



DVR



Preface

Thank you for selecting our products. We will offer the best service for you wholeheartedly.

This manual is based on full function model , different types of front-end equipment will be slightly different, will cause the product features and operational differences.

The contents of this user manual for reference only, subject to change without notice, updates will be added in the new version of this manual. Inaccuracies or typographical errors in this user manual may contain technical sincerely hope you can give us feedback timely advice, in future releases, we will be enriched or improved.

Statement

We have tried the best to make sure the integrity and accuracy of the contents of this manual, but sometimes appear technically inaccurate, inconsistent with the product features and operation or typographical errors, etc. If you have any doubt or dispute, we has the final interpretation.

This manual is only for user reference only, We can not guarantee that it is fully consistent with the physical machine.

CONTENT

Chapter1 Introduction	6
1.1 Overview	6
Chapter2 Technology Guideline and Main Functions	7
2.1 Technology Guideline	7
2.2 Main Functions	8
Chapter3 Installation environment and introduction	12
3.1 Installation environment and cautions	12
3.2 Package checking	13
3.3 Mouse manual	14
3.4 Input method description	15
3.5 Menu operation manual	16
Chapter4 Functions introduce	21
4.1 Basic operations	21
4.1.1 System login	21
4.1.2 Main menu	21
4.1.3 Status bar introduction	22
4.1.4 Mouse right click menu	22
4.2 Power on wizard	23



4.3 Data query and playback	24
4.3.1 Time inquiry	24
4.3.1.1 Intelligent playback	25
4.3.2 Data Mgr	25
4.4 Backup management	27
4.4.1 Quick backup	27
4.4.2 Manual backup	27
4.4.3 Scheduled backup	28
4.5 Record settings	29
4.5.1 Record parameters setup	29
4.5.2 Manual record	30
4.5.3 Schedule record	30
4.6 Alarm settings	31
4.6.1 Motion detection	31
4.6.2 Sensor detection	32
4.6.3 Alarm output	33
4.6.4 Other alarms	34
4.6.5 Manual alarm	34
4.6.6 Alarm input/output connection	35
4.7 Settings management	37
4.7.1 General settings	37
4.7.2 Time settings	38
4.7.3 Output settings	39
4.7.3.1 Channel settings	39
4.7.3.2 Sequence	41
4.7.3.3 Output mode	42

|||| User Manual

4.7.4 COM	42
4.7.5 PTZ setting	43
4.7.6 Network setting	45
4.7.6.1 Network setting	45
4.7.6.2 DDNS service	46
4.7.6.3 Email setting	47
4.7.6.4 Platform server	47
4.7.6.5 Advanced setup	48
4.7.6.6 Cloud service	48
4.8 Disk management	49
4.8.1 Basic information	49
4.8.2 HDD group setting	50
4.8.3 Storage setting	50
4.8.4 SMART	51
4.9 System information	52
4.9.1 Device information	52
4.9.2 Channel status	52
4.9.2.1 Local input	52
4.9.2.2 Record status	53
4.9.3 Alarm status	53
4.9.4 Online status	54
4.9.5 Log inquiry	54
4.10 System maintenance	55
4.10.1 Quick settings	55
4.10.2 User management	55

4.10.3 Factory settings	56
4.10.4 Upgrade management	57
4.10.5 Import/Export	60
4.10.6 Schedule restart	60
4.10.7 System shutdown	60
Appendix 1: IE browser instructions	61
Appendix 2: Cloud service instruction	65
Appendix 3: App alarm push test description	66

Chapter 1 Introduction

1.1 Overview

This series device designed for video and audio digital surveillance system. Use H.264 algorithm and RTOS. It integrated video and audio capture, compression, storage, network translate, multi PTZ control, alarm detection to the single board. It makes in the single board to keep the system high integration and high reliability.

This series device use Media file system, MFS. It's based on Microsoft FAT32 and suitable for video surveillance recording device special file system. It will not produce disk fragmentation even run long time and reasonable and quick scheduling of operations with streaming. It adds the key information verify protection in the MFS to against HDD damage of the key area.

This device can be the local independent work, also can build a strong safety monitoring system by network. Can be applied to Banks, telecommunications, electric power, transportation, intelligent community, factory, warehouse, etc.

Chapter 2 Technology Guideline and Main Functions

2.1 Technology Guideline

1. Video parameters (Series devices support different video source types, specific please according to the model to decide.)
Video input: Support 960H, 720P, half 1080P, 1080P(BNC port, 1Vp-p, 75 Ω).
Video output: 1 HDMI, 1 VGA/SPOT.
2. Video compression:compression algorithm H.264.
3. Intercom:input(RCA interface,AUDIO IN port in the rear pannel,input impedance:10K Ω ,input range:Vp-p=2.0V);;output(RCA interface,AUDIO OUT port in the rear pannel).
4. Audio compression:compression algorithm G.711A,audio sample rate 8K sample/s,16bit/sample point.
5. OS: Linux.
6. HDD interface: Support 48bit LBA mode, support 4 SATA hard drives, specific models based on the actual set.
7. Operation way:USB mouse.
8. Alarm interface
Alaram input: Alarm input suppor Normally Open/Normally Close,4 alarm inputs, it's based on specific models.
Alarm output: Support 1 alarm output, relay output.
9. Serial port: RS485.
10. UTC: support to control the camera or front device via coaxial video cable.
11. Backup port: USB2.0 port.
12. Network port: 10M/100M/1000M adaptive Ethernet port.
13. Power: DC 12V, it's based on specific models and there is factory power supplier.

|||| User Manual

2.2 Main Functions

This series embedded HDD recorder using high-performance embedded real-time multitasking operating system (RTOS) and embedded processors, the perfect realization of the monitoring system needs to build a variety of functions. FLASH program solidified in the system more stable and reliable, will not be disturbed by external factors such as viruses, as well as the case may be unattended for a long time steady work in harsh environments.

Note: The following features for reference only because of hardware and software products and versions, features difference.

◆ Compression features

1. Video compression is H.264 compression technology.
2. Every channel compress the Video&Audio signal independently. Audio compression takes the G.711A technology, after video and audio compression, they combine into compound compression bitrate, when playback, the video and audio is synchronous. you can also cancel the audio; sample point is: 8 sample point/s, 16bit/sample point.
3. Dual-stream compression: main stream is used in local record store, network stream is used in the network.
4. Six kinds record image quality available, users can adjust the image quality according to the requirement to guarantee longer recording time.

◆ Recording function

1. Support manual record, schedule record, motion record, alarm record.
2. Support video motion detection function, providing 5 sensitivity levels.
3. Support motion detection recording multiple channels simultaneously record linkage.
4. The monitoring center can be recorded in real time over the network stream compression, support to store the video in PC by network.
5. Every video record parameter can be set independently.
6. Support channel title superposition overlay support recording time.
7. Support for multi-operation can be achieved while real-time video retrieval playback, fast forward, slow motion, network monitoring, network video playback and downloads.
8. Support for pre-recorded, pre-recorded time of about 5-30s.
9. Support setting delay-record 1-180s.

◆ Playback function

1. Support the video file by time queries, according to the precise time position for video playback.

2. Time query interface supports mouse on the time bar can preview the video data.
3. Support query and playback recordings by data management, channel, record type.
4. Support and intuitive graphical display of data recording information.
5. Support for video playback image enlarged.
6. Supports instant replay, replay 5 minutes ahead of data.
7. Support to playback as specific time.
8. Support for playback directly observed whether the video data for each channel, and you can choose the video playback through the timeline.
9. Can be refined during playback timeline for accurate playback.
10. Supports playback pause, fast forward, rewind, slow forward, slow rewind, frame advance, support selecting the location by mouse.
11. Support single/all channel playback.
12. Support intelligent playback, can search out the recording which there is object moving to playback.

◆ Monitor real-time monitoring function

1. Support HDMI and VGA homology output; support SPOT output.
2. Output resolution up to 1080P.
3. Support 1/4/8/9/13/16 channel image preview, channel sequence can be changed via dragging the channel by mouse.
4. Support for 24-hour and 12-hour time format switch.
5. Support for daylight saving time function.
6. Support image enlarged.
7. Support full channel video parameters (brightness, contrast, saturation, hue) of the regulation.
8. Support Cruise function.
9. Support OSD display and the position adjustable.
10. Support video area shield, each channel can set most 4 area, support full screen shield, real-time shield, playback shield.

◆ Storage backup

1. Supports up to 4 SATA hard drives, depending on the model based on.
2. Support for video file lock and unlock.

|||| User Manual

3. Support hard property settings: read-only, read-write.
4. Support HDD groups, and different channel can be assigned different recording storage capacity.
5. Support manual, quick, schedule backup.
6. Support batch backup according to file
7. Support editing the back up when doing video playback (local storage disc).
8. Support the log backup.
9. Back up the recording data of DVR by Windows' IE browser.
10. Powerful hard disk management functions, support the hard disk to format the hard disk dormancy, support, with sector damage shield function, eliminate bad disk and alarm mechanism.

◆ Alarm detection function

1. Local alarm: Video lost alarm, motion detection alarm, HDD error alarm, high temperature alarm, network disconnection alarm, HDD full alarm, Video shield alarm.
2. Video lost alarm, motion detection alarm and video shield alarm response quickly.
3. Network alarm (warning signal upload), PC comes through the horn sound alarm.
4. Support video motion detection continuous alarm function, each video can be set to a plurality of motion detection area.
5. Support alarm information message upload function, can will produce related channel, alarm alarm type in the email to the specified mailbox.
6. Support alarm push and there is screenshot and video that can be uploaded to mobile APP.

◆ Network function

1. Support TCP/IP Protocol(Support ARP, RARP, IP, TCP, PPPOE, DHCP protocol etc).
2. User can upgrade maintenance and function expansion by the network upgrade.
3. Support FTP upgrading.
4. Support preset server,NTP school.
5. Support the DDNS domain name resolution service.
6. Support plug and play (UPNP).
7. Support E-mail (disk error, video loss, high temperature, movement detection, disk full) alarm email upload function.
8. Support for remote monitoring by mobile phone.



9. Support message testing and domain name resolution test.
10. Support IVVIEW.
11. Support for network diagnosis, network repair function.

◆ Security guarantee

1. High-performance embedded microprocessors and embedded real-time operating system, to ensure the system real-time, high reliability and stability.
2. The sound of the video log inquiry function (modified mobile detection alarm query, remote login log, video parameters log query, query, the upgrade log replay log query, query, system startup log backup log query etc.
3. System lock, password test, multi user authorization a variety of security function.
4. Inform you by email alarm information, such as video loss and motion detection.
5. Network alarm linkage (warning signal upload).
6. Have hardware watchdog function, abnormal system can be detected automatically, and automatically restarts to reinitialize the complete system input, output and video state etc.

◆ Exploitation support

Support SDK for Client manager.

Chapter 3 Installation environment and introduction

3.1 Installation environment and cautions



Installation environment:

- Normal working temperature is -10°C-55°C. Storage temperature is -10°C-60°C.
- Normal working humidity is 15%-85%.
- The equipment must keep horizontal either in installation or on using.
- Avoid installing in high temperature or humidity conditions.
- Heat release fans are placed for cool down, so you should put the device on ventilated place.
- The back of DVR should be placed 6cm away from the other device or wall while installing.
- Moving the DVR between two places with high difference in temperature will shorten the using life.
- Please install the lightning conductor when the machine is used in frequent thunder areas.



Cautions:

- Don't touch the power switch or the DVR by wet hands.
- Make sure the machine and its case are grounded (There is an earth interface on the back panel of the machine).
- Keep the power supplier stable to avoid abnormal power cut off.
- Avoid dropping liquid or metal into machine that may cause short circuit or fire.
- Don't record or playback until at least one HDD is installed.
- Short circuit would happen when moist dust is on the board, so user has to termly brush the board and other accessories to make the machine work in good condition.
- Video/Audio/RS485 devices can't be plug or draw when the power is on, or else the equipment will be easily damaged.

- When shutdown the DVR, do not directly turn off the power switch, should use the shutdown button on the panel, DVR automatically switch off the power supply, so as not to damage the hard disk.
- The DVR host can access the hard disk automatic detection, if detected that the new HDD is not formatted by DVR, the system will prompt the user for the formatting operation. (formatting features, system support the hard drive without the help of the PC machine).
- Warning: Please don't use the DVR HDD to PC if un-professional user. Following illegal operation will make the data of HDD Unrecognized after connect the HDD to DVR and require format.(modifying or editing file name; open the contents and edit; copy the data out and copy back to DVR HDD; Third party browser might be modify the record position of HDD).
- Please don't open the casing.
- To make sure recording data integrity, change the damaged HDD in time.
- Recommend high speed HDD which above 7200 or DVR special HDD.
- Single hard disk partition should be higher than 32GB. Max volume have no limits.
- Selection of total HDD volume, formula of HDD volume as follow:
Total HDD volume= channels numbers x time of recording(hour) HDD volume per hour(MB/hour)
Eg. Selected streaming (Please refer to recording setting streaming mode introduction for more details) as 512K, Data volume for each hour each channel =bitrate(Mbps) Each hour(3600s)= 1Mbps 3600s= 3600Mb. 1MB=8Mb,so data volume for each hour when bitrate as 512Kbps = 3600Mb/8=225MB(each hour 225MB 8=1800Mb =1.8G). This data just for reference cos the deviation. The deviation range around 10-20MB each hour. This just for data calculation.
Audio data volume each channel each hour use 15MB. If have no special requirements, suggest closed audio for reducing space.If selected image quality, data volume and bit rate was uncorrelated. Please calculate the volume for each hour and each channel after selected acceptable image quality.
Noted: When DVR HDD full loaded, will overwrite the data of the earliest day .Please consider this factor when calculate volume
- DVR accessories included data cable and fix screws.
Noted: This series DVR don't support plug & play. Please power on after install HDD and connect power adapt or and data cables

3.2 Package checking

After opened the carton, check whether housing have damage or deform. If have, Please stop to work and contact with your supplier. Please read the use manual in detail and safekeeping.(Noted: the accessories is subject to packing list)

|||| User Manual

3.3 Mouse manual

Name	Operation	Instruction
Left mouse button	Click	1. Preview: Choose the image, show preview quick menu 2. Menu: choose, confirm
	Double click	1. In the preview, playback state, can switch single picture or multi-screen display 2. In data inquiry, backup management interface, can play the section data by selecting a data and double-clicking the left key 3. Get the galendar in the date input
	Hold And drag	1. In occlusion and motion detection regional settings, set regional scope 2. Adjust the brightness, contrast, saturation 3. Time arm/disarm 4. Select the amplification region 5. Adjust channel display position.
Right mouse button	Click	1. Preview: show the right menu 2. Menu: Exit the menu, to return to the previous level interface
Pulley	Scroll up	If in the selection box, scroll up options; if in the scroll bar, scroll up the page,
	Scroll down	If in the selection box, scroll down options; if in the scroll bar, scroll down the page

3.4 Input method description

Soft keyboard interface as below, it's symbols keyboard, alphabetical keyboard and numeric keyboard.

!@#\$%
^&*()'
~_-+=|\?/
{[}]<,>.:;
“, Shift ←

qwertyuiop
asdfghjkl
␣zxcvbnm␣
.com Space Caps

123
456
789
0.←

Icon	Description	Icon	Description
<div>abc</div>	Shows the current is English input, click this button to switch the input method/change to the symbol keyboard	<div>←</div>	Delete button
<div>中</div>	Shows the current is Chinese input, click this button to symbol keyboard	<div>Space</div>	Space button
<div>Caps</div>	English input switch key	<div>.;</div>	Shows the current is symbol input, and click this button to digital keyboard
<div>Shift</div>	Shift button	<div>123</div>	Shows the current is digital input, and click this button to English main keyboard

User Manual

3.5 Menu operation manual

Menu	Simple instruction	
Data inquiry	Inquiry by time	Time query and display and playback to accurately record data graphically; preview video data; intelligent playback
	Data management	Query by the record type, lock and unlock the files
Backup management	Backup management	Format the storage device, query, backup and play the record file and backup files (quick, manual, schedule backup)
Recording setting	Recording para	1. Choose the channel: 1-16 2. Choose the Arbitrate: Main stream or sub stream 3. Resolution: 1080P, 720P, 960H etc. (it's based on specific video source) 4. Image quality: Highest, higher, high, middle, low, lowest 5. Video frame: 1-25/30 6. Audio: Audio can be chosen when recording. 7. Bitrate: 512K, 768K, 1M, 1.5M, 2M, 3M, 4M, 5M, 6M and customer 8. Code performance auto balance function enable default 9. Pre-record: 5-30s 10. Delay-record: 1-180s
	Manual recording	Open the manual recording of all channels
	Schedule recording	Open channel for schedule recording, recording time when deployment, copy the channel



Alarm setting	Motion detection	1. Choose the channel 2. Continuous alarm: after open it, and open the motion detection, alarm will be happened when there is a movement 3. Sensitivity for 1-5 level, and the highest is 5 level 4. Setting motion area, deployment time, copying channel, Restore default and refresh 5. Linkage settings: Trigger recording, Linkage Email, linkage PTZ preset point jump
	Sensor detection	1. Choose the type of probe 2. Set the arming time 3. Copy the channels,reset to defaults 4. Linkage settings: Trigger recording, Linkage Email, linkage PTZ preset point jump
	Alarm output	1. Setting alarm time(2~300S) 2. Open/close audio 3. Open/close buzzer 4. Open/close full screen 5. Open/close alarm push 6. Set the alarm arming time
	Other alarm	1. Alarm type: HDD error, video loss, disconnect network, high temperature, HDD full, Video shield 2. Alarm linkage: link to E-mail.
	Manual alarm	Trigger the alarm output manually
Setting management	General setting	1. Host name 2. Receiving System: support PAL and NTSC 3. Resolution: 1024*768, 1440*900, 1280*720,1280*1024,1920*1080 4. Language: English, Chinese 5. Auto lock: 1,3,5,10min, close 6. Open/close "display power on wizard" 7. Enable/disable adaptive optimal resolution

|||| User Manual

Setting management	Time setting	1. Time setting: manually edit time, setting date format, Time switch(12hours/24hours), daylight saving time setting 2. NTP setting: Automatic time update through the network and time domain server manually	
	Output setting	Channel setting	1. Setting channel name 2. Setting video mask area 3. Audio adjustment: brightness, contrast, saturation 4. Setting the position of each channel name 5. Time, channel name showing setting
		Sequence setting	Set sequence, and can choose the channel, time, cycle for sequence
		Output mode	Standard, bright, soft, bright-colored, sharp
	Serial port setting	Set the serial port type, bitrate, serial port device	
	PTZ setting	Set the PTZ protocol address code	
	Internet setting	Network setting	Get automatically IP, IP address setting, spare IP setting, port setting, Multicast settings, network diagnosis
		Dynamic domain name service	Choose dynamic domain name service, set the username and password, DNS, DDNS
		Email setting	Set the Server, Email username and password, email address, destination mailbox address, port, cycle, SSL secure login, email testing

Setting management	Internet setting	Platform server	Support GB28181 service
		Advanced setting	Configure the UPNP port mapping parameters
		Cloud	1. Add equipment by scanning the two-dimensional code download mobile phone client, IVVIEW 2. Open/close the IVVIEW function
HDD management	General	1. Display device status and information which connected to the hard disk, U disk 2. Set the property of the hard disk 3. Format the HDD, U disk	
	HDD group setting	Set the hard disk and video channel ownership different disk group, display disk group total capacity, residual capacity, video time	
	Storage setting	Set up the video coverage, trigger time, recorded days and other related parameters	
	SMART	View disk type, serial number, firmware version, temperature, health status and various attribute SMART	
System information	Device information	Display device model, software version, single chip hardware version, IP address, MAC, language, the resolution and the current user	
	Channel status	Local video source input and recording status	
	Alarm status	Display alarm status of each channel (Sensor, motion, video lost, video shield), HDD alarm, network disconnected alarm, temperature alarm and alarm clear	
	Online status	Shows all the connection of the equipment user name, login IP and login time	
	Log inquiry	Inquiry system log, display the log information and the backup log	

|||| User Manual

System maintain	Quick setting	Quick set cloud service, time, network, HDD management, recording parameter, manual recording
	User management	1. Add, delete user/use group 2. Modify the user password and permissions settings, user group, the user IP/MAC address locking 3. Open/closed system without login mode
	Factory setting	All setting will be in default or factory settings
	Upgrade management	FTP upgrade, USB upgrade
	Import/export	Device parameters import and export
	Restart by time	Open the system time to restart function, set the timer restart time
	Shutdown	The cancellation of current user, shutdown, restart the system

Chapter 4 Functions introduce

4.1 Basic operation

Power on: Connect the power supplier cable and turn on the power switch, system will start up.

Power off : When the system is operational and logged on under the front panel, press the "power" button or mouse right key menu select "shutdown" option is confirmed, the system will pop up shutdown confirmation prompt, click "OK" button to confirm, the system enters the stand-by state run by the state.

Login and Lock : In order to identify user permission, the system set login and lock function. When system is in running state or login state, press "Lock" button in front panel. Or you can select "Log off" menu in system menu. Then system will go to locked state. You have to input login password if you want to enter system again.

4.1.1 System login

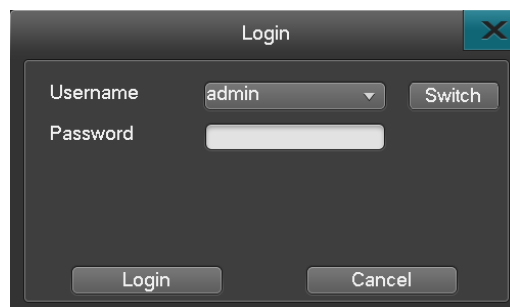
When system is lock status "🔒", left click the status icon "🔒" in status bar or right click the mouse, there will be the login interface as right. input the right username and password and "confirm", the icon in status bar "🔒" will changes to "👤", then you can do the operations within your authority.

Notes: 1. default username: admin, default password: 888888.

2. Password was input incorrect for 3 times, system alarm automatically and lock. 60 seconds later can be try again.

3. left click the mouse in input frame will pop up the digital keyboard, right click after inputting will quit the digital keyboard.

Note: For security reasons, please change your password in time. If you do not want to enter a password every time you login, you can in user management to enable the free-login mode.



4.1.2 Main menu

Left click the icon "🏠" in status bar after login or right click to choose "main menu", enter into the main menu (as right below picture); they are data inquiry, backup, record, alarm, Settings management, HDD Mgr, Sys. Info., System maintenance.

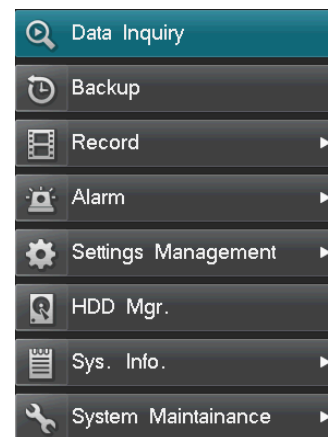
|||| User Manual

4.1.3 Status bar introduction

After rebooting,the status bar shows as the follow picture:

Operations are:

- 1) Menu icon: in login status,click the "🏠" enter into the menu;
- 2) System login/lock icon: Single click "👤" to access host after booting, single click "🔒" to lock the host;
- 3) Alarm status icon: Single click "🚨" ,to access alarm status to query alarm information and clear alarm voice;
- 4) Network icon: single click "💻"enter into the network diagnose interface,diagnose/repair the network of system;
- 5) Preview channels adjust: single click "📺" to change the preview channels number,single click "◀▶" can adjust the channels;
- 6) Display/hide status bar: single click "⬇️" can hide the status bar,in hide status,when the mouse moves to the below,it will show the status bar and if you single click icon "⬆️" can display the status bar;
- 7) Fast playback icon: single click "▶️" can do fast playback the first 5 minutes recording;
- 8) Cloudservice icon: single click "☁️" to enter into the cloudservice,enable/disable cloudservice,download the APP,add the device to the ivview account by scanning the QR code.



4.1.4 Mouse right click menu

Mouse right click menu contents data inquire,PTZ control,digital zoom,video ajust,output mode,shutdown,main menu.every function is mentioned in the later function introduction, we don't describe it here.

4.2 Power on wizard

After device boot, you can do simple configuration through power on wizard to make device working normal and the interface as below:

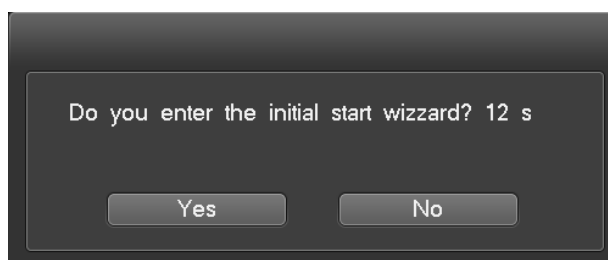
Setting method: access "System Setup" ->"General", then choose the "Display power on wizard" and save, next time boot will prompt whether access power on wizard.

Note: please confirm the HDD has connected with SATA port before use initial start wizard.

The simple configuration in power on wizard as below:

1. Ensure whether access the power on wizard, choose "Yes" to access;
2. Authority filter, input the password (the default is 888888), if the password is default and there is a tip that password is too simply and suggest that change the password;
3. enable/disable cloudservice, save and next;
4. System time setting, click save after set finish and choose "Next";
5. Network setting, you can set the IP, gateway, DNS, command port, HTTP port; click "Save" after set finish and choose "Next";
6. HDD management, choose the HDD number which you want format then click "Format", after pop-up "Are you sure to format HDD?", click "Yes" to format the HDD, after finish choose "Next";
7. Video parameter setting, set the channel frame rate, stream, pre-recorded, clarity etc, then click "save", and choose "next".
8. Set "Manual record", choose "Save" & "Finish" to quit.

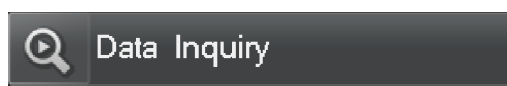
Note: in the process of setting power on wizard, you can right click to quit the wizard.



|||| User Manual

4.3 Data inquiry and playback

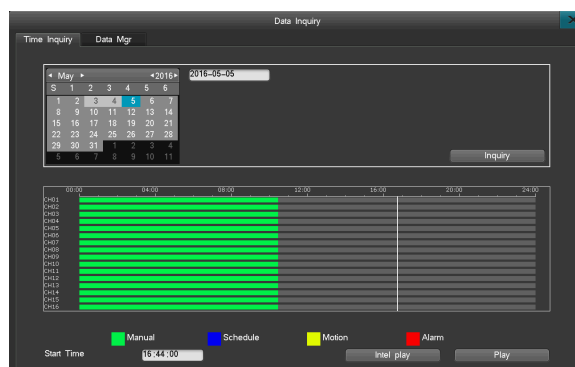
Single right click "Data inquiry" or choose the "Data inquiry" in main menu to enter in the "Data inquiry" interface.



4.3.1 Time inquiry

In "Time Inquiry" interface, click calendar date or input the date which you want query then click "Inquiry" button, you can view graphical record/image information and the interface as right picture:

- The mouse pointer on the timeline, zoom icon appears after clicking left key to refine the timeline, Let the user more carefully view the video;After elaboration of time, move the mouse pointer to the meeting on time axis appear narrow icon click left key can simplify the timeline.
- The Mouse pointer to a particular channel data,drag the mouse can choose the data to backup.
- Left-click the graphical interface (white vertical line location that is the beginning of the video playback time) or the "start time" at the bottom of the graphic input box input accurate time after selected video reproduction "play".
- Mouse the left key double-click the graphical interface for video reproduction, the beginning of the playback time namely white vertical line location corresponding to the time.
- Calendar date of list, there are dark grey squares according to said video data in the day, the light blue on behalf of the selected date, gray represents no.
- "Green" on behalf of the manual videos, "blue" on behalf of the timing video, "yellow" on behalf of the mobile video, "red" on behalf of the alarm video.
- Graphical display in each page only shows at most 16 channels video store information, use the mouse point back, the next page icon to page to track the status of other channel video data storage.





4.3.1.1 Intelligent playback

This series machine can support the intelligent search and playback. Intelligent search playback refers to the select the video in particular time that inside the objects move data from a single search out for playback, it is convenient for user to find the useful data.

Click the intelligent playback in time inquiry or in single playback interface's intelligent playback icon can enter into intelligent playback,the steps of instelligent playback are:

- 1) Choose the intelligent playback channel,only one channel.
- 2) Choose area, there is no limit with area and the min area is a grid.
- 3) Click play button to enter the playback interface smart, intelligent playback support all common playback, data on the time bar shows all the intelligence data.
- 4) Intelligent data search out the start time is the playback start from the current selection point in time.

Attention:● For the models support intelligent search,default this function is enabled.

- As long as enable recording,can do the intelligent search.

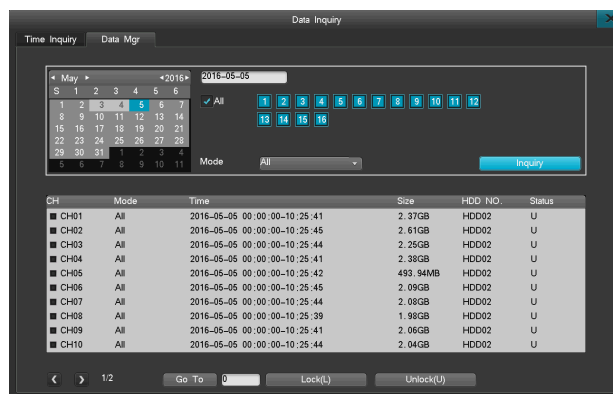
4.3.2 Data Mgr

In the "Data Mgr" interface, can choose according to the channel number and types of video video data query, as right picture:

- Select a Channel.
- Choose video type you want to see In the type drop-down box.
- Double click the mouse to choose the data for playback. If query a channel,the playback is single way;if query full channel, are full channels on playback.
- Click "Next page", "Front page" to switch page.
- You can also edit the selected data, such as LOCK, UNLOCK.

Video playback interface functions introduction:

- Playback: Playback channel amounts depends on the Machine Model.
- Right click the mouse to show or hide the playback control bar.
- It can support Digital Zoom when in single channel playback. Operation Approach: Click thebutton "🔍" to start digital zoom, Choose an area you want to see, then adjust the magnification to see the selected zoom area; Right click the mouse to cancel digital zoom.



|||| User Manual

- Can refine the query to be 5minutes,1 hour,24 hours.
- Through the time left bottom,can fast check one week data.
- "Minimum player icon" can shrink the player.
- Can adjust the position of the player by dragging it.

During playback, You can cut one segment of data, and backup it in a U disk or other backup device. It support AVI and DAT format, the operation method is as follows:

1. Play the recording data

2. Select video segment you want to see.

A.Click the button "⏮" to choose the start time point of playback.

B.Then click "⏭" again to choose end time point.

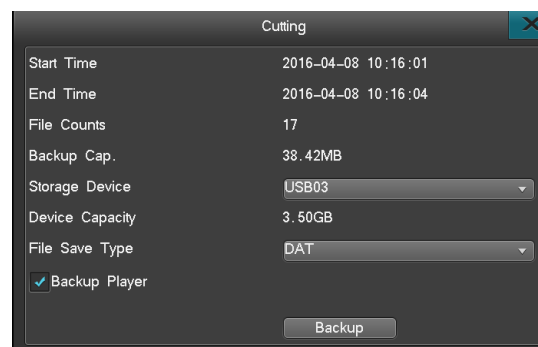


3. It will popup a cutting interface, as right picture:

4. After set the parameter well (storage devices, file save type, backup player), click the backup button,wait for the backup to be completed

Remind: AVI datas can be inquired in DVR,but can't be playedbacked,just can be playedbacked in PC.

Data saved in DAT can only be inquired and played in Machine, while in PC, you need a player which can play DAT video.



4.4 Backup management

System supports 2 way back-up and both can back up recording , same operation:

1. Network backup to a computer, "How to do network backup" can be seen on "IE Remote monitoring instruction".
2. Backup through USB Driver or Mobile HDD, But Backup device must be in FAT32 format.

Select "main menu" -> "Backup" to enter the backup management interface, as right picture:

Backup channel: choose a channel you want to backup;

Inquire Time: input a backup period, MAX support a period of one month;

Device type: select a device to inquiry local HDD data or the backup data of this storage devices;

File status: locking or non-locking;

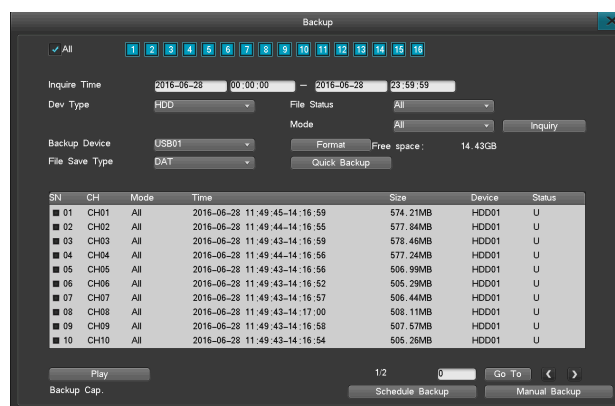
Mode: select the type of data backedup;

Backup device: select device you want to backup the data in;

Data saved type: support video in DAT, AVI format;

Note: 1. Before backup the data or inquiry data, you must select a file type.

2. The backup data played in Machine must be in DAT format.



4.4.1 Quick backup

1. In the backup management interface, after select the backup channel, file status, Video data, Click [Quick Backup];

2. Then it will pop-up a "are you sure to backup" tips, Select [Yes] for backup, until the backup is finished.

Note: Quick backup means backup all data which can be inquired

4.4.2 Manual backup

● Detailed backup operation is as follows:

1. Select the backup channel, file status, video data and click [Inquiry];
2. Check the needed backup file, Click [manual backup] to enter the manual backup interface;

|||| User Manual

3. In the pop-up prompts "Are you sure to backup?"Select [Yes] for backup

4. If need you confirm what this backup data is, just click the [play] to display its image.

Note: the lower left corner "backup cap" display the size of the selected video files.

● Playback the Backup file

1. In the backup management interface, Select a backup interface, then click [Inquiry];

2. Select one video file and click [play] to replay it.

Remind: backup files can be playback in single channel, backup data playback bar can't bedrag for forward or back.

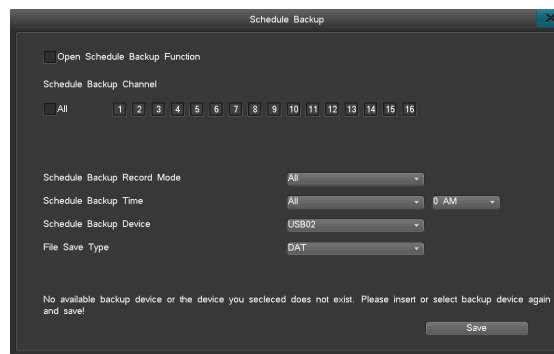
Note: When backup video in DAT format, it will introduce a DAT player as well.

4.4.3 Schedule backup

In the backup management interface, select [Schedule Backup] to enter its interface,as below picture:

You can set parameter such as: Open Schedule Backup Function, Select a Schedule Backup Channel, Schedule Backup Record Mode, Backup Time, Backup Device, File Save type, these will allows machine to start automatic backup as you set.

Remind: backup time can't be over one month! When Schedule Backup and Schedule Restart are set at the same time, Schedule restart runs firstly.



4.5 Record settings

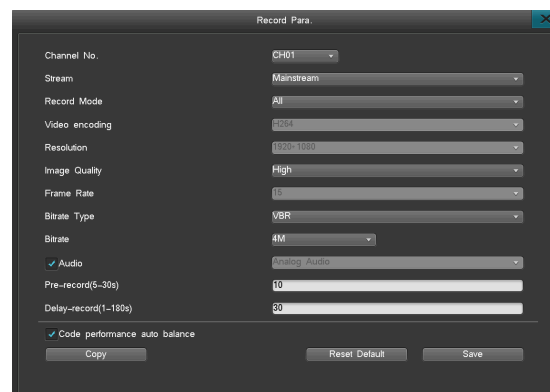
Video set up the main menu contains recordo parameters, manual record and schedule record sub menu.

4.5.1 Record parameters setup

Before recording, it is important to set up the record parameters. After logging in,click "Record" - > "Record Para." to enter the record parameter settings interface, as right picture:

- Channel No: Select a channel.
- Stream: choose the stream type, main stream or sub stream.
- Video encoding: choose the video coding format and support H.264.
- Resolution: 1920*1080,1280*720,960*576,this resolution of the option is shown here is decided by the cameras.
- Image quality:6 choice, highest, high, high, the low, the lowest.
- Frame rate: 1-25/30 frame,this frame rate of the option is shown here is decided by the cameras.
- Bitrate: 512K,768K,1M,1.5M,2M,3M,4M,5M,6M User-defined ,the bit rate option is shown here is decided by the cameras and the specification of the machine.
- Audio:Can record the audio freely,check means recording the audio,on the contrary,uncheck means no recording audio.
- Pre-record: Default setting is 10 seconds, you can change it between 5-30s.
- Delay-Record: how long it will record when alarm happens, default setting is 30s, you can reset it between 0-180s.
- Code performance auto balance.

1. When you do not start the coding performance automatic balance, the frame rate of the channel can be set manually, 1080P set the frame rate in the range of 2-15 frames, less than 1080P set the frame rate range to 2-30 frames.
2. The corresponding channel types of video coding resolution and frame rate is set by the system automatically, not artificial modification, the rest of the parameters can be done to modify.
3. Open automatic coding switch to not open automatic coding, channel coding parameters (the frame rate, bit rate) will be forced to adjust to the corresponding resolution of range, the ones which is not overrun remain the same.
4. Code performance auto balance open by default.



|||| User Manual

4.5.2 Manual record

Manual Record interface is as right picture:

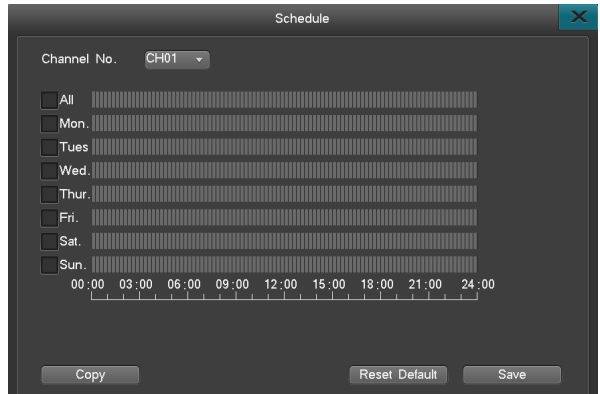
- The channel selected is in blue color, if not, in grey.
- If start Manual record, it will keep recording until you stop it. even restart the DVR, it will record automatically. Attention: Manual record is enable on factory.



4.5.3 Schedule record

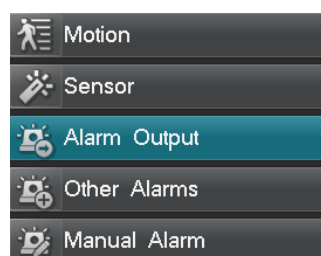
After logging in, Click "Record"-> "Schedule" to enter the Schedule Record interface, as right picture:

1. Channel No: Choose a channel;
2. Schedule time: Choose one day or several days, set a recording period by dray the mouse on the timeline;
3. Save settings or Copy it to other channel.



4.6 Alarm setting

Alarm setting include motion detection,sensor detection,alarm out,other alarm and manual alarm submenu.



4.6.1 Motion detection

After logging in, click "Alarm" -> "Motion" to enter the motion detect setting interface.

Operation Approach:

Step 1 After logging in, Select "Record" -> "Record Para" to set the channel's pre-record time and delay-record time.

Step 2 Select a channel you want to do for motion detect.

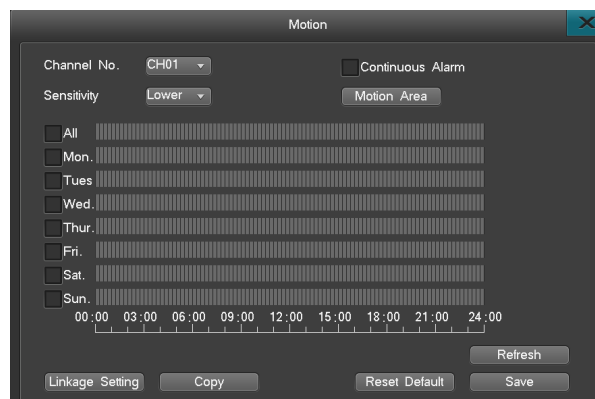
Step 3 Choose a Motion Detect "sensitivity", support 5 levels: low - the highest.

Step 4 Click "Motion Area" to select Motion detect areas on the image. The area with yellow color means a selected motion detect area, Areas with grey color means a non-motion detect area. You can drag the mouse after hold the left button to select an area, then right click the mouse to save it, if want to cancel this area, left click the mouse on it.

Step 5 Schedule a Recording time, follow the way of schedule record.

Step 6 Linkage Settings: set the trigger videos, linkage E-mail.

- When enable manual record, the color of channel button is blue. Disable is gray color.
- Linkage snapshot:choose the linkage channel number.
- If you open manual record, it will manual record all the time until you manual close it.
- Set the PTZ preset point,when there is alarm,the ip dome will switch to the preset point,then show you the video of this preset point.the precondition is setting the preset points.the method is as follow.



Note: If check Continuous Alarm, it will keep Alarming when Motion is detected. If not check the Continuous Alarm, the alarm only happened one time.

System support switching preset point function(the precondition is ip dome supports preset recall function),method as follow:

|||| User Manual

1. In the serial port setting interface to set the serial port type,serial port device,bitrate;in the PTZ setting interface to set the PTZ protocol,address code(bitrate,protocol,address code must be the same to the dome's).note:this state is for the IPC itself don't support PTZ.If your IPC support PTZ control itself,you don't need to set these.
2. Switch to the interface of setting preset point(every channel can most set 16 cruise preset),right click enter into the PTZ control interface,move the ip dome to a place,set a number and click preset.If you need several preset point,you can do these steps repeatly.
3. In the motion detection Linkage setting interface,enter into "PTZ preset point" interface,ticket the PTZ preset,input the point to the channel when there is alarm.For example,if you want to set the image swith to preset 11 in channel01,so you fill the 11 in the CH01(note:the range of preset 1-255,255 means closing);after setting,quit the menu and save.

4.6.2 Sensor detection

Sensor alarm recording setting steps:

Step1: Enter "Main Menu" -> "Record Setup" -> "Record Para." interface to set the channel pre-record time and delay-record time.

Step2: Enter "Main Menu" -> "Alarm Setup" -> "Sensor", then the interface is the figure right.

Step3: Select Sensor type: Normal on or Normal off.

Step4: Select sensor number.

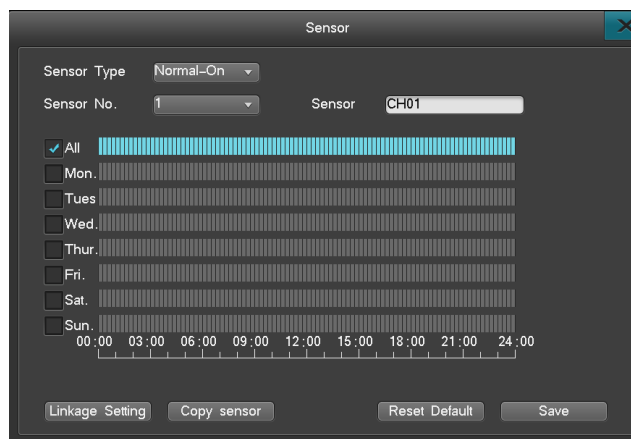
Step5: Set the alarm arming time.The arming time you can set everyday,someday or period.

Step6: When there is alarm in the sensor,it will trigger record at the same time.Advise every sensor triggers record the corresponding channel,it is convenient to find the record.Blue button means linkage recording,gray means no.

Step7: Alarm output setting,blue button means it will output the alarm when there is alarm, gray button means it won't output the alarm when there is alarm.

Step8: Linkage E-mail

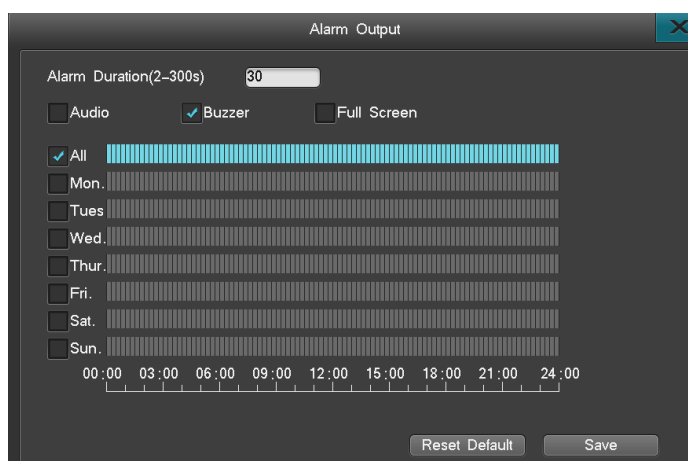
- Linkage E-mail: Ticket the Linkage E-mail,the device will send alarm emails to your assigned mailbox when there is alarm.
- Set the PTZ preset point,when there is alarm,the ip dome will switch to the preset point,then show you the video of this preset point.the precondition is setting the preset points.



4.6.3 Alarm output

Alarm output interface include: Alarm time,audio,bizzer,full screen,arming time,alarm push.

- Alarm Duration: 2-300s, the default setting is 30s, means how long the alarm will last.
- Audio\buzzer: Means when the Alarm happens, the machine will make some Audio and Buzzer to remind person.
- Full screen: System is multi image, when there is alarm and the alarm channel will be full screen.
- Arming time: Can set the period of alarm,if you don't set the arming time,it won't output audio when there is alarm.
- Alarm push: Choose open state,the host alarm information will be transfer to the mobile phone network terminal APP etc.



4.6.4 Other alarms

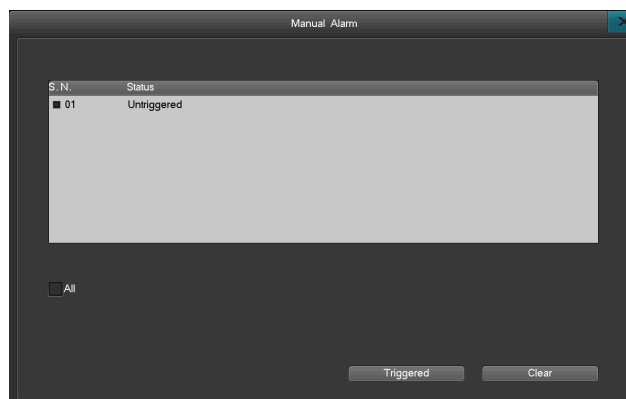
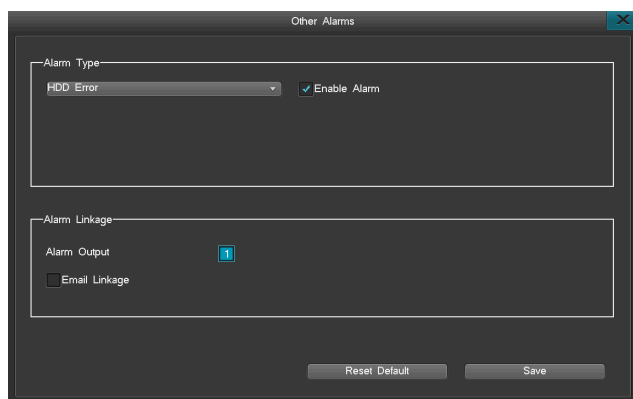
After logging in, through the "alarm Settings" -> "other alarm" into other alarm Settings interface, as left below picture

- Alarm type: Disk error, video lost, video shield, network disconnect, temperature over high, disk full, we designed disk error, video lost, temperature over high and video shield as default; network disconnect, disk full as option.
- Alarm Linkage: when alarm occurs, it can send you an email attached with a snapshot.

Note: If need Alarm-Email linkage, you need to set the email, Please see chapter: 4.7.6.3.

4.6.5 Manual alarm

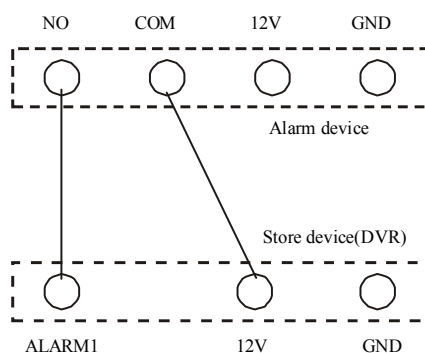
Used to control the opening or closing of alarm output,when triggered,the external alarm light will light,trigger again it will put out, as right below picture:



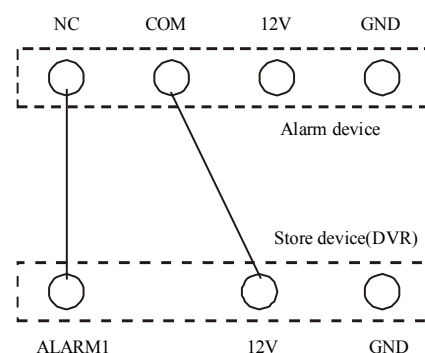
4.6.6 Alarm input/output connection

1. Alarm input connection with normal on like figure 1

NO represent the alertor is Normally Open,in normal status,after connection the alertor as figure 1,the voltage of ALARM1 is 0V.when there is alarm triggered,it equals that the switch between the NO and COM closed,at this moment the voltage of ALARM1 is 12V,it is much more than 0.8V,therefor alarm.



(figure 1)



(figure 2)

2. Alarm input connection with normal on like figure 2

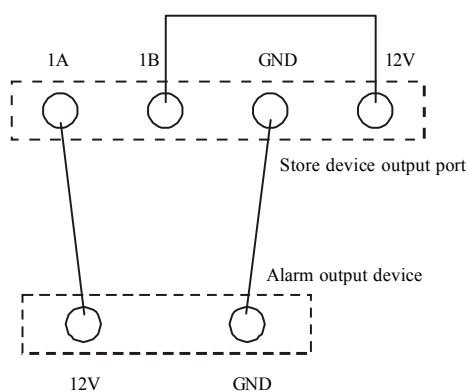
NC represent the alertor is Normally Close,in normal status,after connection the alertor as figure 2,the voltage of ALARM1 is 12V.when there is alarm triggered,it equals that the switch between the NC and COM opened,at this moment the voltage of ALARM1 is 0V,it is much less than 0.8V,therefor alarm.

|||| User Manual

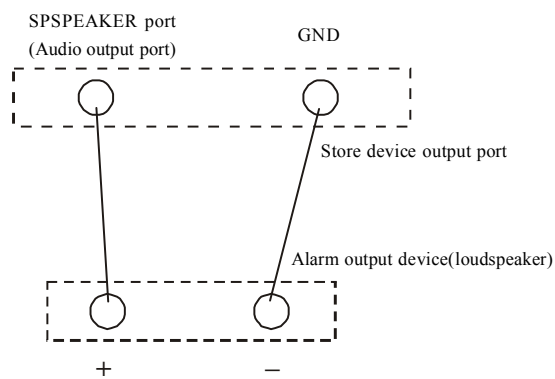
3. Alarm output connection

There is a little difference because of the various alertor, but in generally speaking there are two kinds: passive alarm output connection and active alarm output connection.

As to the passive output alarm device, the connection is as figure 3 (the usual connection)



(figure 3)



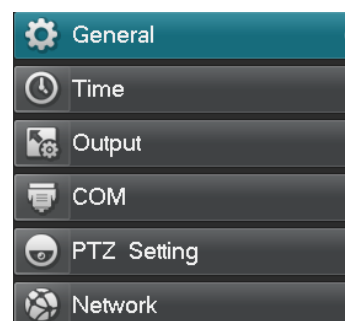
(figure 4)

Active output alarm device has power itself, such as loudspeaker: between the cathode of Capacitor connect a wire to the AUDIO OUT; the another port of alertor connect to the GND of AUDIO OUT, as figure 4.

Note: Only -P serials support the alarm.

4.7 Settings management

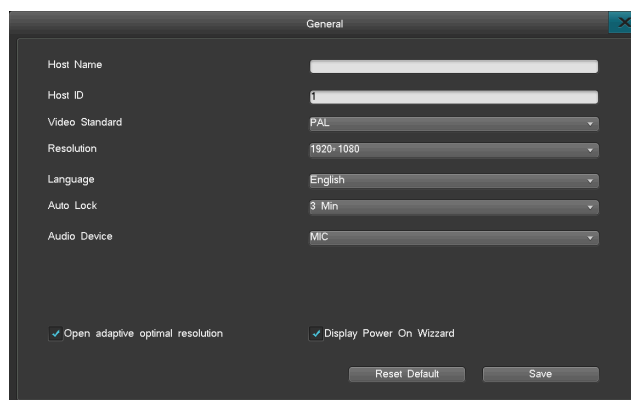
In the Settings menu, it has general settings, time settings, output settings, COM settings, PTZ settings, network settings. as right top picture.



4.7.1 General settings

Please select "Settings management"- "General", as right below picture:

- Host name: Please input the host name.
- Resolution: Output resolution support 1280*1024,1440*900,1280*720, 1920*1080.
- Auto Lock: Auto lock time can be set within 1-10 minutes, default time is 3 minutes. For example, if Lock time was set at 3 minutes. The screen will be locked for being idle after 3 minutes.
- Display Power on Wizard: this means if you need a wizard after turn on the DVR, this make you quick set the parameters including: Cloud service,time,disk management,code Para., manual record.
- Language: English and Chinese.
- Open adaptive optimum resolution output: HDMI output equipment according to receive automatically adapt best output resolution, no matter what display device, the machine after the operation can be adaptive in order to achieve the best output effect (including shutdown after access, and access) in the process of running, no longer requires the user to set.



|||| User Manual

4.7.2 Time settings

Click "Settings Management" - "Time" to enter into Time Settings Management. as right top picture:

- Time Settings

This menu is used to modify the time of the system.

Note: 1. You can choose 9 different data formats.2. Time standard can be 12-hour or 24 hour.

- DST settings

Click the "DST" button to access the setting interface (as right bottom picture), then set the starting time and end time through the week or date. For example: The DST of EU countries is from the last Sunday on march to the last Sunday on October. EU countries change the time at 2:00 of the last Sunday on March in GMT. According to the time zone in different area, Western Europe time zone (UTC) countries (like: Britain, Ireland and Portugal), central Europe time zone (UTC+1) countries (like: France, Germany and Italy) and eastern Europe time zone (UTC+2) countries (like: Finland and Greece), The local time distribution form 02:00/03:00 adjust to 03:00/04:00. Inverse adjust at 03:00 of the last Sunday.

- NTP settings

NTP: Network Time Protocol, can connect to a network time server to gain the current time, and set it as DVR system time. Set the time server in the NTP interface, the system default as "hk.pool.ntp.org", Port: 123, default time zone is GMT08:00.

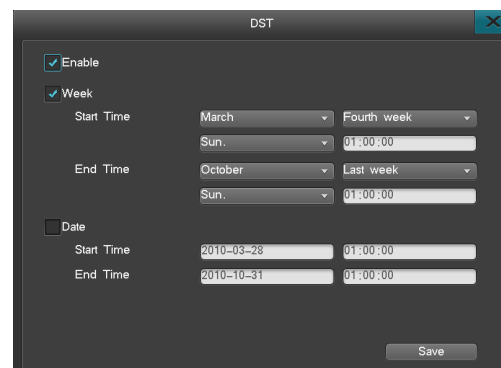
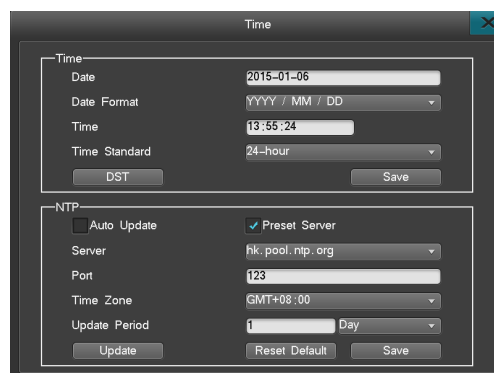
1. Usually the current default time server can successfully make timing, so under normal circumstances, do not need to modify the time server; such as the default time server connection is not successful, you can manually modify the time server can be connected:

2. Port is the ports which connected through the network to time server. This SNTP only support TCP;

3. Time zone, need to get the current time of which time zone;

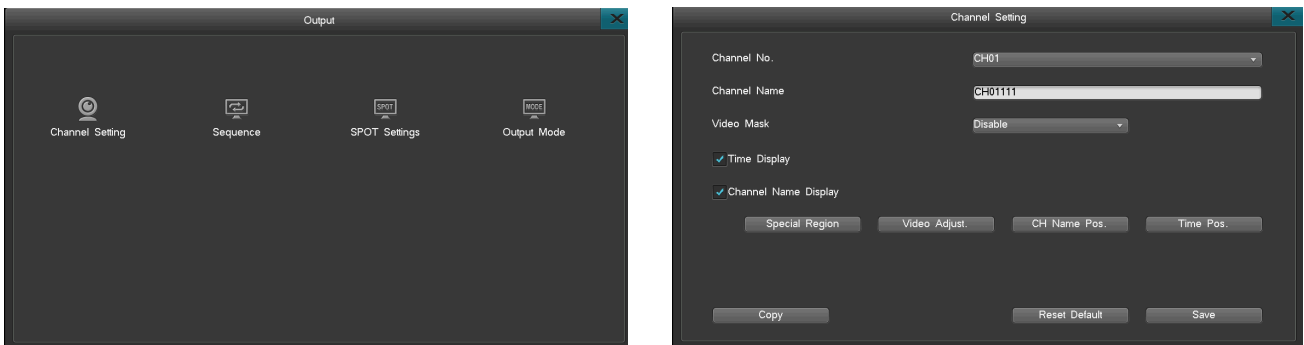
4. Update cycle, click on the "automatic update", the system will automatically update the time according to the update cycle;

5. To do NTP, the DVR must be connected to the Internet.



4.7.3 Output settings

Select "Settings Management" - "Output", as left below picture:



4.7.3.1 Channel settings

Enter into "Output" -> "Channel Setting", the interface as right top picture. Channel settings include the parameter modify in Channel name, Video Mask, Video Adjust, Channel name Pos.

(1) Channel name

- Max characters No is 20 pcs. Click the input sheet to change the name.
- Left click mouse in the text field, then it will pop out soft-keyboard. The keyboard default as inputting english letters. Can click "Caps" button in soft-keyboard to change case.
- To copy the channels, but do not copy the channel names.
- Finish setting up the channel name,the name when playback is the same as preview.

|||| User Manual

(2) OSD

- Equipment support time display and channel, the user can according to need to set up time and whether the channel name, according to the Settings directly affects the effect of playback, if preview does not display, is also not show playback.
- Time of equipment support and channel position adjustment, the user can according to need time and channel position adjustment into the interface with the mouse drag position to save the Settings, the Settings also directly affects the playback effect, if the preview screen time and channel position adjustment, the playback will see the effect and the preview.

(3) Video Area Mask

In some places, the need for some sensitive in monitoring the scene images or privacy area of shielding, such as bank tellers password keyboard in monitoring area.

Video Area Mask Type: Disable, Realtime mask, Record mask, All mask . Record mask & All mask support 4 area at the same time.

- Disable: Normal display, do not open the mask function.
- Real-time Mask: Only when the real time images are blocked, and the full picture was blocked.
- Record Mask: Do not cover the real-time picture which in the chose area, just cover the playback picture , IE browsing picture and client browsing picture.
- All Mask : Selected block area in real time images and video replays, IE browsing pictures and client browsing pictures are covered in the video, all mask Settings as follows:
 1. Choose "Record Mask" or "All Mask", click "Mask area" to set up.
 2. Select the start point by mouse and move mouse, let go to get the square frame mask area to set, double click left of mouse to cancel this selecting.
 3. Back to Channel setting interface, save the setting.

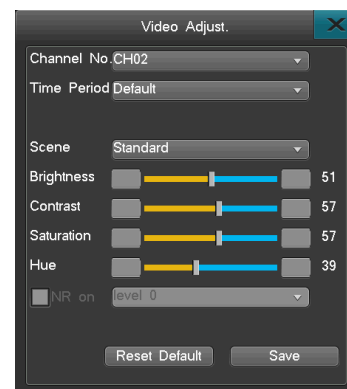
(4) Video adjustment

Choose the Channel Setting interface, click "Video Adjustment", or click the right of mouse to enter into "Video Adjustment", as right picture:

- Channel No.: Used for the channels switch, all channels can be set up here directly.
- Time settings: Default is the whole day, it is also available to set up the channel video parameter by different time.
- Scenario Settings: equipment support four fixed scene, also contains two custom scenarios, the four types of fixed scene are standard, indoor and outdoor, weak light, the four fixed scenarios video parameters cannot be set, can only set a custom scenario.

Video adjustment method:

1. Selection effect to make the video parameters set by the time period, also can choose the default effect throughout the day.



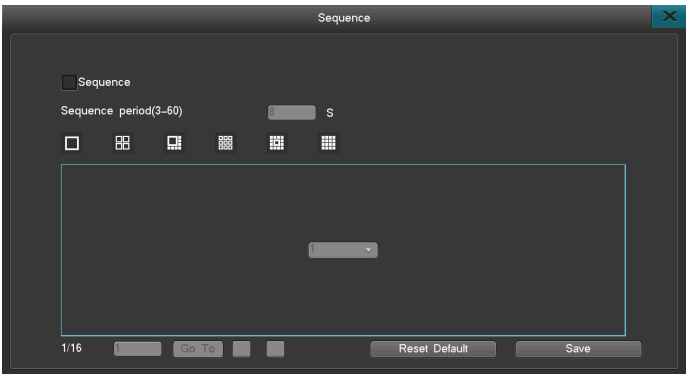
2. Choose user-defined scene.
3. Click the left of mouse to choose left and right arrowa to change the parameter,the left and right arrows which show in the parameter menu represent the data increase and decrease.
4. Finish setting,click "Save".
- Note: After making video parameter regulation effective, playback and preview effect will be consistent.
- Noise reduction:noise reduction function can only take effect in the custom of the scene situation, system support six grades noise reduction processing, the higher grade, the noise reduction processing is more obvious, the user can adjust it according to the effect of output picture, the system default of the noise reduction is closed.

4.7.3.2 Sequence

Choose "Cruise Setting" from "Output Setting"to set,this function is make different channels switched,to set up the cruise image format,cruise cycle.As right picture:

Setup steps:

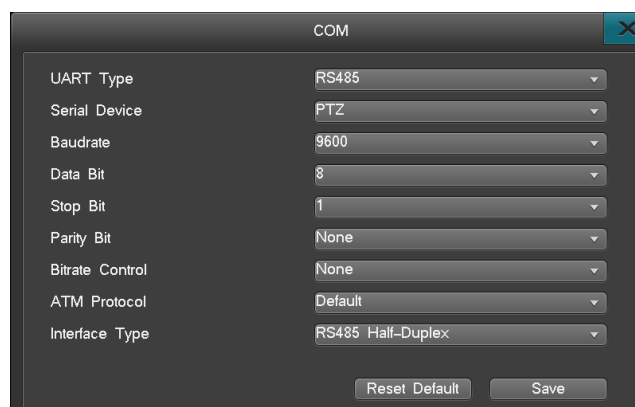
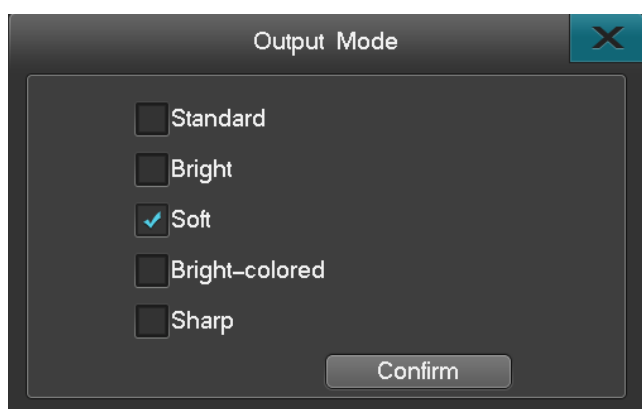
- [Step 1] Check Sequence.
- [Step 2] Input Sequence period
- [Step 3] Set Sequence format, default setup is 1 image, you can change the format.
- [Step 4] setup the sequence of cruise ch, default start from ch1, you can click "▼", then pop-up drop-down box to select the ch number; you can also click "◀", "▶" to or click "turn to" to page turning directly after typing into numbers, if there are multiple page.
- [Step 5] click "save", then setup successfully.
- Reminding: Cruise can just work when device locked.



|||| User Manual

4.7.3.3 Output mode

System support output mode setting: standard, bright, soft, bright-colored, sharp. customer can choose the output mode according to the requirement. can find the output mode by "setting management" -> "output setting" -> "output mode", also can right click to choose the output mode, as left below picture:



4.7.4 COM

After login, through main menu "setting management" -> "serial port" enter into the interface of serial port, as right top picture, Through this setting you can accomplish the communication DVR of serial port. The serial port RS485 is a half-duplex port, can connect the PTZ and keyboard at the same time.

RS485 parameter: Serial port number, serial port device, bitrate, data bits, stop bit, check bit.

Application: Define serial port device type, options are PTZ, serial port keyboard, transparent channel three types.

- Bitrate:set the bitrate of communication between serial port and eternal communication device.you must set the bitrate of PTZ or keyboard and the software setting to be the same.
- Data bits,check bit,stop bit:set the data bit,check bit and stop bit according to the protocol of PTZ itself.as usual the data bit of PTZ,check bit is nop,stop bit is 1.
- Keyboard address:set the host number in general setting interface;when there are several DVR control by keyboard,the keyboard is used to control and distinguish the ID of different host.

4.7.5 PTZ setting

After login,through "main menu" -> "settings management" -> "PTZ" enter into the setting interface,as below picture, PTZ control setting steps:

- Set the serial port type,serial port device,bitrate.
- Enter into the PTZ setting interface to set "PTZ protocol,address code"(PTZ address code and the channel number are the same as default,that is to say,the PTZ address code of channel 1 is 1.attention:please confirm the dome protocol,bitrate,address code the same with the dome protocol)

PTZ Setting

Channel Name	Protocol	Address Code	UART Type
CH01	UNKNOWN	1	RS485
CH02	UNKNOWN	2	RS485
CH03	UNKNOWN	3	RS485
CH04	UNKNOWN	4	RS485
CH05	UNKNOWN	5	RS485
CH06	UNKNOWN	6	RS485
CH07	UNKNOWN	7	RS485
CH08	UNKNOWN	8	RS485

Copy

Reset Default

Save

|||| User Manual

- Switch function is for the single channel, click the right key of mouse to choose and access the PTZ control interface(as right top picture), click the right key of mouse to exit.

- The method to set preset point and recall the preset point:enter into the PTZ control interface,left click mouse in the frame of preset point to callout the soft keyboard,input the preset points,right click mouse to quit the soft keyboard,then save.switch the PTZ to another direction,input the preset point already set in the preset point,click recall,the PTZ will turn to the place set in the former step,then set all the preset points you need

- Cruise:in PTZ control interface click the Switch-cruise to set parameter of multi-preset points cruise.fill in the 1-16 frame the preset points,when the system logout,the PTZ will move among these preset points in order.(Note: Sequence can only be activated when lock-screen)

(1) Range of curse:0-99s. (2) Preset numbers:16 preset point for every channel.

(3) Range of preset point:1-255,255 means closing.

Note: DVR of this serials only support RS485.

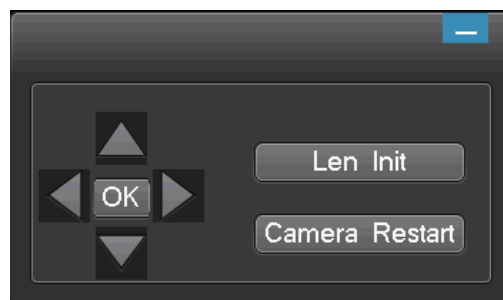
UTC:

When DVR connects the camera which has UTC function, user can set the parameter via UTC function, as below:

- 1.Access the PTZ setting, choose the communication port to AHD485.
- 2.Please switch to single channel in the preview interface.
- 3.Click the right key of mouse to choose "PTZ control".
- 4.Choose the "OSD Menu" to access the UTC interface that can be use the function as right bottom picture.
- 5.Use the direction key and OK key to control the UTC function.

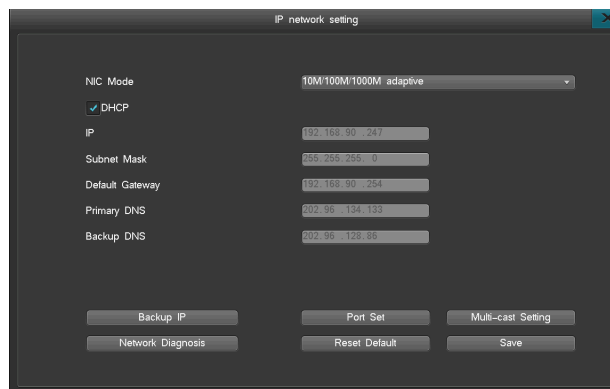
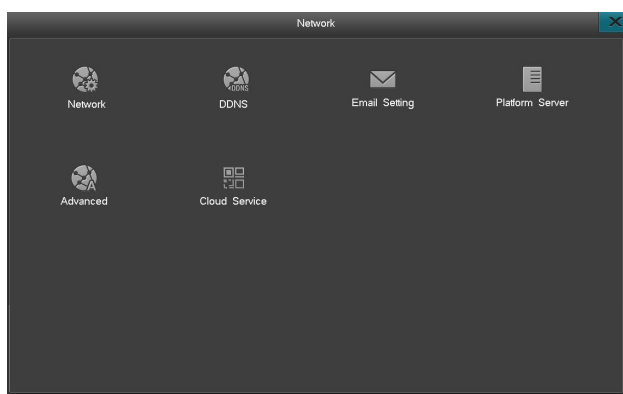
Notes:

- 1.Direction key can control the UTC menu and "OK" key is for saving.
- 2.User can click right key of mouse to quit the UTC function.
- 3.Lens initialization and camera reboot in the UTC function needs the camera support.



4.7.6 Network setting

After log in, pls choose "Setting Management"->"Network Setting" to enter into the network setting interface. Network settings as left below picture:



4.7.6.1 Network setting

Via the main menu "Network setting" "Network setting", after double click, entry into "IP network setting" interface, as right top picture, If there is DHCP serve in your LAN, you can select "DHCP" then will be effective.(Note: default select "DHCP")

- Under the condition of start "DHCP", device will obtain a dynamic IP address, and show in the IP address column.
- Under the condition of not start "DHCP", system will use fixed static IP address.
- IP setting: This IP address must be unique, can not be conflicted with any other else host or work station in the same network sequence. Factory setting :192.168.0.6.
- DNS serve: please type into the DNS address which is offered by your local ISP.
- Standby IP: Standby IP will be workable only after DHCP expiry.

|||| User Manual

- Port setting: Listening port, HTTP port, upgrade port and RTMP port.
Listening port: keep the same with communication port of client-side, default 8101; range from 8000-9000.
HTTP port: Internet Explorer visiting port, default 80; the format of Internet Explorer visiting is :http://IP, when change to other port,the format of Internet Explorer visiting is: http://IP:port.
RTMP port: When view the device via DDNS, it needs to make port forwarding about RTMP port.
- Multicast IP address setting as below:
Start Multicast: Multicast can be only effective for UDP stream.
Multicast IP address: Multicast IP address range from 224.0.0.0 to 239.255.255.255;system default 239.0.0.1.
Multicast port: If there are 2 DVRs or above in one section of the net, please make sure the IP addresses is not conflict when the DVR amount is over 2pcs.
- Network diagnosis: Diagnose whether the current system network is good or not, if not good, you can repair the network via the diagnosis result.

4.7.6.2 DDNS service

When the device use PPPOE to connect WAN, access the device by DDNS can effectively solve the dynamic IP problem. It can support "multi.super-ddns.com, www.no-ip.com, http://dyn.com/dns, www.meibu.com, www.oray.com and http://freedns.afraid.org" DDNS service. You can use one after have applied one account in their official website.Enter the "Network" interface, select "DDNS" to access the DDNS setting page, as right picture:

- Peanut shell/meibu/ freedns/no-ip domain: apply for domain on peanut shell/meibu/ freedns/no-ip website, and write the correct register info,then visit the device via applied domain. The parameters which need to setting: users need type into user name, password, which users register on Peanut shell/meibu/ freedns/no-ip website, then save and log in, and can analysis the domain.
- Dyn dns domain: apply for domain on dyndns website,and write the correct registered info, visit the device via applied domain.The parameters which need to be setting:users need type into user name, password, which users register on dyndns website, then save and log in, and can analysis the domain.

DDNS

Server: multi.super-ddns.com

Domain: 5a0af80a ☒ Default

☒ Auto Login ☐ Not login

Login DDNS Test

Domain

Save

4.7.6.3 Email setting

After entry "Network setting" interface, select "Email setting", then entry into email setting interface(as right top picture).There are such as motion detection, video lost, hard disk error, high temp,full hard disk, video shield,which can support email upload.

The exact ways of email upload:

1. To make sure email upload when alarm, please turn on email upload(select linkage E-mail, setting in each interface menu, which support email upload when alarm), then it means,it will send e-mail to user when alarm.
2. Setting E-mail serve, default smtp.126.com
3. Type into e-mail user name and password which you applied in e-mail serve website.
4. Fill in the e-mail address which you applied in e-mail serve in sent email
5. Goal email can be multiple email address, but with the most 256 characters in total, please use ";"to divide multiple email.
6. Port are 25 default, don't need to amend it usually.
7. Setting the cycle of e-mail upload,this means,when trigger the alarm and turn on e-mail upload function last time,then in the same cycle,any alarm trigger again , will not have email upload.
8. Upload screenshot: When enable it, there is screenshot in the alarm message; if disable it, there is no screenshot in the alarm message.
9. After all related parameters, then just save and done. When alarm trigger, goal email will receive related message in that channel.
10. Start using "SSL safe log in": please select this option accordingly, cause some SMTP serve need sate connection. For example:port 465 of gmail,yahoo email, and some other port 25 of hotmail need starting up "SSL safe log in".

4.7.6.4 Platform server

This series models can support GB28181.as right bottom picture

|||| User Manual

4.7.6.5 Advanced setup

UPNP, full name: Universal Plug and Play, realize auto port mapping, so that the PC in WLAN can penetrate LAN and visit DVR, to make network become much high effective. Select "UPNP" in the option of "advanced setup", then click "setting" button, entry "UPNP" interface.

The steps of remote visit recorder via "UPNP" function:

- Setting the network of DVR, make sure your DVR and router in the same IP segment(host IP must be in the range of router's filter IP address, sub network mask, default gateway and the setting of DNS option must keep the same), recommend to use DHCP function; starting up the UPNP in router manually (select UPNP in the forwarding rules of router, start up UPNP).
- In the interface of DVR's "UPNP", select "UPNP starting up". After starting UPNP, there are 3 port default, these 3 ports can not be edited, deleted; when the status change into "workable", these 3 port mapping can be used normally. If you want to add other ports mapping, then you need to "add new" port mapping operation.
- Click "add new" button, entry into "UPNP PAT add" interface, set serve name,select the right protocol correspond with router(TCP/UDP),port of DVR and port of router(to be easy, these 2 port can be same). After setting parameters, please click "save" and click right mouse, then back to UPNP main menu, then you can see the new added port mapping, also you can see the adding result in the router's UPNP menu(some router don't have this list). The corresponding relationship between the setting of DVR and router's message: protocol name--application description; protocol-- protocol type; DVR port number-- internal port; Router port--External Port.

- Verify whether the setting of UPNP are workable, you can log in via IE/Platform, the way of log in : `http://IP:port`, IP corresponding with the address of WAN, port corresponding with HTTP port.

Notes: 1.UPNP need the support of router, some router can not support his function, can only do port forwarding in router or set the host address of DMZ direct into the IP of DVR.

- 2.Cause the network protocol of Webserver platform are using TCP protocol. Need support network preview, add the TCP protocol of HTTP port and listen port into the mapping list if needed.

4.7.6.6 Cloud service

To solve the device network setting, network safety , and complicated network penetrate issues, add a new function in network setting: ivview. Entry "Network setting" interface, select "Cloud service" interface, as right picture:



- Turn on/off ivview: select "enable ivview" option, click "save", starting up "ivview", when the status change from offline to online, this show "Ivview" function are workable.
- Download the APP: via scan QR-Code, then can download APP for phone.
- Adding device: via scan QR-Code, you can add the device into ivview.

Notes: before adding device, you need to register account on ivview website: www.ivview.com. There are 3 position on the main interface, where you can connect into ivview : booting wizard, status column, network setting.

4.8 Disk management

Click "HDD Mgr" on the main menu to go to the next menu, such as Info, HDD Group, Storage setting, SMART.


4.8.1 Basic information

Choose "Basic Info", you will see this interface, as left below picture:

1. Check the basic info, such as HDD's name, Status, Storage capability, Disk attributes.

Note: Only can use a disk in FAT32 format, the HDD should be up to 32G, if the backup device is divided into several areas, the system can only connect the first area.

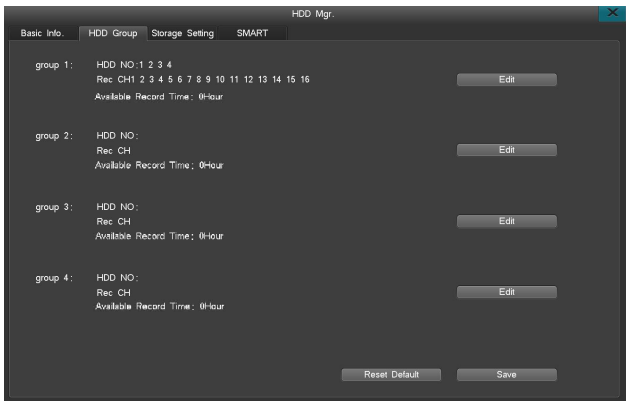
2. Disk Attributes: Two attributes, R-W (Read and Write), R-O (Read Only), R-W as default, you can change the Disk Attributes from R-W to R-O to prevent a data loss Set route:

Click " " to change the attribute.

3. HDD Format: Select the HDD you want to Format, or Click "All format" clear all HDD storage.

Note: When doing "All format", it will also format the backup device, but the Disk log will not be cleared.

|||| User Manual



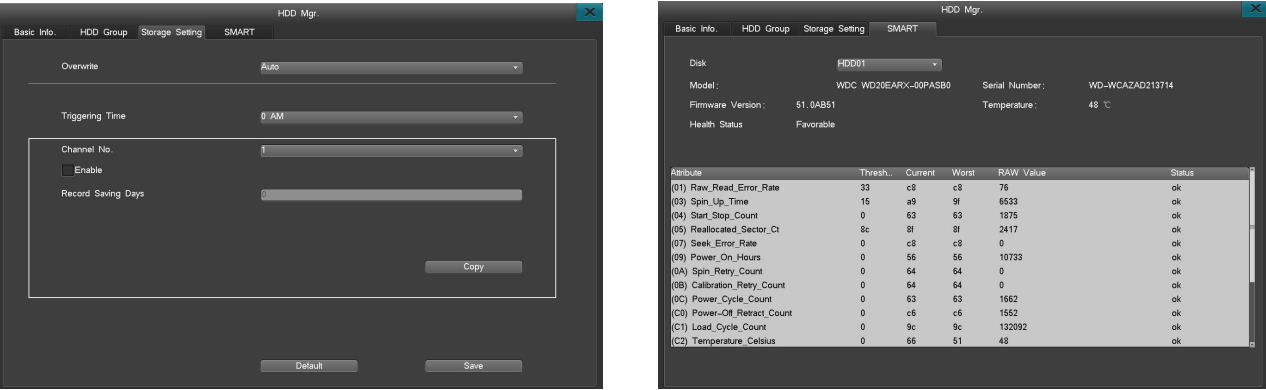
4.8.2 HDD group setting

- Setting a HDD Group makes the data of selected channel be stored in a certain HDD. This can bring benefits as follows:
1. Know which HDD stored the data of one channel.
 2. Preset enough storage for each channel
- Click "HDD Group" to enter the following interface(as right top picture) , it shows the info of each group, click "Edit" to change settings.
- HDD NO: Set which HDD was in this group.
 - Rec: mean which channels data will be stored in this group.
 - Available record time: Means Max recording time in the remaining storage.

4.8.3 Storage setting

Select "Storage setting" to see the left below interface.

- Video Overwrite: "Auto" is recommended, when the disk is full, it will overwrite the earliest recording data automatically, when choose "Manual", you need to make a confirm on the full disk tips, the machine will stop recording until you confirm to overwrite the disk.
 - Triggering time: At this particular moment, the machine will check the HDD storage automatically to know if the data overflow the max storage time.
 - Channel No: Choose the channel which will delete the data automatically.
 - Select "Enable" to active recording data auto-delete function.
 - Recording saving days: set how many days the data will be stored. (For example:if set 7 days and the last day is 7th, when in 8th, the system will delete the 1st day's data)
 - Channel Copy: The setting of one channel can be copied to other channels.
- Note: if the data's attribute is set as R-O(Read Only), it will not be overwritten or delete.



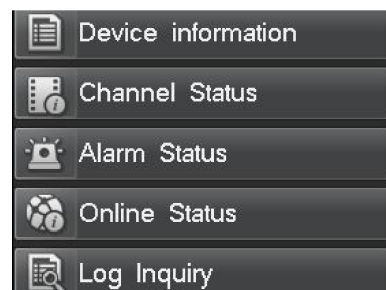
4.8.4 SMART

Select "SMART" sub-menu in HDD management interface (as right top picture), can view the disk number, serial number, firmware version, temperature, health status and SMART of each attribute value and status.

|||| User Manual

4.9 System information

Through the "main menu"->"system information" to view software version information, log information and so on, including sub menu: device information,channel status,POE status,alarm status,online status,log inquiry,the menu right picture:



4.9.1 Device information

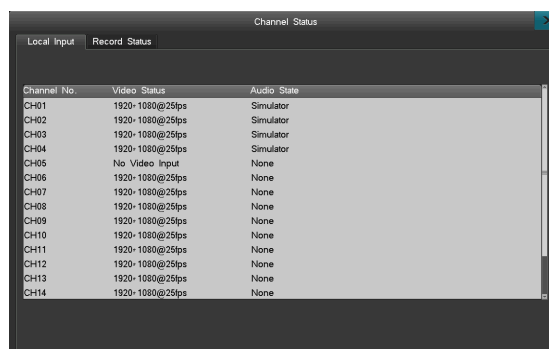
Device information displays the system software version and other relevant information,can view the type of device model, channel info., software version, GUI version, IE version, hardware version,SCM version, IP, MAC, language,and other information, as left below picture:

4.9.2 Channel status

This menu contains two sub-menus: Local input and record status

4.9.2.1 Local input

Click "System info"->"Channel Info" ->"Local Input", as right below picture. Local Input: it shows video info of every channel, such as resolution and frame rate.

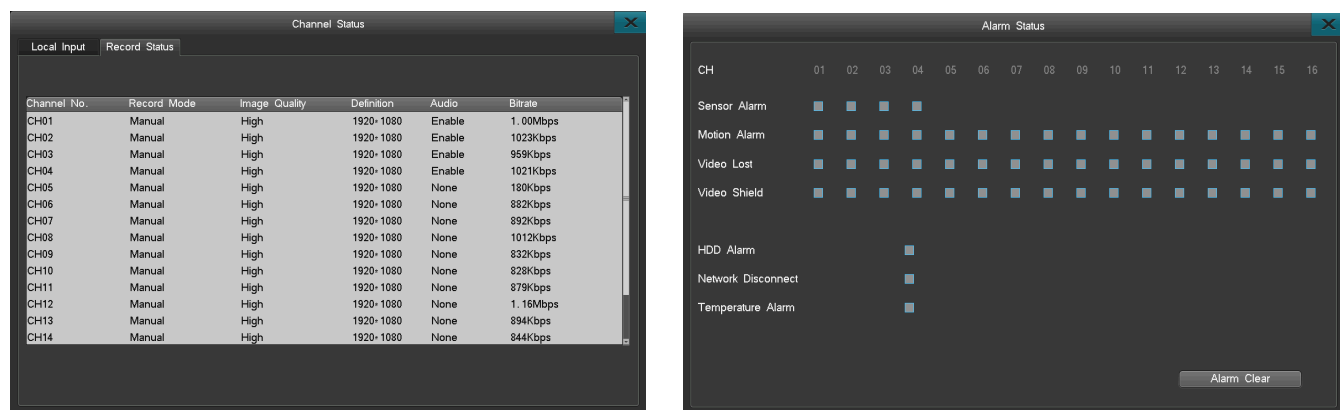


4.9.2.2 Record status

Click "System info"->"Channel Status"->"Record Status". The interface will be it as left below picture:
Record status: It shows record information of each channel, such as Record mode, Image quality, Resolution, Audio and Bitrate.

4.9.3 Alarm status

Alarm status's interface will be it as right below picture, it shows alarm status of each channel, including: Motion Alarm (Marked with Yellow), Video lost alarm (Marked with Blue), sensor detection (Marked with red), Video shield (Marked with yellow), HDD Alarm (Marked with Red), Network disconnect (Marked with Red), Temperature Alarm (Marked with Red).
when alarm occurs, you can click the Alarm icon on the bottom status bar, then it will show the Alarm Interface, click"Alarm Clear"to clear the Alarm.
Note: the alarm of temperature and network disconnection will not be directly clear, must after return to normal.



|||| User Manual

4.9.4 Online status

Online Status shows the current network info of this device, such as Uername, Server IP and Login time(as left below picture).

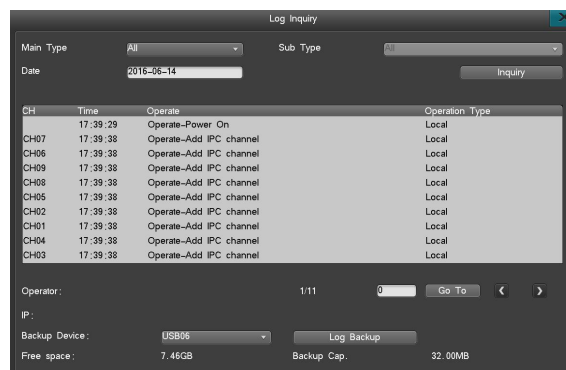
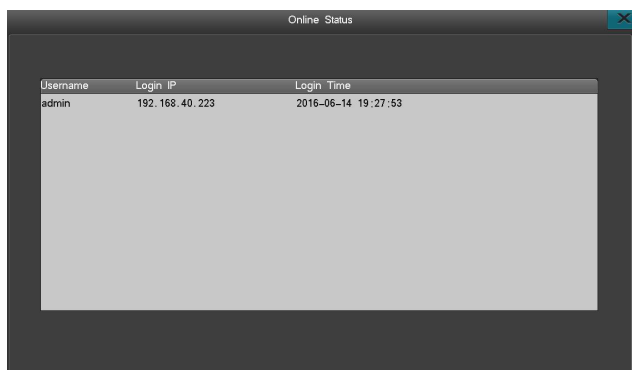
Note: (1)The platform may affect the online status information display. If the platform added an IP device, server platform keep login DVR operation even if platform client does not open, if the user name password matching, login will get succeed, and one more message will be displayed.(2)When login on the web browser, the Log of DVR will also record this operation.

4.9.5 Log inquiry

Log Inquiry interface as right below picture:

- Note: The log total number of the day which you inquired (Log information max support 1023 days, 524032 item logs); You can check the host log information by web.
- Log can be inquired by primary and secondary,it is more convenient.
- System log include: System boot up/Shut down log, firmware upgrade log, alarm log, PTZ control log, System user login log, System parameter change log, Record playback log, backup log, Formatting HDD log, client login log and so on.
- Support to backup Log and check it in PC.

Note: Log can't be recognised directly in PC,please use "DVR HDD analysis tool" to inquiry.



|||| User Manual

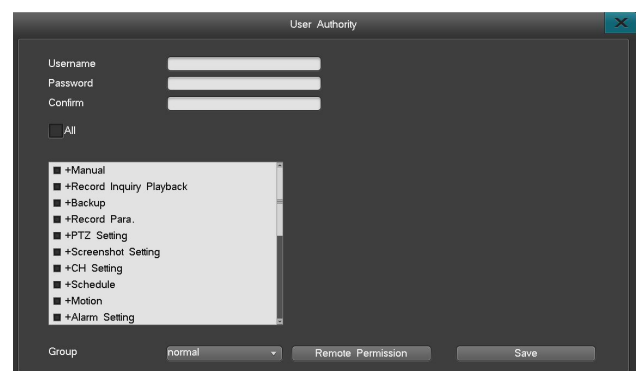
1. User management

- Add/delete user: Focus the cursor on the "Add" icon and click to add new user, move the cursor to select the user in the user list, then focus the cursor on the "Delete" icon and click to delete the user.
- Modify password: Move the cursor to the user list, choose a user, then move the cursor to "Edit" to enter in the modifying interface.
- Support local and remote rights setting. some authorities allow the user to set the authorities of some channels. (like local authority of preview and manual record, remote authority of remote preview, parameter settings and so on).
- Support MAC address binding with an IP, it can be visited by the PC which one binding.

2. User group

Support user group function: each user can just take part in one group, the admin user can distribute rights to users in this group. The interface as right picture:

Note: the operation above is in the situation of disabled excuse-login, if enable the excuse-login, we can't edit the user



4.10.3 Factory settings

The way to reset to the factory settings: after login, "System Maintenance" -> "Reset to factory" continuous operations to enter the interface, reset the system default parameter or factory settings, as right below picture:

System default parameters:

General: Enable auto-lock (enable), Auto lock (3 minutes); Host id (Null), Display power on wizard (enable).

Output: Video shield(disable); Channels name position; Sequence(disable).

Schedule record: Schedule record(disable).

Alarm: Motion record(disable); Linkage E-mail(disable).

Serial port setting: Serial port type(RS485);serial port device(PTZ);bitrate(9600)and so on.

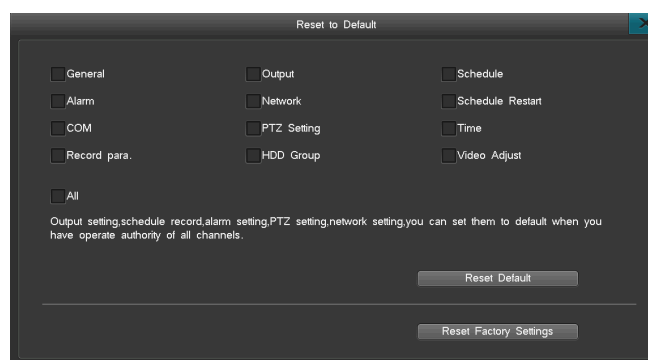
PTZ setting: Protocol(UNKNOWN);address code(1-16);serial port type(RS485).

Network: Cloudservice(enable); UPNP(enable); DDNS(enable,note:just auto-register server); auto-dial(disable).

Schedule restart: Schedule restart(disable).

Reset to default: Click "reset to default" button and confirm,the ticketed parameters is reset to the factory settings.

Reset to factory settings: Click "Reset to factory settings" and confirm,the machine will restart,after that,all parameters are reset to the factory settings.



4.10.4 Upgrade management

There has 4 kinds of upgrade method: 1.Web network upgrade 2. USB upgrade 3.FTP upgrade 4. USB restore,please read the upgrade instruction before restore

Please read the upgrade instructions carefully before upgrade.

1. Web network upgrade

Please double check the version of the upgrade software, so you can restore to the former version when your upgrade is failed. If your system are running well or just don't need the new function, we recommend you keep the default version. Please backup the important record files before upgrade.

Do ensure supplying the power and the stability of network when upgrading. Network outages and interrupted power supply will cause upgrading failure. If the host-side did not appear "the update was successful, which is resuming the equipment, please be later..." in 5 minutes after the browser side shows uploading upgrade file completed, you can shut down and then reboot, then check whether the host computer update was successful.

Please double check the version of the upgrade software, including machine model and boot interface, and make sure whether it corresponds to your system. If you have any doubts, don't upgrade, or in case you fail to upgrade the firmware, you can neither redo the system upgrade nor restart the machine (These upgrade failure machine must send back to the factory).

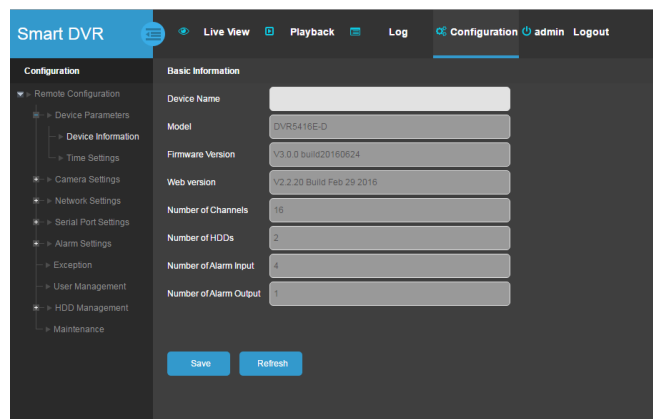
After upgrade, for the new features, please refer to the user manual of the new version. You can get the new version from the suppliers.

Please don't modify modify the software (including the name of the firmware), otherwise, we will take no responsibility and will not provide free update.

|||| User Manual

The procedure is as follows:

- Connect the Net DVR to PC by coherent network cable or LAN (pay attention to IP conflict).
- Before upgrading, please confirm the IP address of host computer, input http://host IP: http port in browser address, download the webcontrol.exe and install then login.
- After login then choose "Config" -> "Remote upgrade" to open upgrade interface.
- Click "Browse" button to choose the file to be updated, as right picture .
- Waits for 3 seconds, the DVR will display "Network upgrading..." . It probably takes 2-3 minutes to update the software.
- The "System is rebooting, please wait..." message will show in DVR when firmware upgrade succeed. Then the machine will automatically restart.
- The DVR administrator password will not change after upgrading.



2. USB upgrade

Operation steps:

- Copy the upgrade.bin to the U disk.
- Plug into the USB disk on the back of the DVR, right click the mouse, then pops out the tip, and confirm it.
- The host says "Local upgrading...".
- When the upgrade have been finished, the host will pops out "Local upgrade was successful!", that indicates the upgrade is successful, then the host will restart automatically.
- The DVR administrator password will not change after upgrading.

3. FTP upgrade

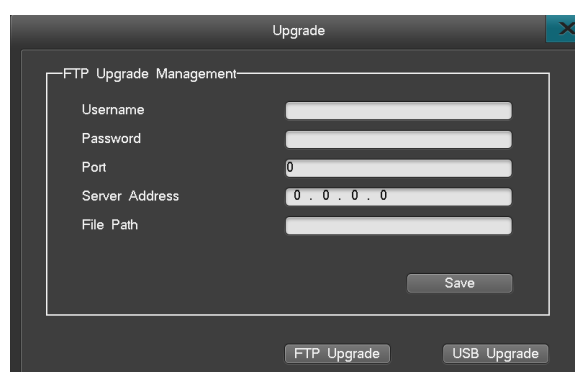
Operation steps:

- Open the FTP server software, configure it follow the setup wizard. Create user name and password in server. Set the root directory (the folder which will place upgrade file), set the permission (must set the download permission).
- Enter server after configuration. Set the FTP server IP and port.
- Start FTP service.
- Click "System Maintenance" -> "Upgrade Management" -> "FTP upgrade" (as right pictures),

set the DVR information as below:

username=the username created in step 1
password=the password created in step 1
port=server port set in step 2
server address=server IP set in step 2

File route is the location of upgrade file.If set the root to be d disk,create 5XXX folder and put upgrade.bin into it,so the route will be /upgrade.bin,then save,click the FTP upgrade.



4. USB restore

- Copy the restore file to the root of USB,the file must be:restore.bin.
- Plug the USB which include the restore file into the USB interface of front panel.
- Shut down the DVR power, then turn on the DVR, the system will detect the restore file automatically, it will also show the progress of restore, after that, the system will restart automatically.

Note:When restore the DVR,the USB should be in the USB2.0,USB 3.0 doesn't support USB restore.

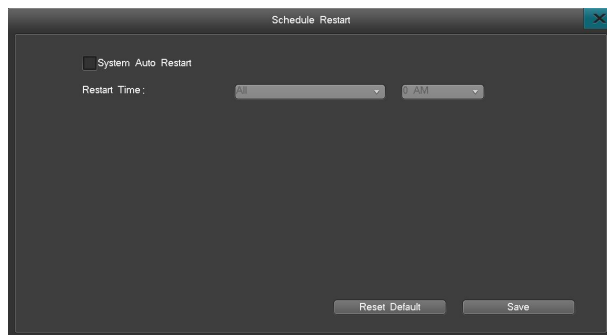
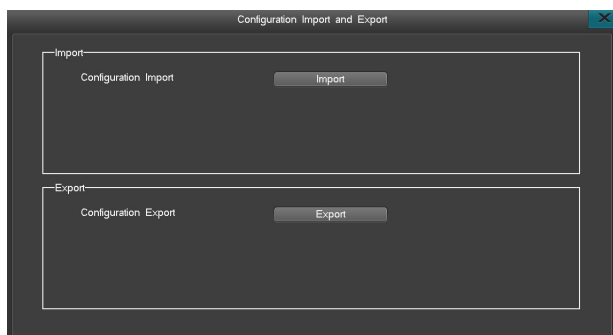
|||| User Manual

4.10.5 Import/Export

On input&output interface, you can backup the setting parameters in the USB, if you did factory reset, you can put the USB in the device, it can loading the setting parameters before.

4.10.6 Schedule restart

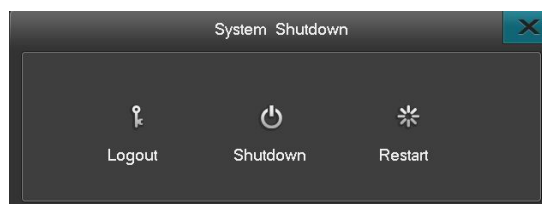
Choose "main menu"->"system maintain"->"schedule restart" enter into the interface of schedule restart(as right below picture).then enable schedule restart,save.when it is the time that you set,there will popup "yes" or "no" for you to decide whether restart or not,if you don't choose any one of them,it will automatically restart by itself after 20s.



4.10.7 System shutdown

"Main menu" -> "system maintain" -> "system shutdown", you can logout, shutdown and restart as right picture:

- Logout: Lock automatically.
- Shutdown: Choose "shutdown", popup a window and choose the "yes", it will shutdown; you have to turn on the power if you want to start the system again.
- Restart: Click restart, the system will restart.



Appendix 1 IE browser instruction

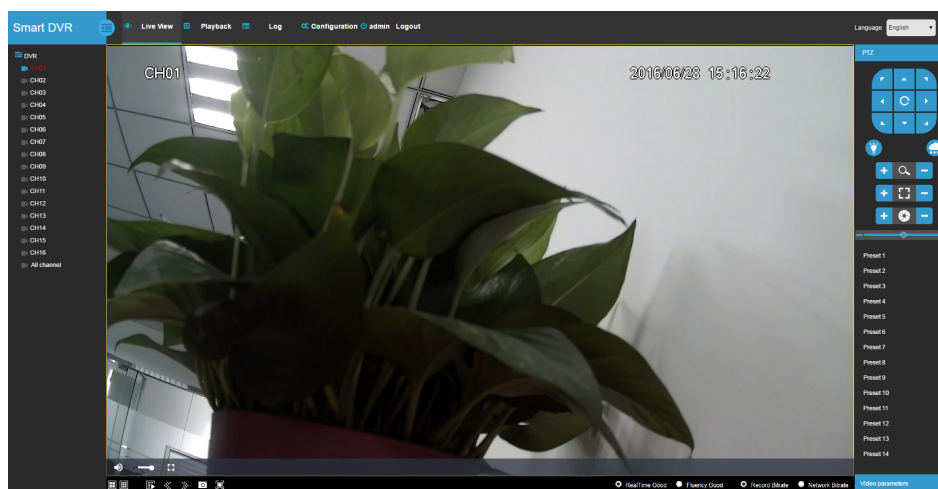
Attention: Support IE9.0, Firefox4.0, Chrome 4.0, before use, please make sure your PC's flash software version was upgraded to the latest version.

1. Instruction of visiting the DVR in LAN

Step 1 : Confirm whether ping successfully to the device(DVR)

Step 2 : IE's visit port default is 80,in IE browser type into the IP address `http://device IP`,then enter,come up with the interface as follow:

Step 3 : Please refer to "Client user guide" for further operation.

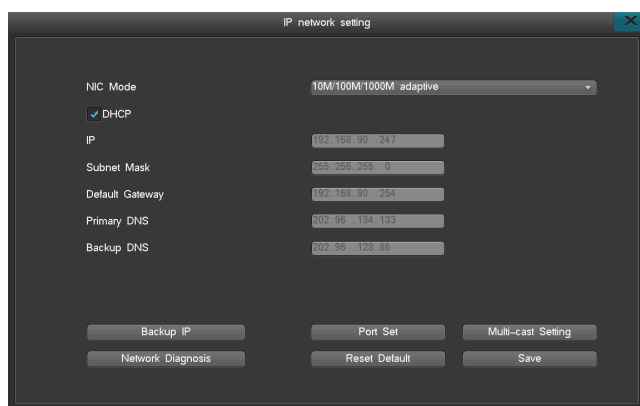


|||| User Manual

2. Instruction of visiting the DVR in WAN

Method 1: You have fixed WAN IP for DVR,so you can connect directly DVR to the Internet,set the right IP,DNS,gateway,after set the IP, Subnet and Gateway, then it can be access remotely.

Method 3: Port forward,fotmat :http://WAN IP:http port ;http://domain:http port.

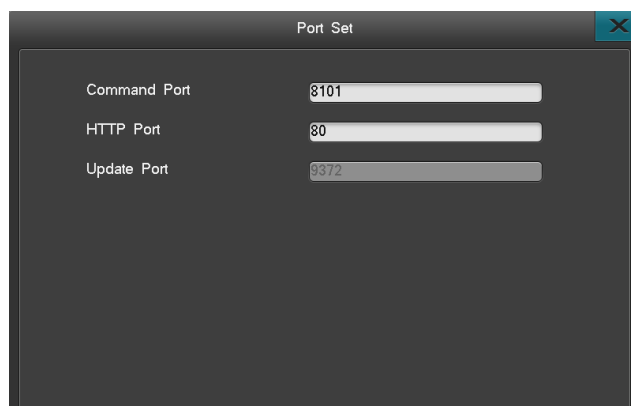


The screenshot shows the 'IP network setting' window. It contains the following fields and buttons:

Field	Value
NIC Mode	10M/100M/1000M adaptive
<input checked="" type="checkbox"/> DHCP	
IP	192.168.90.247
Subnet Mask	255.255.255.0
Default Gateway	192.168.90.254
Primary DNS	202.96.134.133
Backup DNS	202.96.128.86

Buttons at the bottom: Backup IP, Port Set, Multi-cast Setting, Network Diagnosis, Reset Default, Save.

Picture 1



The screenshot shows the 'Port Set' window. It contains the following fields:

Field	Value
Command Port	8101
HTTP Port	80
Update Port	9372

Picture 2

Router port forward instruction:

Take TP_LINK TL-480T router for example:

[1] After signing up routers, by choosing "Running Status" icon on left side menu of Figure 3, view the LAN IP and WAN IP address of the routers, such as, the LAN IP address 192.168.2.1, WAN IP address 116.30.143.163.

WAN

WAN Port:

WAN1

WAN Connection Type:

L2TP

User Name:

username

Password:

••••••••

Connect

Disconnect

Disconnected!

Dynamic IP

Static IP

Server IP Address Name:

IP Address:

192.168.2.1

Subnet Mask:

0.0.0.0

Gateway:

0.0.0.0

DNS:

0.0.0.0, 0.0.0.0

Internet IP Address:

116.30.143.163

Internet DNS:

0.0.0.0, 0.0.0.0

MTU Size (in bytes):

1452

(The default is 1480, do not change unless necessary.)

Max Idle Time:

15

minutes (0 means remain active at all times.)

WAN Connection Mode:

Connection Demand

Connection Automatically

Connection Manually

Save

Picture 3

[2] Select "Transfer Rules" on Figure 3 left menu, click "Add new" button to add new port mapping items on Figure 4 menu. You should both mapping http port (80) and command port (8101) at the same time. And each port mapping should both include TCP/UDP (ALL) protocol. Click "Save" button to save the settings.

Virtual Servers

ID	Service Port	IP Address	Protocol	Status	Modify
1	8101	192.168.2.6	ALL	Enabled	Modify Delete
2	80	192.168.2.6	ALL	Enabled	Modify Delete

Add New...

Enable All

Disable All

Delete All

Previous

Next

Picture 4

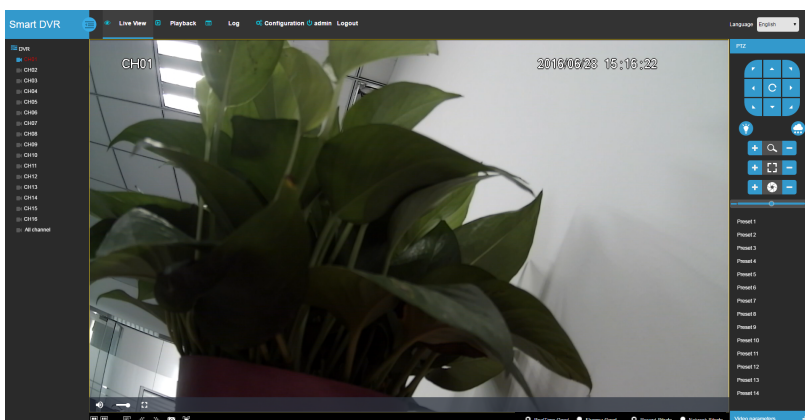
|||| User Manual

[3] Port Explain: Command port means all the TCP port of the DVR, HTTP means IE port, RTMP means video TCP port of the DVR.

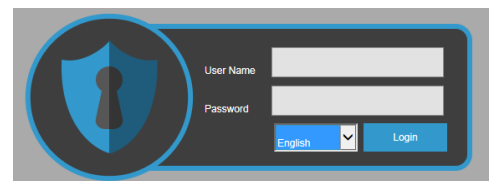
A, If the 3 ports are default,input the WAN ip(116.30.141.49) as the picture3 to login,the interface is picture5 after successful login;input the WAN ip(116.30.141.49) as the picture3 to login,then input the right username and password,the interface as picture6 after successful login.

B, If the 3 ports are not default,input http://116.30.141.49:http port;

Attention: The ":" between IP address and port must be input under English input status



Picture 5



Picture 6

Appendix 2: Cloud service instruction

In order to solve the network setting, network security and complicated network problem, we develop a platform: Ivview. Ivview platform supply various client software, it is convenient for users to visit their device through PC, pad and mobile phone.

Step1: visit the ivview website to register ID.

Step2: download the mobile client: realview pro. In Android phone, you can search the APP realview pro(YDT) in software application shop, 360, baidu phone assistant; about apple phone, search the realview pro in APP Store. Another way, enter in the Cloud Service of DVR and scan the QR Code to download.

Step3: Scan the device's SN QR code to add it to ivview(YDT) account.

Step4: Open the APP: realview pro(YDT). add the device has been added into the ivview (YDT) account to the APP.

Step5: Live video.

Notes: Realview pro(YDT) please refer to the instructions.



Appendix 3: App alarm push test description

When alarm occurs, the DVR will send a message to the App of the smart phone, the phone will show a message push accordingly.

steps:

- 1.Download the Mobile App the install it, then login your account by input the username password
- 2.After login successfully, click "Get Alarm Code" to get the Code.
- 3.For needs, bound and release or forbidden settings need the mac address of DVR.
- 4.Click the button "latest Alarm info" to show the lasts alarm message.
- 5.Click "History Alarm" to show all the Alarm message before.