is triggered.

The screenshot shows the 'Alarm Set' window with the 'Motion Detect' tab selected. The configuration includes:

- Channel: 1 (dropdown)
- Enable: (checkbox)
- Sensitivity: Middle (dropdown)
- Region: Set (button)
- Period: Set (button)
- MD Interval: 2 (input) Sec.
- AlarmOut: 1 (input)
- OutDelay: 10 (input) Sec.
- Record Channel: 1, 2, 3, 4, 5, 6, 7, 8 (checkboxes)
- Tour: 1, 2, 3, 4, 5, 6, 7, 8 (checkboxes)
- PTZ Activation: Set (button)
- PostRec: 10 (input) Sec.
- Show Message: (checkbox)
- Send Email: (checkbox)
- Buzzer: (checkbox)
- Write Log: (checkbox)
- FTP upload: (checkbox)

Buttons at the bottom: Advanced, OK, Cancel, Apply.

Motion detect.

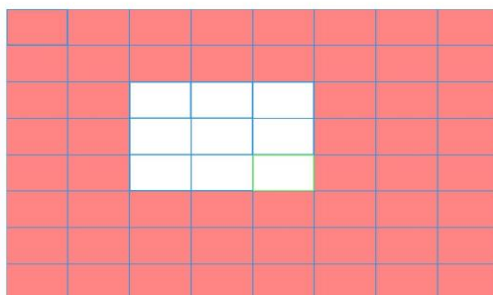
【Channel】 Choose the set motion detect channel.

【Enable】 "■" means that the motion detect function is enabled.

【Sensitivity】 Choose in the six options according to the sensitivity. .

【Region】 Click [Set] to enter the set area. Red blocks are monitored. White blocks are ignored.

Set the areas by dragging the mouse and drawing the area. All blocks are active by default.



Region

【Period】 Set the time period the motion detect settings are active. You can set daily or copy the day schedule to the entire week. Each day is divided into four time sections.

【Interval】 Only one alarm signal is turned on even if there are several motion detect signals within the set interval.

【Alarm output】 Start the external equipment of corresponding linkage alarm when the motion detect alarm is turned on.

【Delay】 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 channels possible). Record video of linked channels when the alarm is turned on.

【Tour】 ■ means that the selective channel is single window alternate patrol preview. The interval is set in the [Main Menu]>[System] > [Tour].

【PTZ Activation】 Set the PTZ activation when the alarm is turned on.

Note: Enter [PTZ control] to set preset points, cruise between points, etc.

【Delay】 When alarm is over, recording will last some seconds(10~300sec),then stop.

【Show message】 Display the alarm information dialog box on the local host computer screen.

【Send EMAIL】 ■ means sending an email to user when the alarm is turned on.

Note: Click the [NetService] button to configure email settings.

【FTP upload】 Video & picture of related channel will be uploaded to a FTP server (FTP server not provided).

Note: FTP upload need be set at [Netservice]

【Buzz】 When alarm happens, device will come out with buzz.

5.8 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.

5.9 Video Loss

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

Video loss

5.10 Alarm input

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

Alarm input

5.11 Alarm output

Refer to chapter 4.9.

5.12 Abnormal

When an abnormal event happens, the device will make a relative answer such as show message and buzzer.

Abnormal

【Event Type】 Select the abnormal event you want to inspect.

【Enable】 Select it to make enable the abnormal function.

【Show message】 Automatically cue dialog box on main screen on an abnormal event.

【Buzzer】 Device will sound the internal buzzer when event happens.

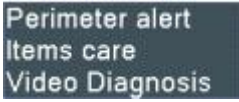
5.13 Intelligent analysis

***Note: only available on certain models.**


To analyze the video image, when system detects objects that meet pre-set algorithm rules and fit minimum image distance, will trigger video analysis alarm. **this function is enabled, then video blind is invalid.**

【Channel No.】 Choose channel to configure.

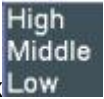
【Enable】 Enables the video analysis function on certain models.

【Algorithm rule】 Drop-down box  and choose the method of detection.

【Rule】 choose different algorithm rules, the related setting page is different.

- **Show traces:** When alarm triggers, there will be red box around moving objects.
- **Sensitivity:** There are 3 options in the drop-down box .
- **Minimum image distance:** Range between 0~30 %, the more flexible the less image distance.
- **Cordon:** Can set 3 prohibited directions: bidirectional prohibited, from top to bottom (from left to right), from bottom to top (from right to left), when the setting cordon is too slope, show with from left to right / from right to left, otherwise will be from top to bottom / from bottom to top, when the moving object meet preset cordon rules, the alarm will be triggered.
- **Warning area:** Set 3 kinds of prohibited directions: bidirectional prohibited, enter and leave, when the moving object meet preset warning area rules, alarm will be triggered.
- **Rules:** Click **setting**, enter rule setting page, right click mouse, choose add, use mouse to fix two or more point, and then connect them to form a line or a irregular region, after that a box of prohibited direction options will come out, choose one of them, right click mouse, click Yes, return to previous page, click Yes, alarm rules setting is finished.

Items care:

- **Show traces:** When this function is triggered, there will be read box shows around the moving object.
- **Sensitivity:** There are 3 options in the drop-down box .

- **Minimum image distance** range between 0~30 % , the more flexible the less image distance.
- **Alert way:** Three modes: Items stranded, Items stolen, Illegal parking.
 - **Items stranded:** objects appearing within warning area, and the size of object meet the rules set, alarm will be triggered.
 - **Items stolen:** object disappears from within warning area, and the size of object meet the rules of minimum image distance, alarm will be triggered.
 - **Illegal parking:** this method is similar with Items stranded.
- **Rules:** Click **setting**, enter the setting page of rule, right click mouse, choose add, use mouse to fix several points and then connect them to form a irregular region, right click mouse, click Yes, return to previous page, click Yes, alarm rule setting if finished.

Video diagnosis:



Sensitivity: There are 3 options in the drop-down box.

Detection type: There are 8 kinds of detection type: Brightness anomaly detection, Sharpness detection, Noise detection, Color cast detection, Screen freeze detection, Scene change detection, Anthropogenic interference and PTZ runaway detection. Choose one or more types if necessary. When video detects enabled type of detection, the alarm will be triggered.

The setting way of set / withdraw garrison time period and linkage parameter.

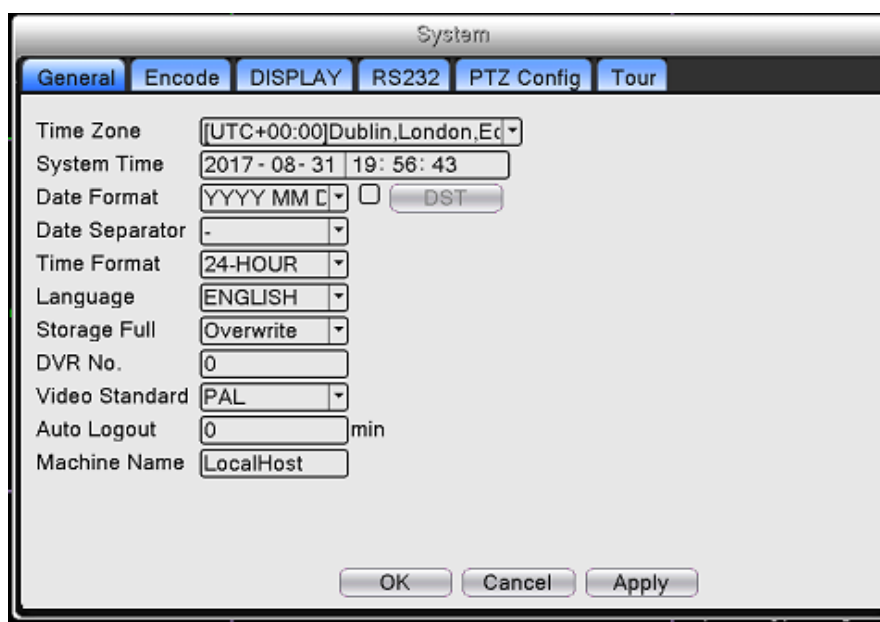
For example: using video analysis function **Cordon**, prohibited direction is bidirectional, when a moving object crosses the cordon line, an alarm is triggered, see below pic 5.16.



5.15 System setup

Set the system parameters such as **General, Encode, Network, Net service, GUI display, PTZ configure/RS485 device, RS232, Tour setup, Spot and Digital (available options vary depending on model).**

5.15.1 General



General setup

【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-hour or 12-hour.

【Language】 Supports 29 languages : **Arabic, Czech, English, Finnish, Greek, Indonesian, Italian, Japanese, Portuguese, Russian, Thai, T-Chinese, S-Chinese, Turkish, Brazilian, Bulgarian, Farsi, French, German, Hebrew, Hungarian, Polish, Romanian, Spanish, Swedish, Vietnamese**

【HDD 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.

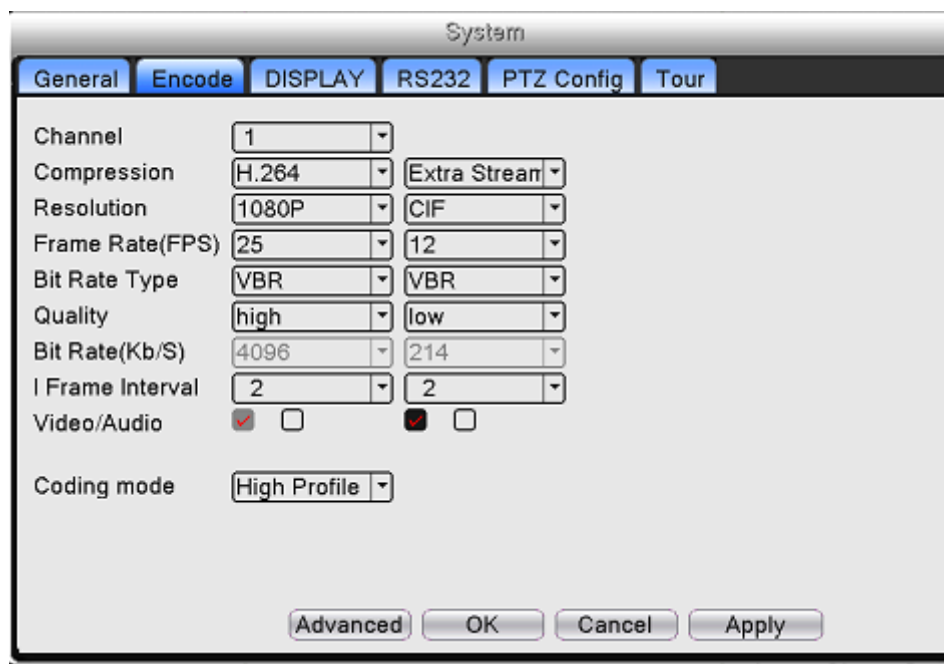
【Machine Name】 Can setting the device's name.

【DST】 Set the Daylight Saving Time.

5.15.2 Encode setup

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 for multi-channel playback simultaneously, Dial-up multi-channel real-time monitor under poor bandwidth, or mobile monitor and so on.



Encode setup
Independent channel code setting is possible.

【Channel】 Choose the channel number.

【Compression】 Standard H.264 main profile.

【Resolution】 Resolution type:1080P/720P/960H/D1/ HD1/CIF / QCIF.

【Frame Rate】 P:1 frame/s~25 frame/s; N: 1 frame/s~30 frame/s

【Bit Rate Type】 When you choose the variable code stream there are six image quality options. under the constant code stream, you can choose the code stream bit rate manually.

【Bit Rate】 Set the code stream value to modify the image quality. The larger code stream value the better image quality:

1080P(1024~8192kbps), 720P(1024~4096kbps), 960H(869~4096kbps), D1(512~2560kbps), HD1(384~2048kbps), CIF(64~1024kbps), QCIF(64~512kbps)

【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】 is 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.

5.16 Network setup

Net Card	Wire Netcard	<input checked="" type="checkbox"/> DHCP Enable
IP Address	192 . 168 . 19 . 105	
Subnet Mask	255 . 255 . 255 . 0	
Gateway	192 . 168 . 19 . 1	
Primary DNS	221 . 12 . 1 . 227	
Secondary DNS	192 . 168 . 19 . 1	
Media Port	34567	
HTTP Port	80	
HS Download	<input type="checkbox"/>	
Transfer Policy	Quality Prefe	

Network

【Net Card】 You can choose cable network card or wireless network card.

【DHCP Enable】 Obtain IP address automatically (not recommended).

【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.

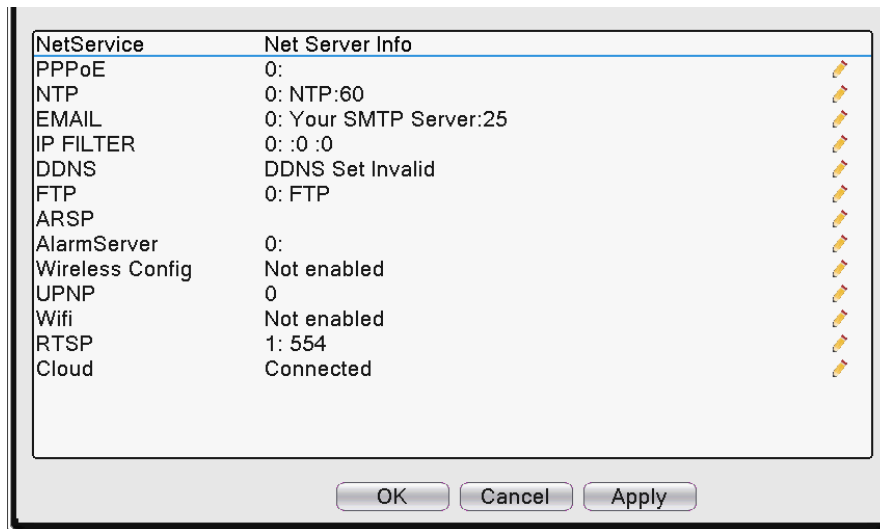
【HTTP port】 Default: 80.

【HS Download】

【Transfer Policy】 There are three options: 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.

5.16.1 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.



NetService

【PPPoE setup】

Enable: ■ means setting is enabled.

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 setup】

Enable: ■ means setting is enabled.

Host computer IP: Input the IP address installed NTP server.

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

Time zone: Choose a time zone.

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

【EMAIL setup】 Enter email information to allow the sending of email notification.

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

Port: Email server port number.

SSL: Decide whether using Secure Socket Layer protocol to login.

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: You can set as you wish.

【IP Filter setup】

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 cannot connect the DVR. The 64 IP addresses are supportive in the list.

You can delete the set IP address by \surd in the options.

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

【DDNS】

It is the abbreviation of Dynamic Domain Name Server.

Local 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.

Note: The DNS setup must be configured correctly in the network setup.

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

【Enable】 Click Enable, then all settings will be available.

【Server IP】 IP address for FTP server.

【Port】 Domain Port of FTP. Default is 21.

【User Name】 User name login for FTP server.

【Password】 FTP user account password.

【Anonymous】 Use anonymous login. FTP server *must* accept anonymous login to use this option.

【Max File Length】 Max length for upload files at every packed, default 128M.

【Dir Name】 The base directory for uploading files.

Note: The user account used must have authority to upload files to the server.

【ARSP】

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

[Type]: Choose "DNS"

[Enable]: means it is enabled.

[Sever IP]: IP address of DDNS server

[Port]: Port number 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.

[Refresh cycle]: Time interval between device and DDNS.

Note: Please set up server before using DDNS.

【Alarm center】

Reports alarm information to alarm server.

【Protocol type】 GENERAL.

【Enable】 To tick it means enable.

【Server IP】 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 (only available on certain models).

【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, get from dial

Note: some models don't support this function.

【Mobile Monitor Setup】

To view the device remotely, make a router mapping of this port to monitor and operate it.

【Enable】 Select it to enable remote mobile viewing.

【Port】 It's a port of mobile monitoring which you need to make a router mapping of if want to view it remotely.

【UPNP】 UPNP protocol enables auto port forwarding on router. This function must be supported by the router and enabled on the router to work.

【Enable】 Choose Enable to make sure all UPNP settings available

【HTTP】 Router will automatically distribute HTTP port for the device, when viewing in Internet Explorer it needs this port.

【TCP】 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 needs this port.

【WIFI】

DVR connect to wireless router via WIFI module, then to visit it through IP address, the precondition of using this function is to make sure the DVR have connected with WIFI modern.

【Search】 : Search all the available wireless device in current range.

【Enable】 : Enables setting.

【Auto obtain IP address】 : Device will auto obtain an IP.

【SSID】 : Wireless LAN name, auto match to the wireless device connected.

【Password】 : Wireless network password of router.

【IP address】 : To set the IP address of device, default is 192.168.1.12.

【Subnet mask】 : Set subnet mask of device, default is 255.255.255.0.

【Gateway】 : Set gateway of device, default is 192.168.1.1.

【RTSP】

To do surveillance via cross-browser (Safari, Firefox, Google chrome) with a RTSP plug-in or software such as VLC Player. **This function is only for video, it cannot control the device.**

【Enable】 : means enabled.

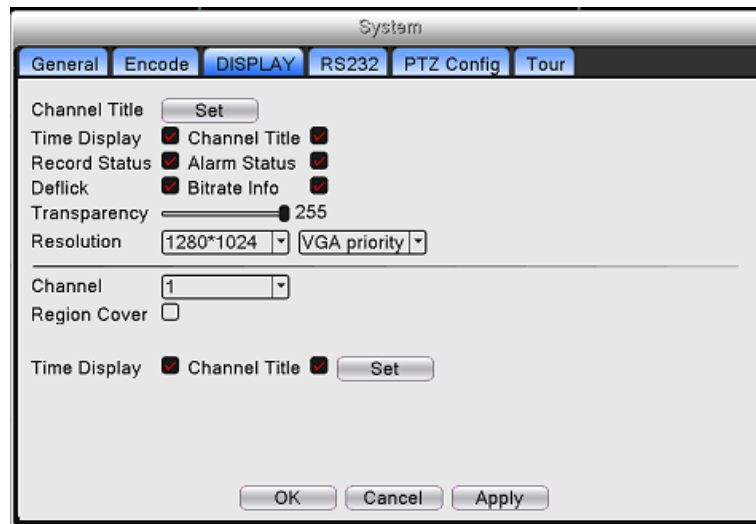
【Port】 : The default port is 554.

5.17 GUI 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.



Output mode

【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】 Display the system data and time in the surveillance window.

【Channel display】 Display the system channel number in the surveillance window.

【Record Status】 Display the system recording status in the surveillance window.

【Alarm Status】 Display the system alarm status in the surveillance window.

【Transparency】 Choose the background image transparency. The range is 128~255.

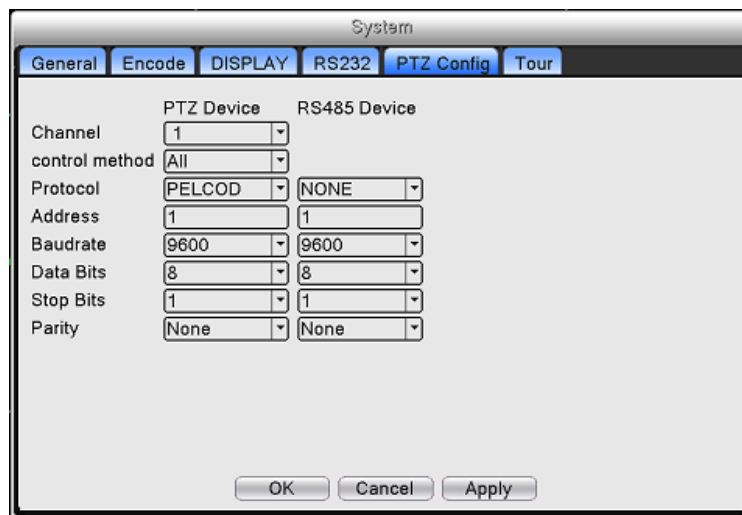
【Resolution】 Set display resolution.

【Channel】 Choose the set code output channel number.

【Region Cover】 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.

5.18 PTZ device /RS485 device



PTZ configure

【Channel】 Choose the dome camera input channel.

【Protocol】 Choose the corresponding dome protocol. (PELCO-D 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. Default: 115200.

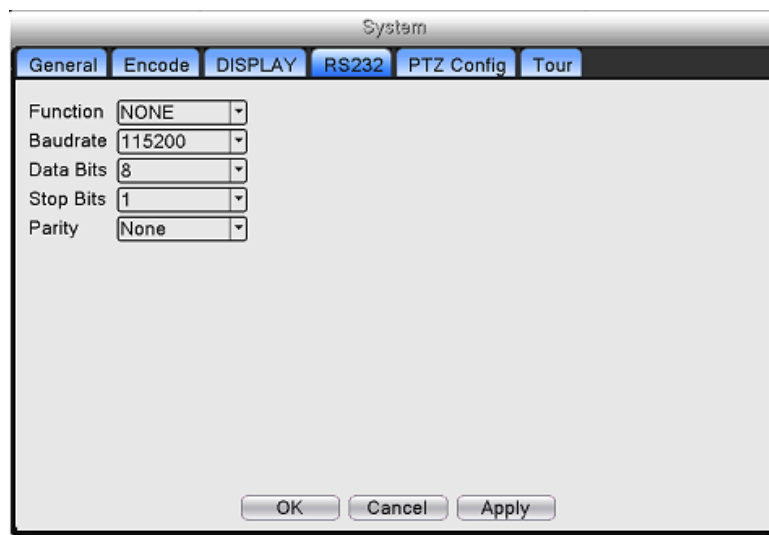
【Data bits】 Include 5-8 options. Default: 8.

【Stop bits】 Include 2 options. Default: 1.

【Parity】 Include odd check, even check, sign check, blank check. Default: void.

5.19 RS232

Note: some models do NOT support this function.



Serial port setting

【Serial Port Function】 Common serial port is used to debug and update program or set up specific serial port.

【Baud rate】 Choose the corresponding baud rate length.

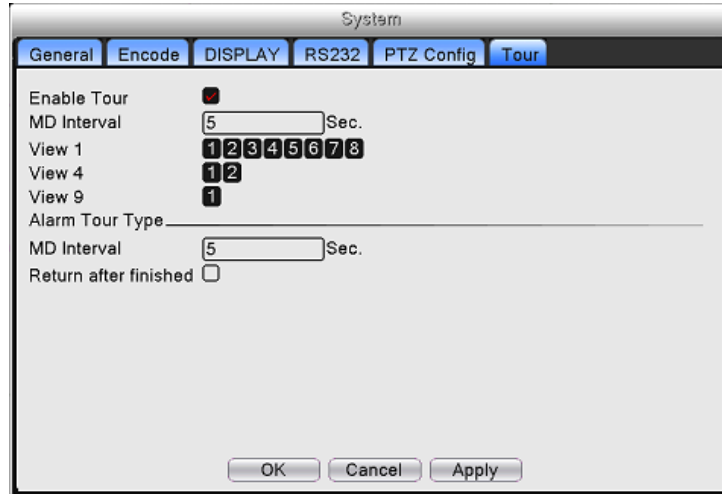
【Data bits】 Include 5-8 options.

【Stop bits】 Include 2 options.

【Parity】 Include odd, even, mark, space, default is none.

5.20 Tour





Set the patrol display. ◆ means that the tour mode is enable. You can choose the single-view, four-view, six-view of single mode tour or hybrid mode tour.



Tour configure

【Interval】 Set the patrol switch interval. The set range is 5-120 seconds.

【Alarm tour】 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.

Note: clicking upper right icon  /  can turn on / off tour ( means it's on,  means it's off).

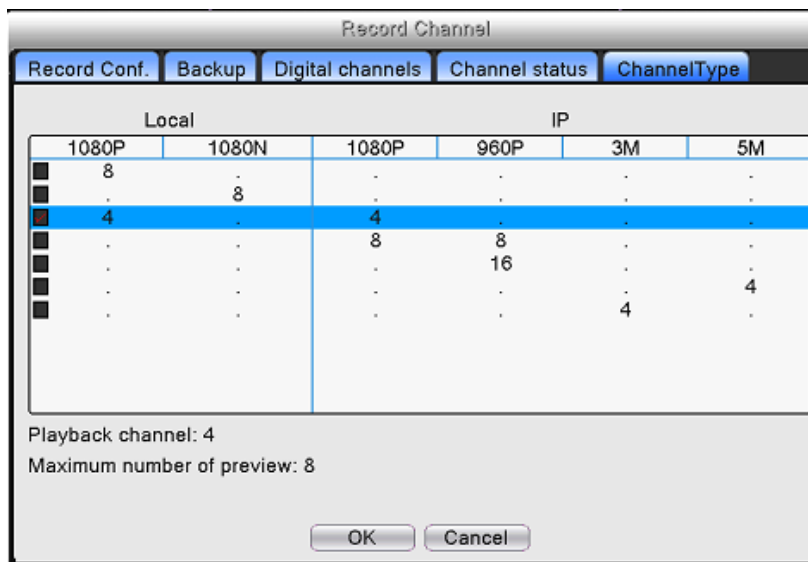
5.21 Spot configure

Note: only some models can support this function.

【Interval】 Set the interval of automatic switching between preview layouts. The set range is 5-120 seconds.

5.22 Channel manage

Note: only some models can support this function.



Channel Type

Record Channel

Record Conf. Backup Digital channels Channel status ChannelType

Channel 5 Enable

Time Sync Time and Tir Decode Order Middle

Connection mode Single connet Synchronization resolution

Network Configuration list

0	Config Name	Device Type	IP Address	- - IP Channel

Add Delete

Advanced OK Cancel Apply

Digital channel interface

【Channel】 select channel.

【Enable】 Enables digital channel.

【Time Synchronization】 The time of this channel and device will be the same.

【Connection Mode】 Singe connect or multi-ink.

【Delete】 If the user want to change device, select the existing device, click delete will be ok.

【Add】 click add will come out below page to add new device.

【Configure Name】 device is with default configure title, user can revise it if necessary;

【Device Type】 3 types: IPC、 DVR、 HVR, user can choose as what you like, default is IPC;

【Protocol】 Default is TCP

【Remote channel】 User can input remote channel title from the device that you want to connect remotely.

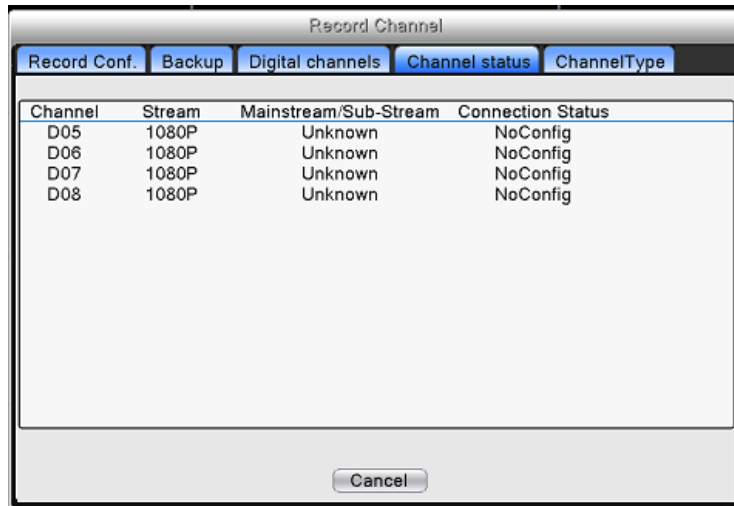
【Stream】 Default is main stream, do not support extra-stream at present;

【Device address】 IP address of device.

【Port】 Default is 34567

【User name】 Default is admin

Channel Status:



5.23 Advanced

Manage tools menu including: HDD manage, account manage, online user, output adjust, auto maintain, upgrade.

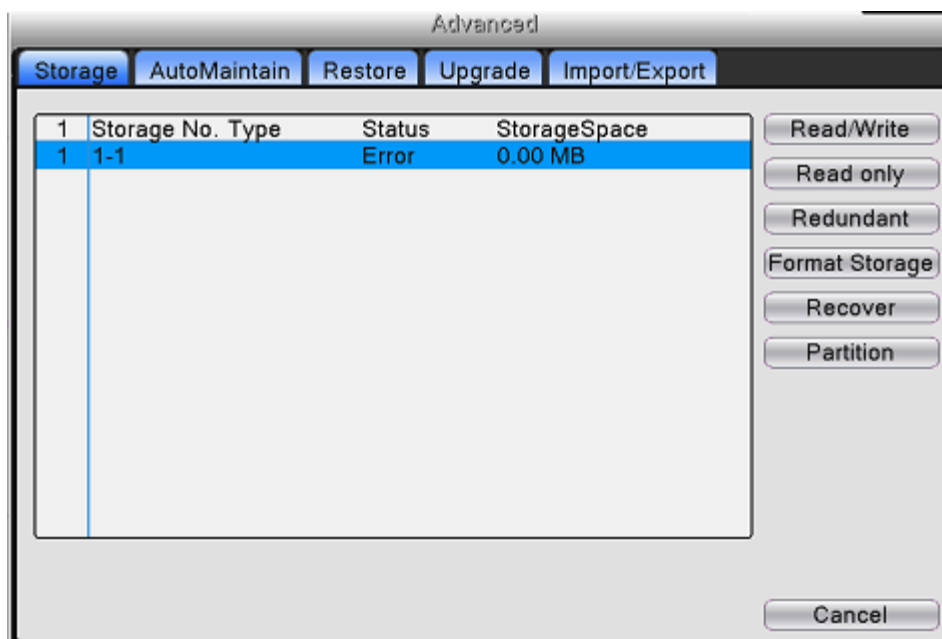
5.23.1 HDD Manage

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 cannot write data.

Redundant Disk: Double backup the video files in the write-read disk.



HDD manage

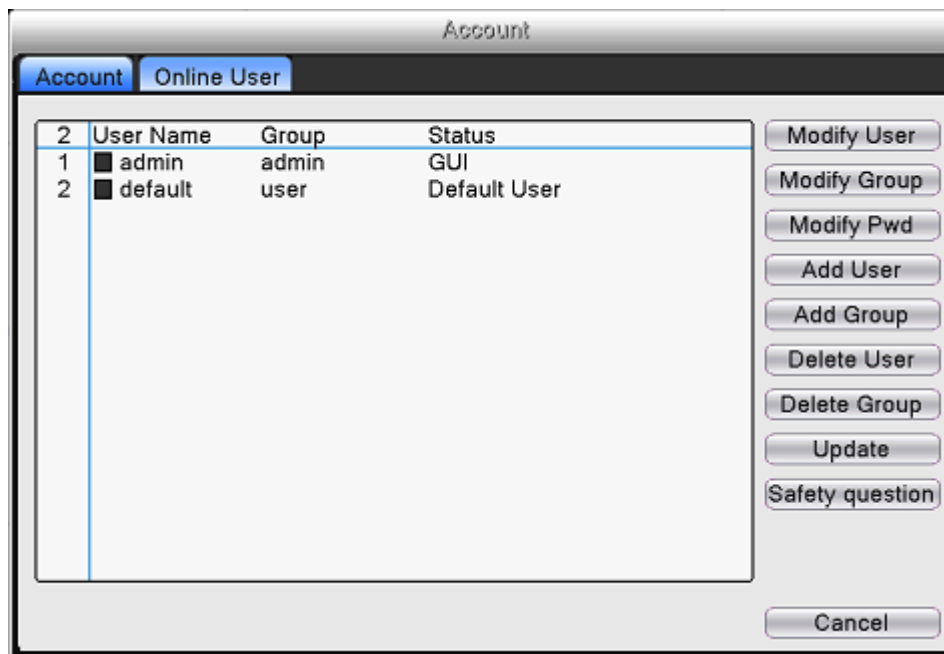
5.24 Account

Manage the user account.

Note: The character length is 8 at most for the user name. The blank ahead or behind the character string is invalid. The middle blank in the character string is valid. Legal characters include: letters, numbers, underline, subtraction sign and period.

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.

The user management include: group/ user. The group and user name cannot be the same. Each user only belongs to one group.



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.

【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.

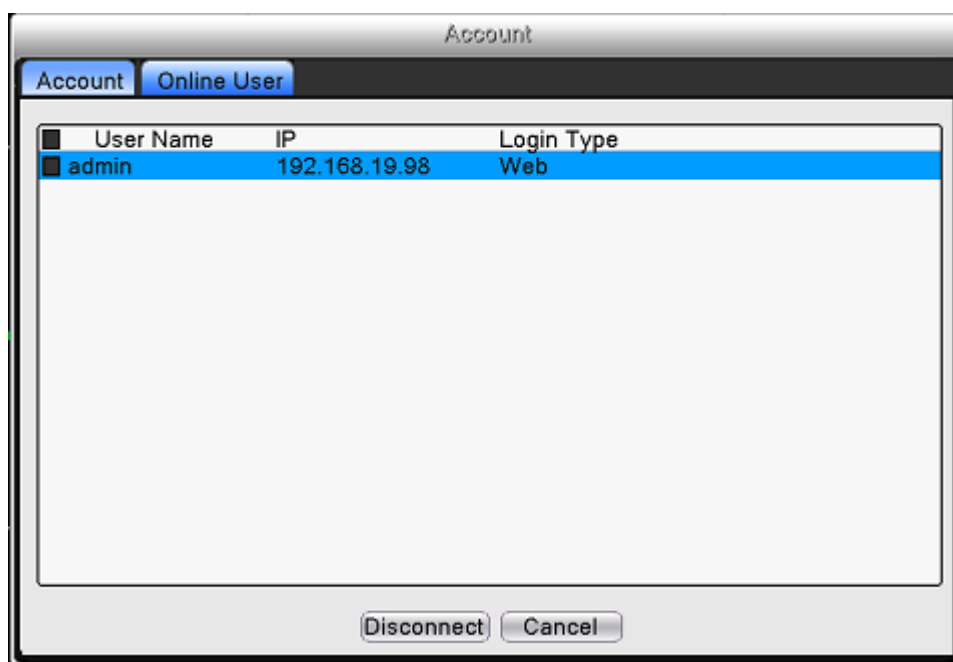
【Add Group】 Add a user group and set the purview. There are 33 different purviews: shut down the equipment, real time surveillance, playback, record setting, video backup and so on.

【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.

5.24.1 Online user

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



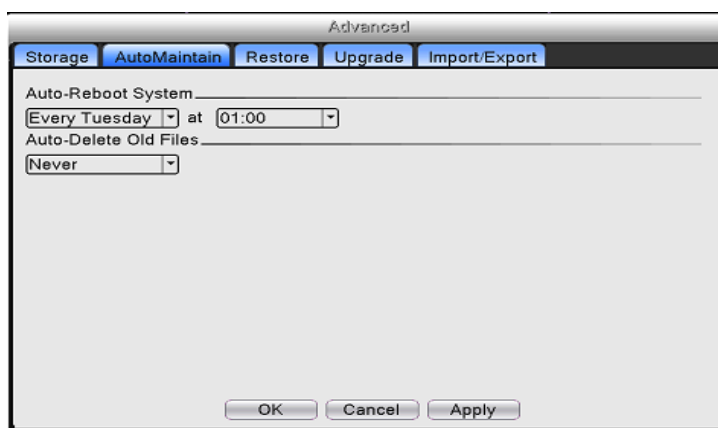
Online user

5.25 TV adjust

Refer to chapter 5.17 .

5.26 Auto Maintain

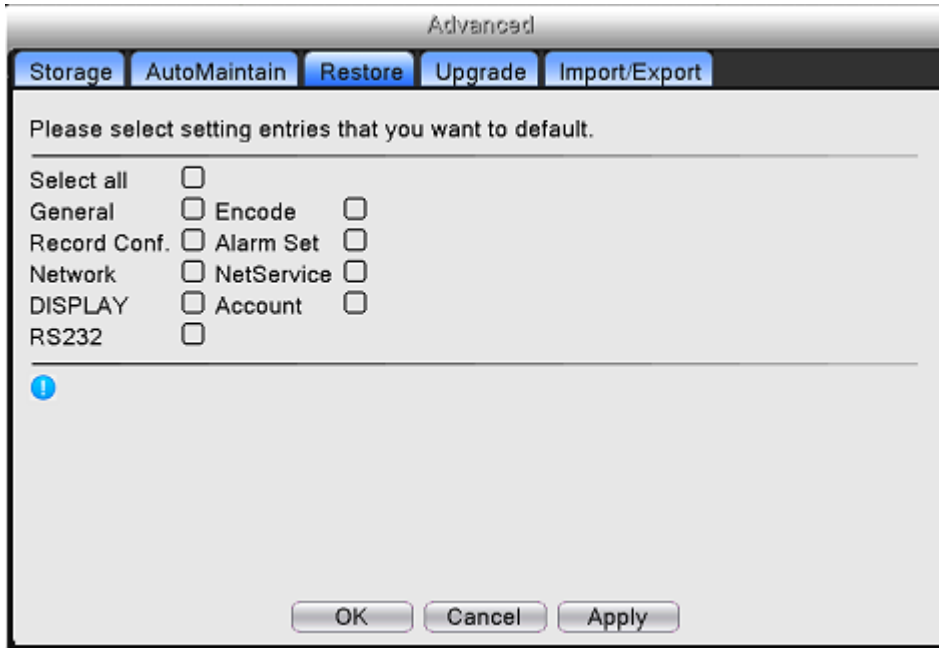
The user can set the time to auto reboot and auto delete file.



Auto maintain

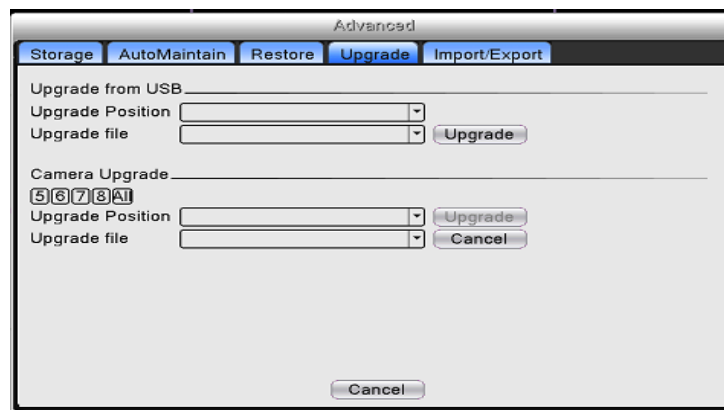
5.27 Restore

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



Restore to default

5.28 Upgrade

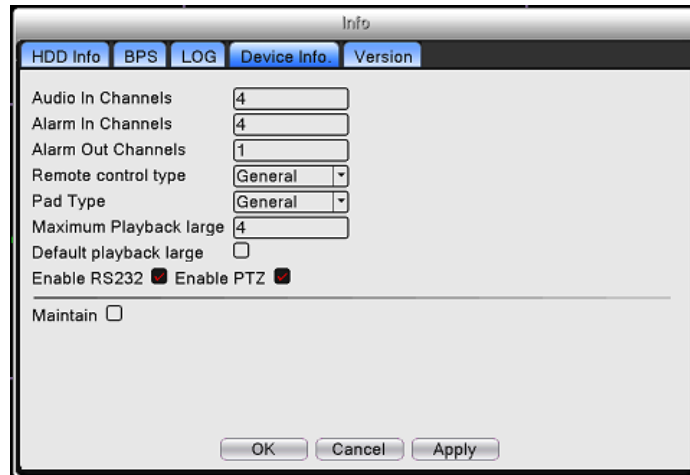


Upgrade

【Upgrade】 choose USB interface. Then choose the upgrade file.

5.29 Device Info

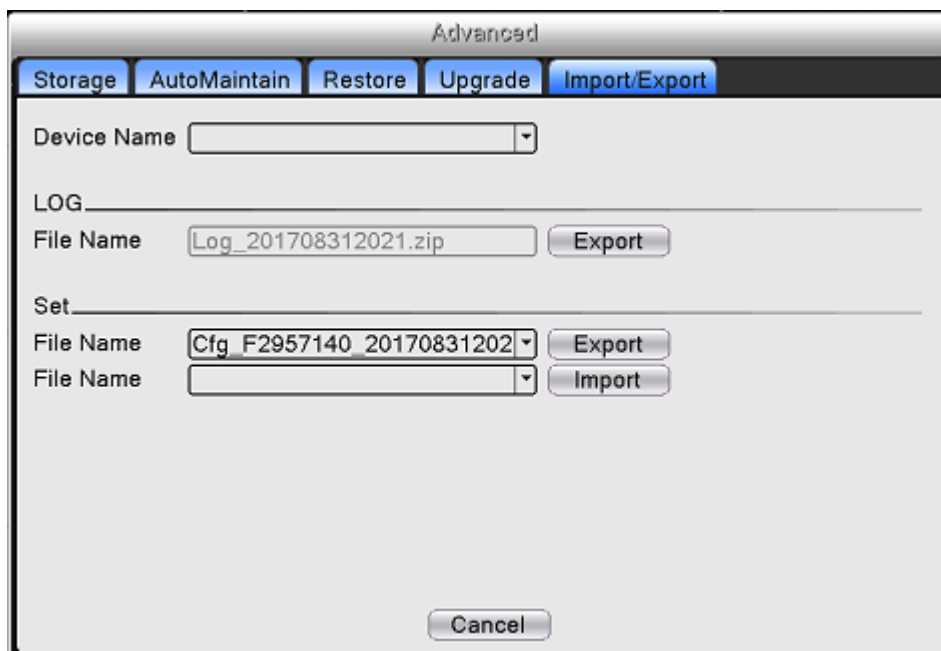
Provide device interface info like audio in, alarm in/out to be conveniently used for user.



Device info

5.30 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.



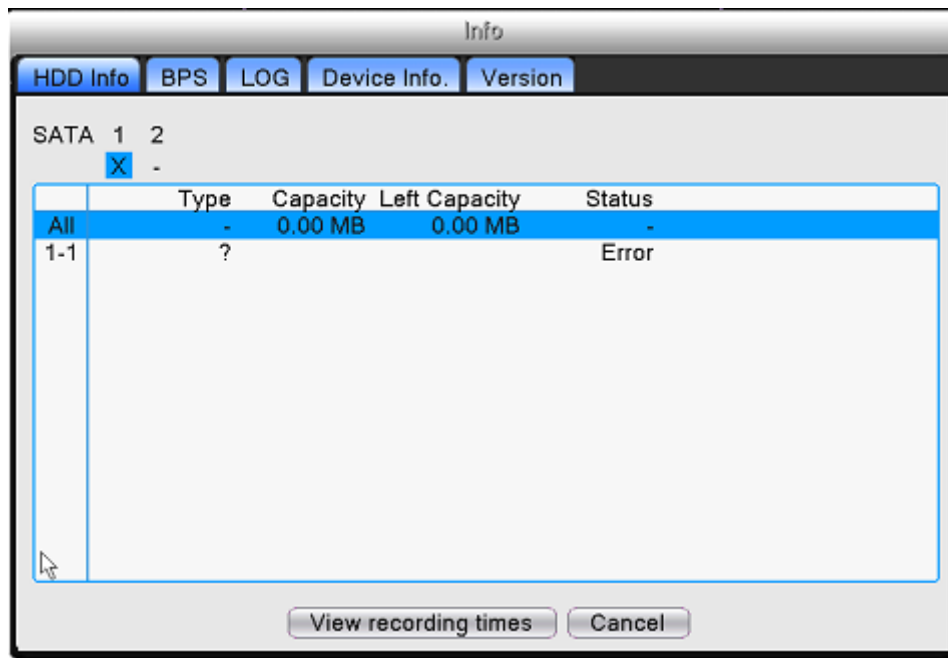
Import / Export interface

5.31 Info

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

5.31.1 HDD info

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

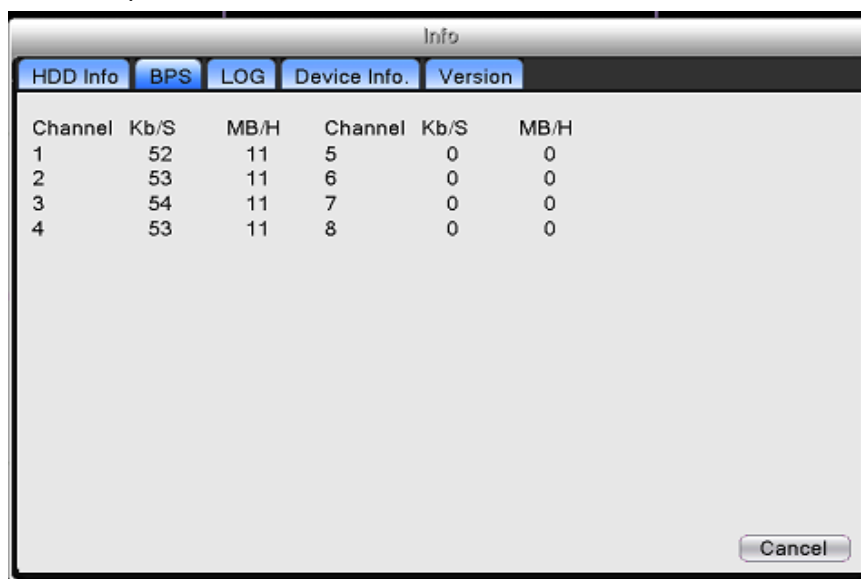


HDD info

Tips: ○ means that the hard disk is normal. X means that the hard disk is broken-down.- means that there is no hard disk. If the user need to change the damaged hard disk, you must shut down the DVR and take up all the damaged hard disks, then install a new one.

5.31.2 BPS

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

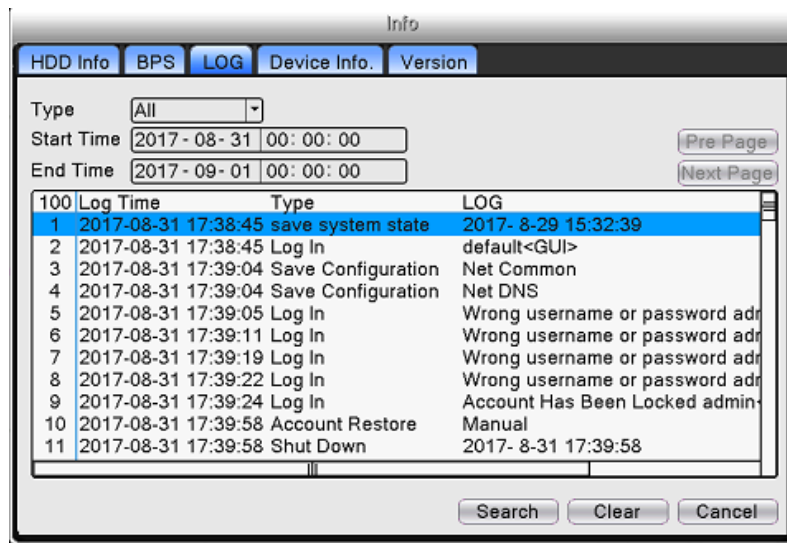


BPS

5.31.3 LOG

To search log information base on the set search mode.

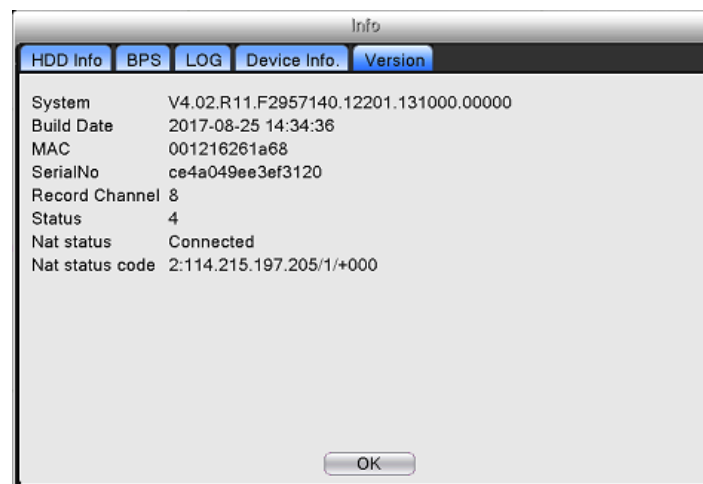
Log information includes: system operation, configuration operation, data management, alarm affair, recording operation, user management, file management and so on. Set the time section to look up and click the look up button. The log information will display as a list. (one page is 128 items) Press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



Log information

5.31.4 Version

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



Version information

6 Cloud Technology Basic Operation

6.1 Cloud technology monitor

Cloud technology make the device one step on net, greatly bring convenience for customer to monitor via wide area network, this technology is using the serial no to visit device.

6.1.1 Check the connecting status of cloud technology

Connect device to a router with internet, then enter **【 Main menu 】 > 【 Info 】 > 【Version】** to check whether the device successfully connect to the cloud server or not.

7 Network Access Settings

7.1 LAN Access Settings

1. Network connection

(1) Before the WEB operation, make sure your DVR is properly connected to the network.
(2) Enter DVR “Main Menu” →“Network” to set correct IP address, subnet mask, DNS and gateway or set to obtain IP address automatically by DHCP. Port retains the default settings. (The IP segment of device should be the same with PC, if disconnected, please check device IP was connected successfully.)

2. Login

Step 1: After connecting successfully, then you can login to view.

Open a web browser; enter the IP address of the login device in the address bar. As the device with IP address “192.168.1.10”, HTTP port “80” for example, then enter: http://192.168.1.10 in the address bar. If HTTP port is not 80, such as 81, then need to add port when viewing, as: http://192.168.1.10:81.

Note: If the PC connects the device at first time, when open system, the security warning will pop up whether to accept the WEB control web. cab, please choose to accept the user, the system will automatically identify the installation. (If the system is prohibited to download, please confirm whether you have closed other prohibited controls to download software and reduce the IE security level, permit unsigned plug-in to operate. Connection as shown below will pop up after the success of the interface.)

Step 2: Enter the user name and password. (The default user name is “admin”, password is blank.)

7.2 Client ISS Software Operation

ISS is a powerful center control software. It is distributed architecture combining with the functions of multi window, multi user, multi languages, voice intercom and alarm center all in one. With friendly interface and simple operation, it's convenient to permission settings.

Please take out the CD-ROM in the accessories, copy the ISS install software in the CD-ROM. After installation on the local PC, double click the “ISS” to open the control interface, default without password, the client can set the login password (**Note: The password for ISS client is different than DVR login password**).

Please refer to the ISS USER MANUAL in the CD or ISS software’s help information for details.

5.3 Mobile Phone Monitoring

Revo Aero Mobile , which is designed for mobile phone on the basis of iOS (Version 7.0 or higher), can be used to remotely monitor the live video from embedded DVR, NVR, IP Camera and network speed dome via wireless network, play back record files and control PTZ as well. Revo Aero Mobile can support multiple network connections, such as Wi-Fi or 3G.

Please download this APP from APP Store or Google Play Market. Search “Revo Aero Mobile”. Please refer to the Revo Aero Mobile User Manual in the CD for details.

8 FAQ and maintenance

8.1 FAQ

If the problems are not listed, please contact the local service or call the HQ service. We are willing to offer the service.

1. The DVR cannot 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 Switch power supply is damaged.
- 4 The program updating is wrong.
- 5 The hard disk is damaged or the hard disk lines are broken.
- 6 The front panel is damaged.
- 7 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 cannot 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 cannot 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 live view but no audio signal during 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 cannot 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 120 Ω 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 cannot 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 playback.

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 keyboard cannot control the DVR.

Possible reasons are as followed:

- 1 The serial port of the DVR is not set correctly.
- 2 The address is not correct.
- 3 When multiple transformers are connected, the power supply is not large enough.
Please give each transformer individual power supply.
- 4 The distance is too far.

18. Alarm cannot be recessional.

Possible reasons are as followed:

- 1 The setting of the alarm is not correct.
- 2 The alarm output is turned on manually.
- 3 The input machine is damaged or the connections are not correct.
- 4 There are some problems for specific program edition, Please update the program.

19. Alarm is not working.

Possible reasons are as followed:

- 1 The setting of the alarm is not correct.
- 2 The connection of the alarm is not correct.
- 3 The alarm input signal is not correct.
- 4 A alarm is connected with two loops synchronously.

20. 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.**21、
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.

22. The downloading files cannot 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.

23. I cannot remember the advanced password or network code in the local menu operation.

Please contact the local service or call the HQ service. We will offer the service according the machine type and the program edition.

24. Cannot see the preview picture the digital channel

Possible reasons are as

followed: 1 Did not add

device

2 The device of related channel was not enable

3 The device of related channel was not selected.

4 The selected device did not connect to video

sources 5 The channel title of selected remote

device is not exist. 6 Stream for remote channel

was set by extra stream.

7 User name & password not matched

8 directly input with IP address or port No. incorrectly when adding device. 9. The resolution of added device is too large to display by the monitor.

25. Click “search” why not search out any of the device.

Possible reasons are as followed:

- 1 There is no other device exist in the Local area network
- 2 The subnet mask setting incorrectly on Network settings.

26. The snapshot at alarm function was enable, why not catch picture

Possible reasons are as followed:

- 1 HDD manage without partition for snapshot.
- 2 Partition for snapshot is 0
- 3 The snapshot function is not enable on record-> storage of related channel.

27. The time shows on digital channel is not the same as local side:

Enable the time synchronous function of digital channel.

28. Cannot see preview picture of analog channel

Possible reasons are as followed:

- 1 The camera did not connect to video interface
- 2 The device did not connect to video source
- 3 Video source is broken.

29. Picture will be frozen when multi-connection and shift devices.

Picture come out from digital channel need few seconds, shift device means to show new picture, so it needs several seconds to buffer.

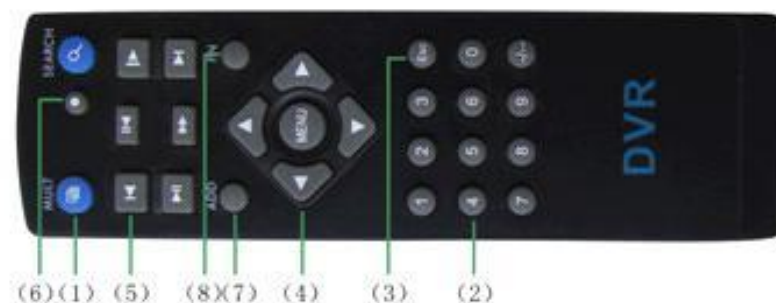
8.2 Maintenance

- 1 Please brush printed circuit boards, connectors, fans, machine box and so on regularly.
- 2 Please keep the grounding well done to prevent the video or audio signal interfered and the DVR from static or inductive electricity.
- 3 Do not pull out the video signal line or RS-232 port or RS-485 port with the power on.
- 4 Do not use the TV in the local video output port(VOUT) of DVR. It will damage the video output circuit easily.

- 5 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.
- 6 Please keep the DVR away from heat resource.
- 7 Please keep the DVR ventilated for better heat radiator.

Please check the system and maintain regularly.

Appendix 1.Remote controller operation



No.	Name	Function
1	Multi-window button	Same function as Multi-window button in the front panel
2	Numeric button	Code input/number input/channel switch
3	【Esc】	Same function as 【Esc】 button in the front panel
4	Direction button	Same function as direction button in the front panel
5	Record control	Control the record
6	Record mode	Same function as “Record mode”
7	ADD	Input the number of DVR to control it
8	FN	Assistant function

Appendix 2. USB Mouse operation

Operation	Function
Double left click	Double click one item in the file list to playback the video
	Double click the playback video to zoom in or out the screen
	Double click the channel to make it full screen display double click again to resume the multi-window display
Left click	Choose the according function in the menu
Right click	Pop desktop shortcut menu in preview state
	Current shortcut menu in the menu
Press middle button	Add or subtract number in the number setting
	Switch the items in the combo box
	Page up or down in the list
Move mouse	Choose the widget or move the item in the widget
Drag mouse	Set the motion detect area
	Set the cover area

Appendix 3. Hard disk capability calculation

Make sure the hard disk installed to the DVR for the first time. Pay attention to the IDE hard disk lines connection.

1. Hard disk capability

There is no limit for recording machine. We recommend 120G~250G size to keep better stability.

2. Overall capability option

The hard disk capability formula is:

Overall capability (M) = channel number * time (hour) * capability in an hour (M/hour) The recording time formula is:

$$\text{Recording time (hour)} = \frac{\text{overall capability (M)}}{\text{Capability in an hour (M/hour) * channel number}}$$

The DVR introduces the H.264 compression technology. Its dynamic range is very large so the hard disk capability calculation is based on the estimation values of each channel creating files in an hour.

Example:

For one piece 500G HDD, real time CIF for recording, it will keep recording for about 25 days. HDD spaces per channel is 200M/H, if 4channels real time CIF at 24hours recording uninterrupted, it can last: $500G / (200M/H * 24H * 4ch) = 26$ days