

H.264 DVR



USER MANUAL

7"LCD 4channel H.264 DVR COMBO

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Chapter one Product Description

1.1 General Description

This equipment is designed specifically for the field of a number of digital security surveillance products, which uses an Embedded Processor Init (MPU) and operating systems, combined with the field of the latest IT technologies, such as video and audio encode/decode, high-capacity hard disk recorder, TCP / IP network technology, code in FLASH, making system operation more stable. This equipment, with digital video and audio recorder (DVR) and digital video and audio server (DVS) features at the same time, can work not only in local independently, but also be networked to form a powerful security monitoring network. It applies to bank, telecommunications, electric power, justice, transportation, residential area, factory, warehouses, water conservancy facilities and other areas and departments of the safety precautions

1.2 Technical Parametres

Model	7"LCD 4channel H.264 DVR COMBO MD8704
LCD liquid crystal display	7"color LCD,800x480,400:1, Visual angle:160°,4:3,CCFL
Operation system	Embedded Linux operation system
Image compression	Main profile H.264
Operation interface	Graphical user interface (GUI), mouse, front button, remote control operation
Video standard	PAL、NTSC
Video input	4BNC
Video output	1BNC,1VGA
Audio input	2channel
Audio output	1channel
Image display	1,4 Image display
Multiplex operation	Live display, recording, network transmission, recording, backup, mobile phone surveillance simultaneously
Display resolution	PAL: 720x576 (D1) ; NTSC: 720x480 (D1)
Recoding mode	Manual, timing, alarm, motion detection
Recording frame rate	25fps NTSC: 30fps
Recording quality	High, normal, low
Recording resolution	CIF/Half-D1/D1 (4 channels support full D1 real-time)
Recording playback	1/4 channel playback simultaneously
Recording backup	Support USB disk backup, moved hard disk backup, network backup, backup by files, backup by time
Network transmission	4 channels real-time network transmission with CIF resolution
Recording display	Special player, support AVI file format conversion
Video Save	hard drive, network

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JPEG capture function	Support,3M Pixels@10fps
Privacy mask	Support
PTZ	RS485
HardDisk Interface	1 SATA
Network interface	RJ45 10M/100M self-adaptive Ethernet
Motion Detection	each channel of the detection area (16 × 16), multi-level sensitivity can be set
IE browser	Support
Client software	Support
Dual stream	Support (main and secondary interchange)
Group play	At least support five users online access
Multi-language	Support
Mobile phone surveillance	Support Windows,symbian,iphone,Android and Blackberry operation systems
USB Interface	2USB2.0 high-speed interface
Backup	network backup, USB backup
Time/date format	Support (adjustable)
Power	DC12V/3A
Working temperature	0℃-50℃
Working humidity	10%—90%

1.3 Open Case And Connect Cables

1.3.1 open-case inspection

First of all, plz check if there is apperant damage of the packing as soon as you received the products. the material can protect from the damage very well in the transportation.

Secondly, take out the product, take away the protection film from the DVR to check if there is damage.

Thirdly,open case,check if there is any loose of data cable of front panel,power cable,connection between fan power and mother board

1. pront panel and rear panel

There are instructions of how to use keys on the front panel and the interfaces on rear panel plz check the model no. with the one you ordered.

As for the lables on the panel, plz take good care of them, which is very important to our after-sale service.

you need to offer the model no. and serail no. during the after-sale service.

2.After open case,need to check

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Besides checking obvious damage,also need to check if there is any loose of front panel data cable,connect between power and mother board

Chapter Two: Structure Appearance Description

2.1 Panel Description

4 channel DVR Front Panel Description:



- | | |
|----------------------------------|-------------------------|
| 1. POW: Power States LED | 8 PTZ: PTZ control |
| 2. CH1~CH4: Single-Screen Switch | 9. ESC: Exit |
| 3. QUAD: Multi-Screen Switch | 10. MENU: Menu Key |
| 4. HDD: HDD State LED | 11. ▲▼◀▶: Direction Key |
| 5. FN: Reserved | 12. ◀▶: Confirm key |
| 6. PLAY: Record Playback Key | 13. Ir Receiver |
| 7. REC: Manual Recording Switch | |

2.2 Product Interface Description

4 channel DVR Rear Panel Description:

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- 1、AUDIO OUT: Audio Output Connector

2、VIDEO IN: Video Input Connector

3、VIDEO OUT: Video Output Connector

4、USB: Standard USB Connector

5、VGA: Video Output Connector

6、POWER: Power switch
- 7、AUDIO IN:Audio Input Connecor

8、NET:RJ-45 Standard Network Connector

9、RS485: RS-485 interface

10、DC12V: 12V(DC) Power Connector

2.3 Remote Control Description



POWER	Power switch
DEV	Device button: after press" DEV", input the same number as device number and press “ENTER” to save the setting.Then DVR can operated by remoter
0-9	Number button
MENU	Menu button;eliminate all the areas when set up motion detection area
ESC	Exit
▲	In menu mode: upwards; in PTZ mode:control the PTZ camera revolve upwards
▼	In menu mode:downwards ;in PTZ mode:control the PTZ camera revolve

	downwards
◀	In menu mode:left; in PTZ mode, control the PTZ camera revolve left
▶	In menu mode: right; in PTZ mode, control the PTZ camera revolve right
ENTER	Select key
PLAY	Video playback
FN	Subsidiary key
REC	Recording key
VIEW	Multi-screen key

Note: If many devices in same place,remote control should select a device according to device number.So each device needs a unique device number,unless remote control may effect to multi devices with the same number.

Chapter Three: Description of Operation System

3.1 Turn on / off

Confirm that AC voltage accessible matches with DVR .Ensure that the DVR power outlet connect with a good middle ground grounding. After switching power, the device started, **【POWER】** light is on. Turn into system, if the panel status light flashing ,it's normal conditions.

3.2 Preview

After device start, preview interface can be seen immediately. In the preview interface you can see the system date, time, channel name. Press corresponding number key of panel or click the left mouse button, user can preview the single channel; Press "QUAD" key in the panel or click the left mouse button, you can return to a multi-interface monitoring state.

3.3 Menu operation instructions

3.3.1 Menu

【MENU】 ,enter the device's main menu interface. **【PLAY】** shortcut keys for playback interface.

【REC】 shortcut keys for manual recording. **【PTZ】** shortcut keys for PTZ control.

Noted: Default password is empty, click "enter" can into menu directly.

3.3.2 Menu composition

Menu component units as following:

(1) Check box::two kinds of status available, "√" means valid, "□" means invalid , direction key:

【↑】 【↓】 【←】 【→】 ,enter key **【↵】** . Also, click the left mouse button to choose.

For example: "channel" and "video mode" check box in the video research.

(2) Selection box: select the target content according to the drop-down box options. Use

【↑】 , **【↓】** key or click the left mouse button to select.

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For example: "channel" and "code stream" in the encode setup menu

(3) List Box: Displays the research information in the list, you can try one option for operation

For example: Press **【←】** button in the video backup file. or the left mouse button.

(4) Edit box: Enter the name into edit box

For example: in the setup menu, you could input numbers, English letters, punctuation and so on in the "channel" edit box.

a) use panel key **【↑】** **【↓】** **【←】**, **【→】** or move the mouse to edit box , press "**←**" key or click the left mouse button, then enter keyboard appears, select the desired input target characters through the arrow keys or click the left mouse button.

b) After input the information,click **【OK】** **【CANCEL】** button or button **【ESC】** can safe or exit

(5) Button: used to implement a specific function or enter the next setup menu, click **【OK】** **←** key and the left mouse button.

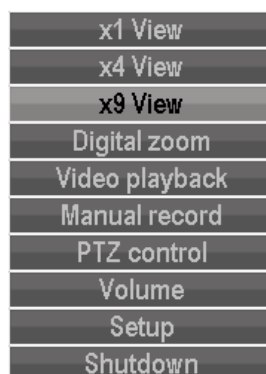
3.3.3ESC MENU

Press **【MENU】** , **【ESC】** or the right mouse button to exit the menu mode

Click the right mouse button and return to the previous menu level.

3.4 Main Menu Introduction

Press MENU key or right mouse, it will pop-up the main menu. Main menu consists of the following three components



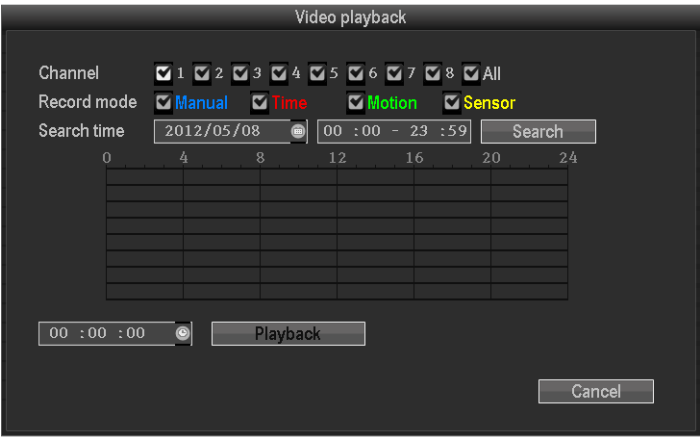
Preview mode: select corresponding preview mode in the menu column.

Shortcut menu: in menu column, there are: digital zoom, video playback, manual record, PTZ control, volume ,setup ,shut down. User could enter the corresponding menu preview mode.

Setup menu: including video playback , video backup ,system setup ,system tools ,system info, system logout.

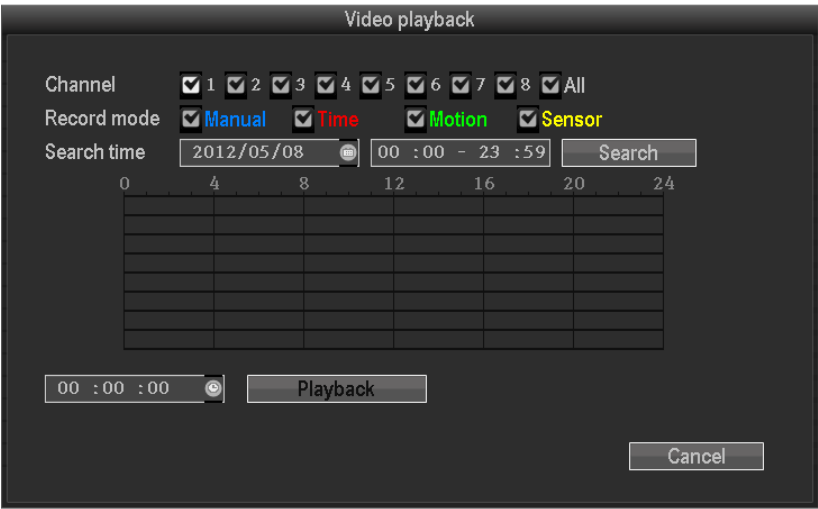
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3.5 Video Playback



Click "setup" menu and turn into "video playback" interface.

3.5.1 Video Search




Chanel: to choose the target channel by clicking the check box.

Record mode: to choose the recode mode by clicking the check box

Search time: input the Starting and finishing time into edit box

Search: After setup the above search condition, click "search" to begin the corresponding video file searching and show the files. Red means time recording, green means MD recording, yellow means sensor recording.

Playback : chose playback and turn into playback interface. In the search list box, choose the time bucket according up ,down,left ,right key or move the mouse. Click  or left mouse to enter "video playback "Interface


Cancel: back to previous menu .


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3.5.2 Playback toolbar


Select the playback file or time playback file, it will turn into video playback interface.

Playback toolbar : it will show below the playback interface. Each channel can magnify or narrow by clicking the left mouse .

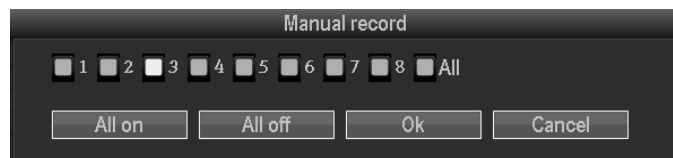
Stop play: click  to stop the video and turn back to playback interface.

Pause/play:click  can pause the playback video,click  can continue the playback video.

Fast forward :click  can fast forward the video,also times fast forward the video by click the button again.

Exit playback: click “ESC”or  can exit the playback video; or exit until all file have been played.

3.6Manual record



In the shortcut menu, click manual record or click **【REC】** to enter the setup the manual record interface.

Manual record menu illustration

Manual record menu include several parts:

Channel: ☒ means open; “☐” means close.

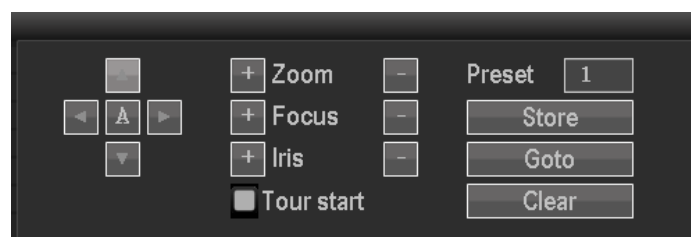
All on: start all the channel.

All off: close all the channel.

OK: confirm an exit

Cancel: click cancel can exit the manual record interface and back to main menu.

3.7PTZ control



Choose the "PTZ control" from shortcut menu .

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PTZ control menu including: direction control; auto pan scan; zoom;focus ;Iris;speed.

3.8 Setup

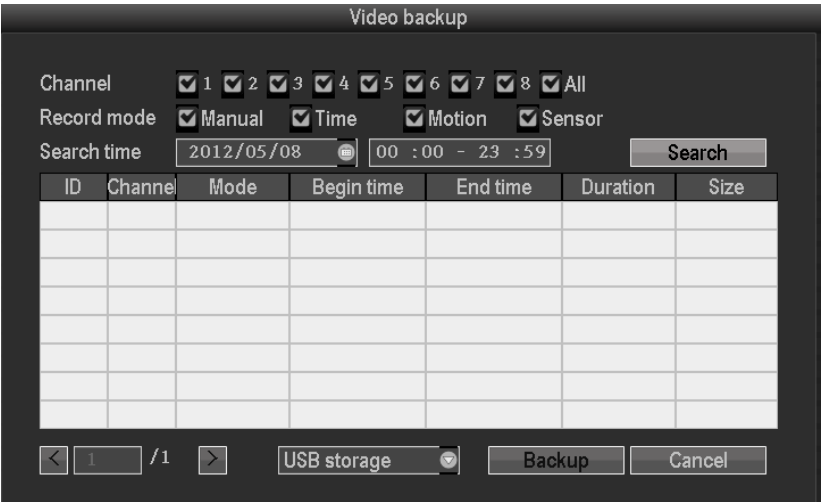
Click"Setup" in the shortcut menu, the first class menu including: video playback , video backup ,system setup ,system tools ,system info, system logout.

3.8.1video playback

That is the playback interface in shortcut menu



3.8.2Video back up



Choose the channel,and record mode; setup the search time, then begin search the file. After choosing the needed file from list box, click backup and ok, wait for process bar until 100% and show backup success.

Note: USB driver pen must be FAT32 format when backup the file.

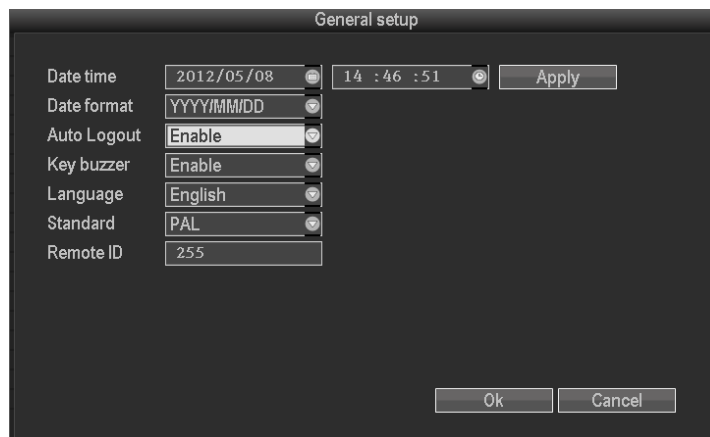
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3.8.3 System setup



In the setup menu, Choose “system setup” and turn into it's sub menu. It includes: General setup, Encode setup, Record setup, Network setup, Screen setup, Video detection, PTZ setup, Sensor setup.

3.8.3.1 General setup



Choose the "General setup" and turn into it's setup interface.

Time: The real time when preview, click”refresh” after setting, make sure saving when it shows” the recording will stop once you modify the time”

Date Format: Y/M/D”、 “D/M/Y”、 “M/D/Y”

Keyboard Lock: The present user will log off if there is no operation in 10 minutes, it needs login again.

Key Buzzer: Enable, there is sound with the controller or pressing key on front panel, disable, without sound.

Language: There is multiple choice according to users, chinese and english and so on.

Video standard: PAL and NTSC are all available, PAL is as default one.

DVR ID: controller connect by device number when it is used to control.The remote controller should be correspond with the ID so that it can work. (Plz refer to the instruction in 2.3)

After setting finished, click"ok", the information will be saved. click"cancel" to exit without

saving.

3.8.3.2 Encode setup

Encode setup			
Channel	1	Stream	Main stream
Encode mode	Video only	Bitrate mode	Constant
Encode format	D1	Constant rate	2Mbps
Quality	Highest	Framerate	25fps
<div> Copy to 1 Ok Cancel </div>			

Select "encond setup" in system setup.

Channel : chose the right CH you like by clicking the select box

Stream: chose the right stream : "main stream" or "sub stream "

Encode mode: chose the right encode model you need : "video only "means only encoding for video ; "AV combined" means encoding for both video and audio.

Bitrate mode : chose the right bitrate mode you need : "constant bitrate " means system encoding video as user-defined bitrate and and frame rate. "variable bitrate" means system encoding according to user-defined image quality and video frame rate , but bit rate is automatically adjusted by the system depending on the video scen. "average birtrate " means system automatically adjusted fluctuation as user- defined bitrate.

Encode format: encoding resolutions defined by user' need : (QCIF) 176*144、 (CIF) 352*288 (HD1)576*288 (D1) 704*576

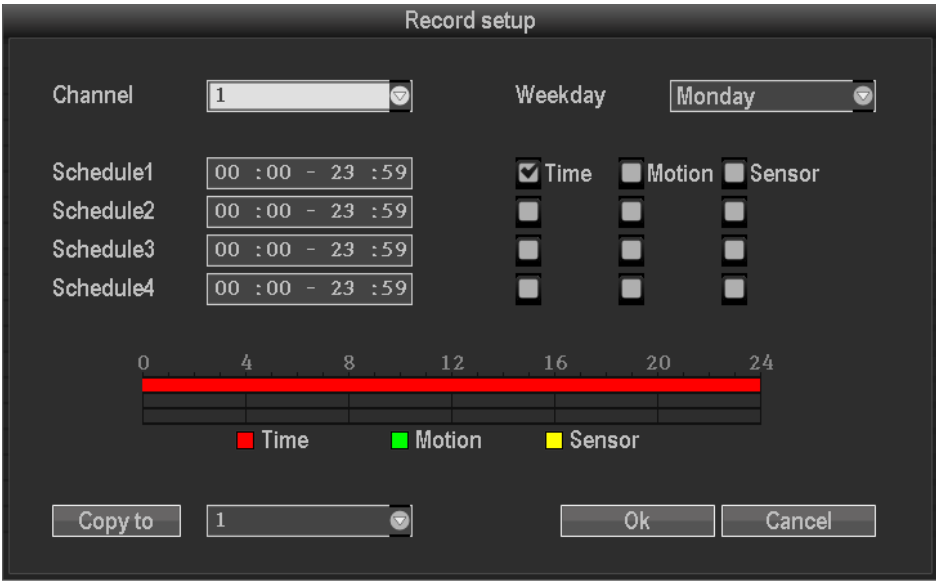
Bitrate: users select the encoding bitrate as needed. The higher bitrate ,the better image but with large disk space

Fluctuation: image quality fluctuations , user identified.

Frame rate : users select the video frame rate as needed. The higher frame rate ,the better image but with large disk space

Copy to : select the target channel on the right of "copy to "button ,click "copy to " & "ok " then system will set the current channel setup informations to other target video channel. Click button "cancel", the setup informations is non-saved but to exit.

3.8.3.3 Recode setup



The 'Record setup' dialog box is used to configure recording parameters. It includes a 'Channel' dropdown set to '1' and a 'Weekday' dropdown set to 'Monday'. Below these are four schedule rows (Schedule1 to Schedule4), each with a time range input (all set to '00 : 00 - 23 : 59') and checkboxes for 'Time', 'Motion', and 'Sensor' recording modes. A 24-hour timeline at the bottom shows a red bar for 'Time' recording from 0 to 24 hours. A legend indicates red for Time, green for Motion, and yellow for Sensor. At the bottom are 'Copy to' (set to '1'), 'Ok', and 'Cancel' buttons.

Select “recond setup” in system setup.

Channel : chose the right CH as needed by clicking the inverted triangle

Weekday : chose the right day as user's need, "ALL" means all days in a week.

Image mode and time : every time slot can set different recoding mode in all 4 time slot.

"Time " recording with red color , "Motion" recording with green color ,

"Sensor"recording with yellow color ; “☑” means working , “☐” means invalid. The

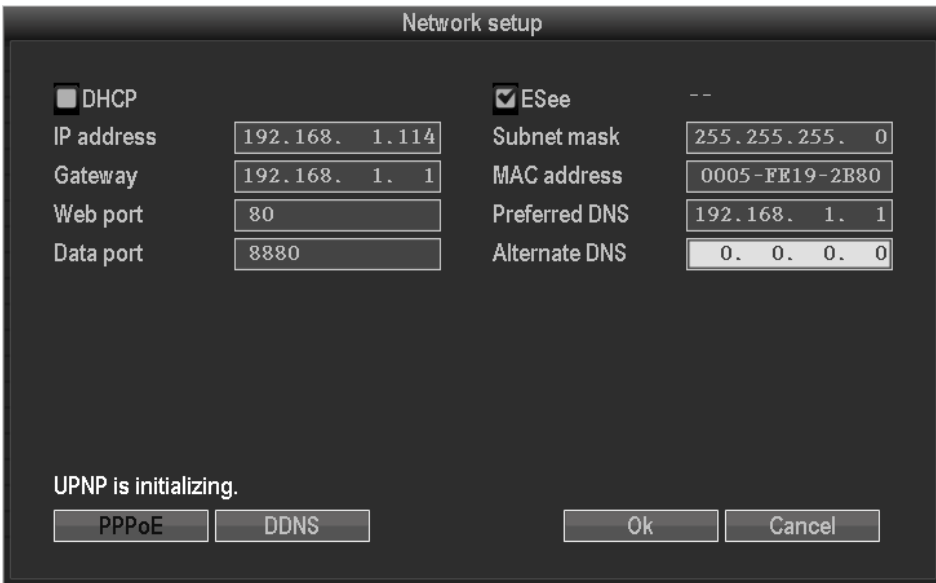
bottom parts has times status display, whole schedule from time 0~24 hours

Copy to : select the target channel on the right of "copy to "button ,click "copy to" & "ok "

then system will set the current channel setup informations to other target video channel.

Click button "cancel", the setup informations is non-saved but to exit.

3.8.3.4 Network setup



The 'Network setup' dialog box contains settings for network configuration. It has checkboxes for 'DHCP' (unchecked) and 'ESee' (checked). Below are input fields for IP address (192.168.1.114), Subnet mask (255.255.255.0), Gateway (192.168.1.1), MAC address (0005-FE19-2B80), Web port (80), Preferred DNS (192.168.1.1), Data port (8880), and Alternate DNS (0.0.0.0). At the bottom, it says 'UPNP is initializing.' and includes buttons for 'PPPoE', 'DDNS', 'Ok', and 'Cancel'.

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Select "recond setup" in "system setup".

MAC address: showing the device's MAC address

DH CP: select whether to start up DHCP to automatically obtain IP . "☒ " means works ; "☐ " means non-work

IP address : the IP address must be unique and can not be in conflict with the host or workstation on the same network segment

Subnet Mask : subnet for the network segment.

Gateway: need to set the gateway address to achieve communication between the different network segments.

DNS address : devices used PPPOE protocol to access network to gain a dynamic IP address

HTTP port : port number IE browser visit , default port is "80"

Client port : port number device and mobile visit , suggest to set above 2000

ESeenet ID: after connecting internet , click "☒ Eseenet" to gain a Eseenet ID , which can be used in IP remote monitoring in ESeenet network server

PPPOE configuration :

Start using : "☒ PPPOE" means to start up PPPOE dial-up. "☐ " means not to start up

PPPOE user: input the user name of ISP into edit box

PPPOE password : input the password of ISP into edit box

After the page setup is completed, click "OK " to save the changes ; click "cancel " , non-save but exit.

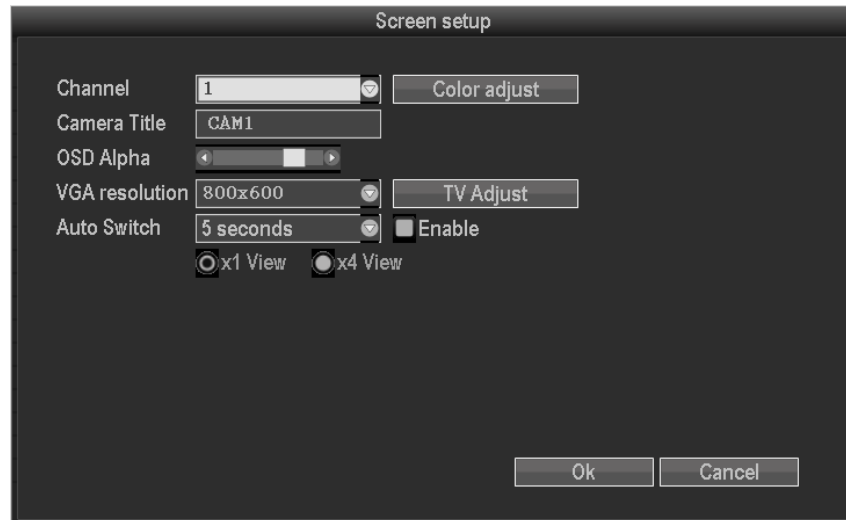
DDNS setting: automatic analytical function of dynamic domain name, supported 3322 and DYNDNS

In the "network setup" menu, click " DDNS "

Start using : "☒ " means DDNS dynamic domain services start using ; "☐ " means not to start up.

Select the right network server and input user name, password and domain name (edit method pls refer to 3.3.2(4))

3.8.3.5 Screen setup



Select "screen setup" in "system setup"

Channel : chose the right CH as needed by clicking select box

title : edit any channel title as needed

OSD title : ☒ means display channel title, ☐ means non-display

OSD Alpha: OSD menu transparency. Can be adjusted as needed

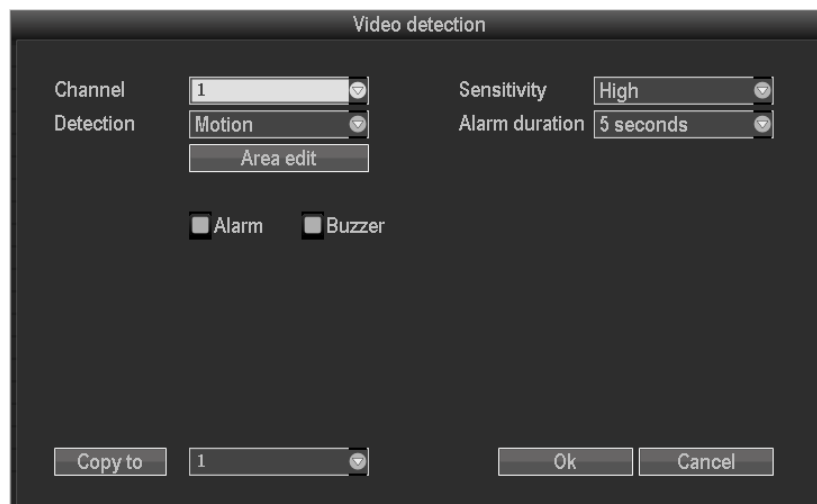
OSD time : ☒ display system time, ☐ non- display;

Sequence Dwell : the time of auto switching preview image , can be single screen or 4 Channels screen.

Start using: ☒ start using , ☐ non-start using

After the page setup is completed, click "OK " to save the changes ; click "cancel " , non-save but exit.

3.8.3.6 Video detection



Select"video detection" in the "system setup"

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Sensor : chose the right CH as needed by clicking the inverted triangle

Sensitivity : chose the trigger video detection sensitivity

Detection type: select detection type --motion, video loss ,“keep out” alarm

Alarm duration: after chose the trigger video detection, the time alarm last

Area edit : set motion detection area ;move by choosing left of mouse.

Record channel : system defaulted channel after trigger video detection,,

Alarm: “☒”means start , “☐”means non start .

Buzzer : “☒”means start , “☐”means non start.

OSD : “☒”means "detection " marks shows on screen,, “☐” means non show

E-Mail notice : “☒” means E-Mail valid, “☐” means E-Mail invalid.

Copy to : select the target channel on the right of "copy to "button ,click "copy to" & "ok " then system will set the current channel setup informations to other target video channel. Click button "cancel", the setup informations is non-saved but to exit.

3.8.3.7 PTZ setup

32/32	Preset	Keep time
1	1	00:00:10
2	2	00:00:10
3	3	00:00:10
4	4	00:00:10

Select "PTZ setup" in "system setup"

Channel: choose the right channel, click the select box to choose

Protocol: the selected one must be the same with the one of PTZ

Data bit: choose the matched one of the PTZ

Address: input the address of appointed decoder

Stop bit: choose the matched one of the PTZ

Baudrate: choose the matched one of the PTZ

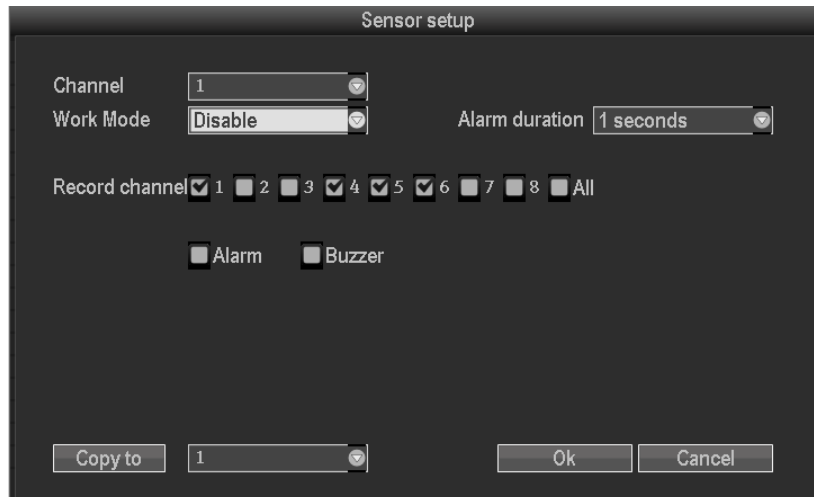
Parity check: choose the matched one of the PTZ

Copy to: choose the object route in the right select box, click the button of copy setting, then the informations of setting will be showed, which also can be applied in other object routes.

After the setting, click the button of sure to exit with saving the , or click the botton of cacle to exit without saving

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3.8.3 8 Sensor setup



In system setup , choose "PTZ setup",enter setting interface

Channel: choose the right channel, click the select box to choose

Work mode: setting to start alarm or not

Alarm duration: set up alarm duration time

Recording channel:When alarm is triggered,channel needed to be recorded

Alarm: “☒” enable alarm, “☐” close alarm

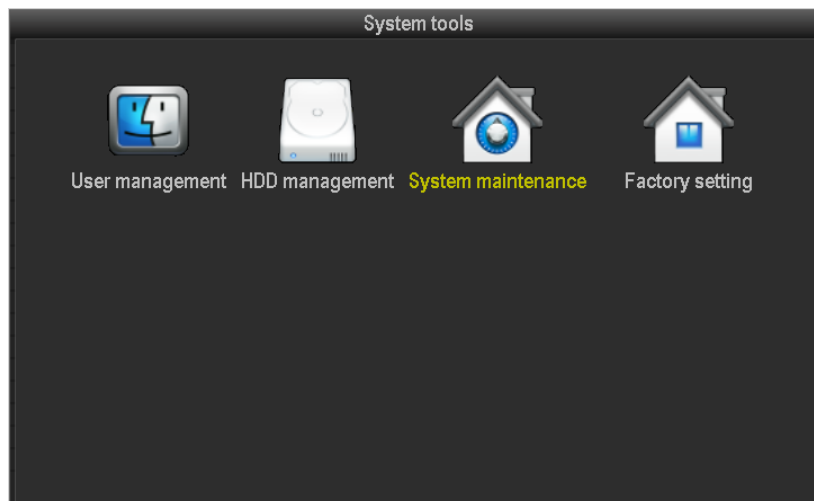
Buzzer: “☒”start buzzer, “☐” close buzzer

Screen notice: “☒”alarm icon shows on the screen, “☐” no alarm icon shows on the screen

Copy to: choose the target channel in the right select box, click" copy to" ,the setting information will be applied to other channel.

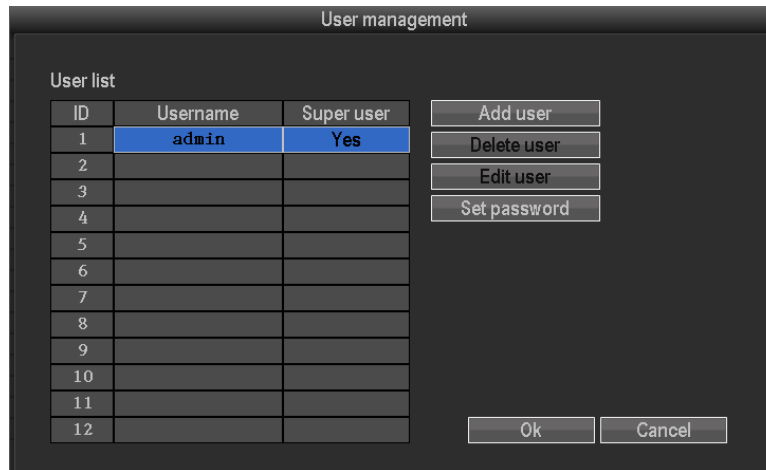
After the setting, click "OK" to exit with saving the , or click"candle"to exit without saving.

3.8.4 System tool



In main menu, choose"system tool",enter setting interface, it includes four interface of user management, HDD management, system maintainance and factory setting

3.8.4.1 user management



In the management tool, click "user management".

Add user: input a new user name in the edit box and set up the operational authority. Choosing in the right check box, "☑" users can use it, "☐" users can not use it. Click the "password setup" to set the new password, or it can be the default password.

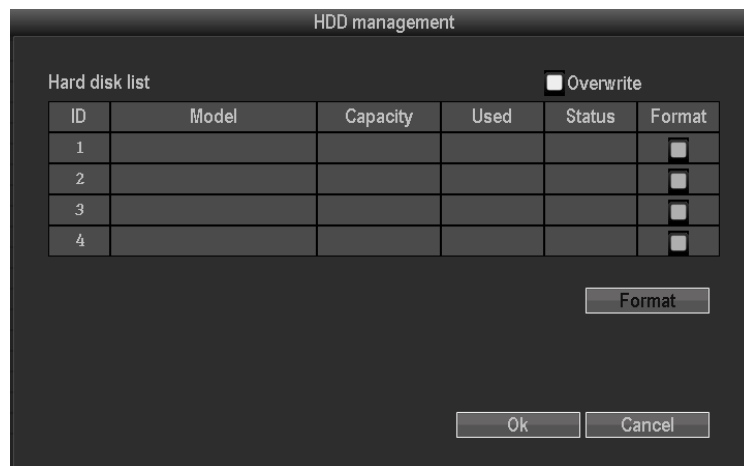
Delete user: delete the selected user (But Admin, other user has no the right to set up or delete other users)

Modify user: Modify the selected user (But Admin, other users has no the right to set up other user permissions)

Set password: set password of logging in user

After the setting, click "OK" to save and exit, or click "Cancel" to exit without saving

3.8.4.2 HDD management



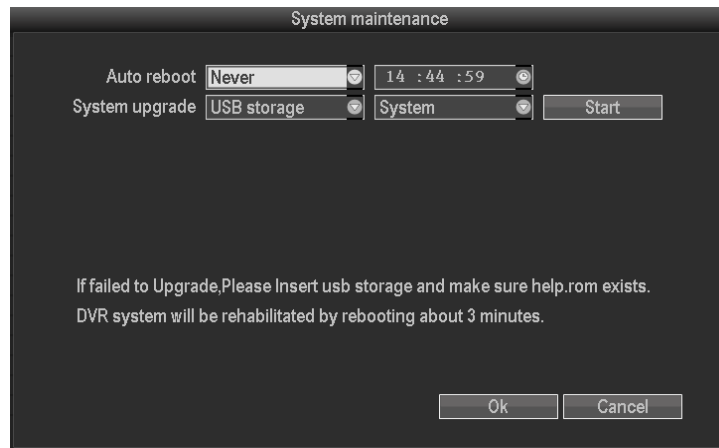
In the "management tool", click "HDD management", enter setting interface

Overwrite: "☑" earliest recording files will be covered when the disk is full, "☐" shows not cover.

Format: "☑" stands selected, "☐" stands not selected, when click "format" a confirm interface will pop up, then click confirm to format, click cancel to return the main interface

3.8.4.3 system maintenance

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In the " management tool", click "HD management", enter setting interface

Auto reboot: setting automatic reboot time, it can set " Saturday to Sunday" . "Never" means do not reboot automatically.

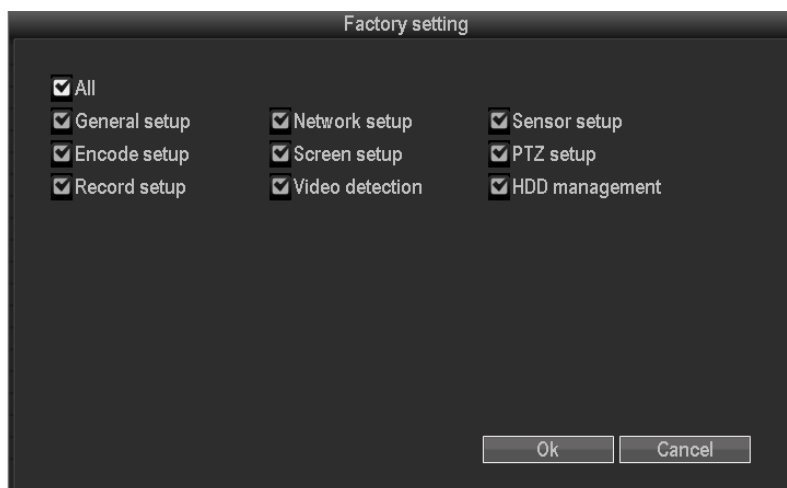
Firmware upgrade: copy firmware to the root directory of USB drive, insert USB, select the USB storage device, then click "start" to upgrade. When upgrade is completed, click "OK" then system auto reboot.

Note: 1. Firmware name should be: **FWHI1504A_***.rom(4ch)**, **FWHI1508A_***.rom (8ch)**,

******** means the publish time: such as **FWHI1504A_20110520.rom**

2. During upgrade, do not cut up power to protect from device damage

3.8.4.4 factory setting



In the " management tool", click "factory setting", enter setting interface

Select the terms which need factory setting, click "OK" to save and exit or click "cancel" to exit without saving.

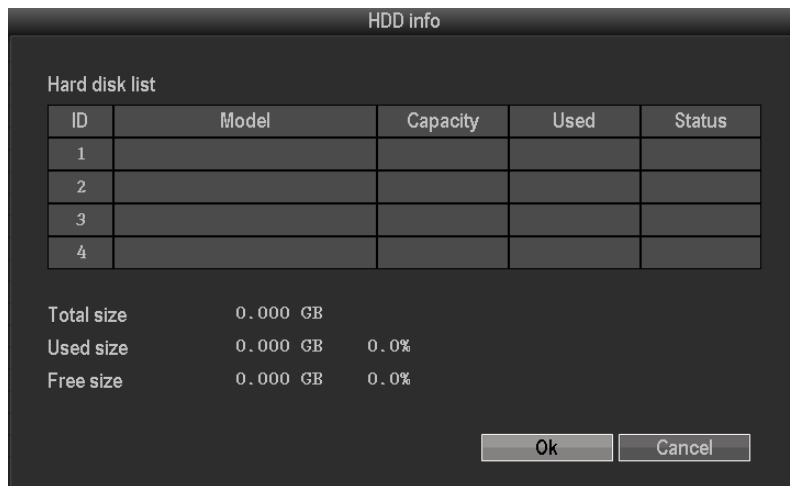
Remarks: after factory setting, all the settings will be the initial one, please use carefully.

3.9 system information

In the main menu, click "system information" which include HDD information, system information and log information

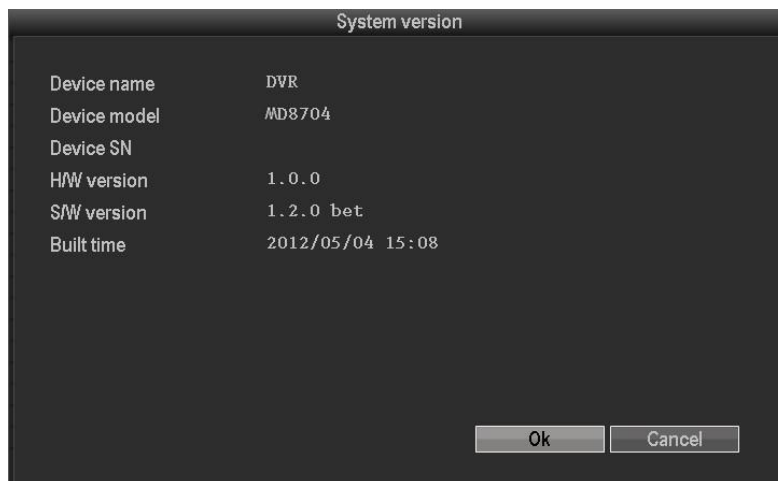
3.9.1 HDD information

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The listbox shows the HDD status information

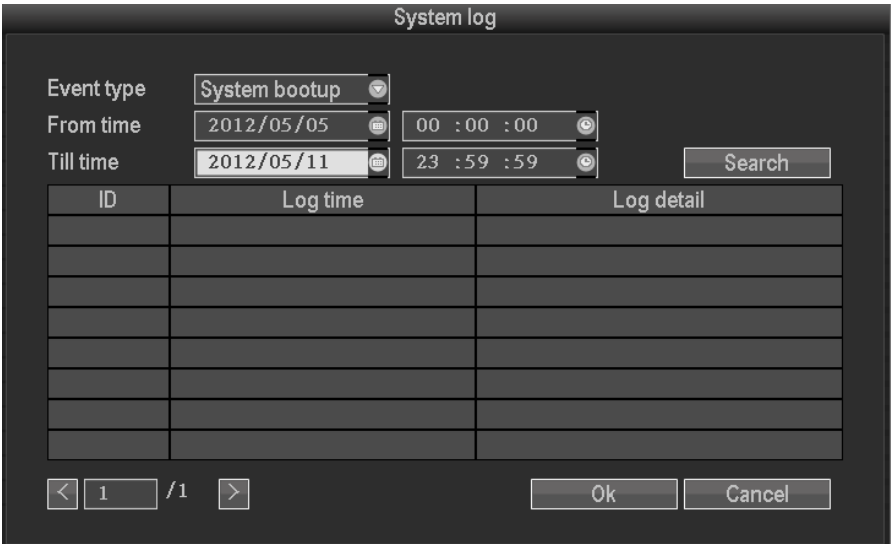
3.9.2 system information



Device name,device model,H/W version, S/W version could be checked here.

3.9.3 system log

Choose the log type which need to check from listbox, and input the time period in the editbox, then click " search", the related log information will showed below, you can turn the page by click " previous" and "next", or input target page to turn



3.10 system logout

In the main menu, click "system logout", popup setting interface



User logout: apply for logging users. After logout, if you want to use the device continue, need to login again

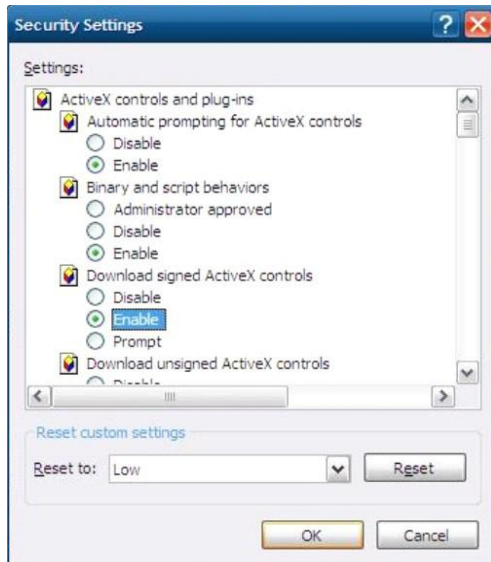
System reboot: It will reboot after "OK".

Esee Operation Instruction

Do the following setup before you log in Esee on pc

IE setting, if use it for the first time, the software can't load, then need to make the following setting, Internet options-> safety-Internet-> custom options-> pick Active X and plugin all for opening, click ok

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Login:open IE browser and input www.e-seenet.com , enter log in webpage.Look at following picture,input esee ID,user name and password,this user name and password is same with DVR log in user name and password,.Input correct info,then can login



1.1 video monitoring homepage:

Monitoring homepage including: preview window, PTZ control,preview mode, code stream selection, channel opening,setting,playback, user logout, as below :

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1-1

Open preview: click the target channel with mouse left, red color means select already. Double click the channel can open or close the correspond preview channel, such as:

 open;

 close

Preview mode: can click  to choose the mode, or double click preview window to switchover into multi-channel mode

<http://www.global-export-import.eu>