DVR User Manual

For H.264 24/32-channel digital video recorder

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CAUTION

- **Please read this user manual carefully to ensure that you can use the device correctly and safely**
- **The contents of this manual are subject to change without notice**
- **This device should be operated only from the type of power source indicated on the marking label. The voltage of the power must be verified before using. Kindly remove the cables from the power source if the device is not to be used for a long period of time.**
- **Do not install this device near any heat sources such as radiators, heat registers, stoves or other device that produce heat**
- **Do not install this device near water. Clean only with a dry cloth**
- **Do not block any ventilation openings and ensure well ventilation around the machine**
- **Do not power off the DVR when the device is function. The correct procedure to shut down DVR is to stop recording firstly, and then use "shut down" button from the menu, and finally switching off the main power.**
- **This equipment is for indoor use only. Do not expose the machine in rain or moist environment. In case any solid or liquid get inside the machine's case, please cut off the power supply immediately, and get it checked by a qualified technician.**
- **Refer all servicing to qualified service personnel. No any parts repaired by yourself without technical aid or approval.**
- **This manual is suitable for 24/32-channel digital video recorders. All examples and pictures used in the manual are from 32-channel DVR.**

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1 Introduction

1.1 DVR Introduction

This model of DVR (Digital Video Recorder) is designed for high performance CCTV solutions. It adopts state of the art video processing chips and embedded Linux system. Meanwhile, it utilizes most advanced technologies, such as standard H.264 with low bit rate, Dual stream, SATA interface, VGA output mouse supported, IE browser supported with full remote control, mobile view(by phones), etc., ensuring powerful functions and high stability. Due to these distinctive characteristics, it is widely used in banks, telecommunication, transportation, factories, warehouse, and other related applications.

1.2 Main Features

COMPRESSION FORMAT

- Standard H.264 compression with low bit rate and better image quality

LIVE SURVEILLANCE

- Support HD VGA output
- Support channel security by hiding live display
- Display the local record state and basic information
- Support USB to make full control

RECORD MEDIA

- Support eight (optional) or four SATA HDDs to record for a longer time without any limitation
- Support saving recorded files with AVI standard format to a remote computer through internet

BACKUP

- Support USB 2.0 devices to backup

- Support built-in SATA DVD writer to backup
- Support saving recorded files with AVI standard format to a remote computer through internet

RECORD & PLAYBACK

- Record modes: Manual, Schedule, Motion detection and Sensor alarm recording
- Support recycle after HDD full
- Resolution, frame rate and picture quality are adjustable
- 128MB for every video file packaging
- Three record search mode: time search, event search and image search
- Support 1/4/6/9/16 screen playback simultaneously
- Support deleting and locking the recorded files one by one
- Support remote playback in Network Client through LAN or internet

ALARM

- 4 channel alarm output and 16 channel alarm input available
- Support schedule for motion detection and sensor alarm
- Support pre-recording and post recording
- Support linked channels recording once motion or alarm triggered on certain channel
- Support linked PTZ preset ， auto cruise and track of the corresponding channel

PTZ CONTROL

- Support various PTZ protocols
- Support 128 PTZ presets and 8 auto cruise tracks
- Support remote PTZ control through internet

SECURITY

- Customize user right: log search, system setup, two way audio, file management, disk management, remote login, live view,

manual record, playback, PTZ control and remote live view

- Support 1 administrator and 63 users.
- Support event log recording and checking, events unlimited

NETWORK

- Support TCP/IP, DHCP, PPPoE, DDNS protocol
- Support IE browser to do remote view
- Support setup client connection amount
- Support dual stream. Network stream is adjustable independently to fit the network bandwidth and environment.
- Support picture snap and color adjustment in remote live
- Support remote time and event search, and channel playback with picture snap
- Support remote PTZ control with preset and auto cruise
- Support remote full menu setup, changing all the DVR parameters remotely
- Support mobile surveillance by smart phones , symbian, WinCE, Iphone or Gphone, 3G network available
- Support CMS to manage multi devices on internet

2 Hardware Installation

***Notice**: Check the unit and the accessories after getting the DVR.*
Please disconnect the power before being connected to other devices. Don't hot plug in/out

2.1 Install Hard Drive &DVD Writer

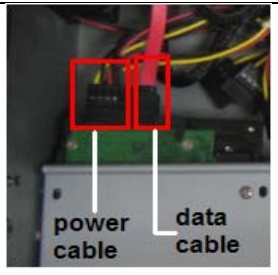
2.1.1 Install Hard Drive

***Notice**: 1. This series support four SATA hard drives or support three SATA hard drives plus one DVD writer. (User can also choose to install eight SATA hard drives or four SATA hard drives plus one DVD writer. Here take eight SATA hard drives installation for example). Use the hard drive the manufacturers recommend specially for security and safe field. Please refer to "Appendix C Compatible devices".*

2. Please calculate HDD capacity according to the recording setting. Please refer to "Appendix B Calculate Recording Capacity".

Step 1: Unscrew and open the case and then unscrew the screws in the both sides to take out of the upper iron bar as shown below:

Step 2: Put the HDD under the lower iron bar and let the screw holes of the HDD aim at the iron bars'. Then screw firmly and connect the power and data cables. The pictures are shown as follows:



Step 3: Install other three HDD according to above-mentioned method. Then cover the upper iron bar and screw it firmly. Put the HDD under it and screw firmly as shown below:

Step 4: Install other three HDD under the upper iron bar as shown below:

2.1.2 Install DVD

Step 1: Unscrew and open the case. *Then unscrew the screws in the both sides to take out of the upper iron bar as shown below:*

Step 2: Install the DVD holder attached with the device. Please let the screw holes of the DVD aim at the holder's. Try to place the holder farther away from the front and then screw firmly. Then, put the DVD with the holder into the case and let the screw holes of the case aim at the holder's. Next, screw them firmly.

Step 3: Connect the power and data cables and install the upper iron bar. Then, screw firmly with screws in the both sides.

Note: If the user installs a DVD, he can only install 4 HDD disks due to the too much room taken up.

2.2 Front Panel Descriptions

***Notice**: The front panel descriptions are only for reference; please make the object as the standard.*

Item	Name		Function
1	Power Button		Soft switch off to stop firmware running. Do it before power off.
2	DVD button		Press this button, user can place the DVD to do backup.
3	Digital keys 0-9		Input number 1-9 or choose camera
4	（0/——）		1. represents decade number. 2. Indicates digital number 0. Eg. Switch to 32 channels, user can press：0/_ _, 3, 2，switch to 20 channels：please press 0/_ _, 2, 0/_ _， switch to 1channel：please press 1 or press 0/_ _, 0/_ _, 1；
5	AUDIO/+		1. Control voice 2. Increase the value in setup
6	P.T.Z./ -		1. Enter PTZ mode in live 2. Decrease the value in setup
7	Input button	Direction button	Change direction to select items
		Multi-screen	Change screen display mode like1/4/9/16 channel
		Enter button	Confirm selection
8	Work state indicator	REC	When recording, the light is blue
		HDD	When HDD is writing and reading , the light is blue
		Backup	When backup files and data, the light is blue
		Net	When access to network , the light is blue
		Play	When playing video, the light is blue
		Power	Power indicator, when connection , the light is blue
9		MENU	Enter menu in live
		INFO	Check recording data

Item	Name		Function
	Function button	BACKUP	Enter backup mode in live
		SEARCH	Enter search mode
			Rewind
			Fast forward
			Record manually
			Play/Pause
		/ Esc	Stop/Esc
10	Jog dial		Control rewind/fast forward/frame when playing the image.
11	USB port		To connect external USB devices like USB flash, USB HDD for backup or update firmware; or connect to USB mouse

2.3 Rear Panel Instructions

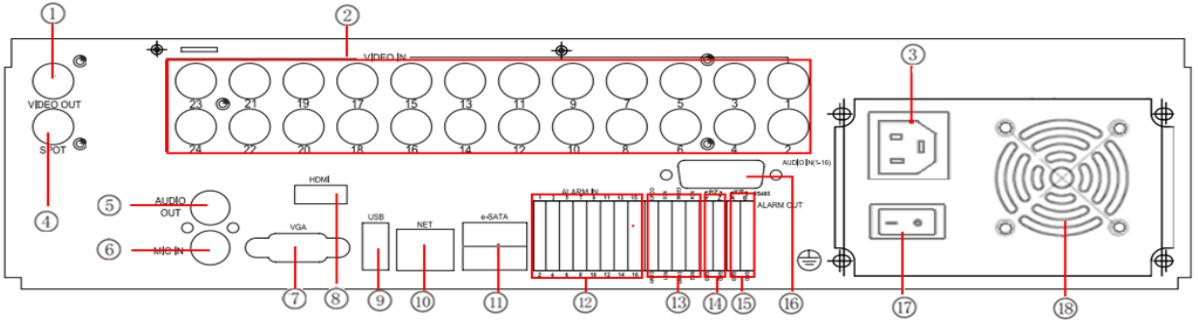


Fig2.1 Rear Panel for 24-Channel

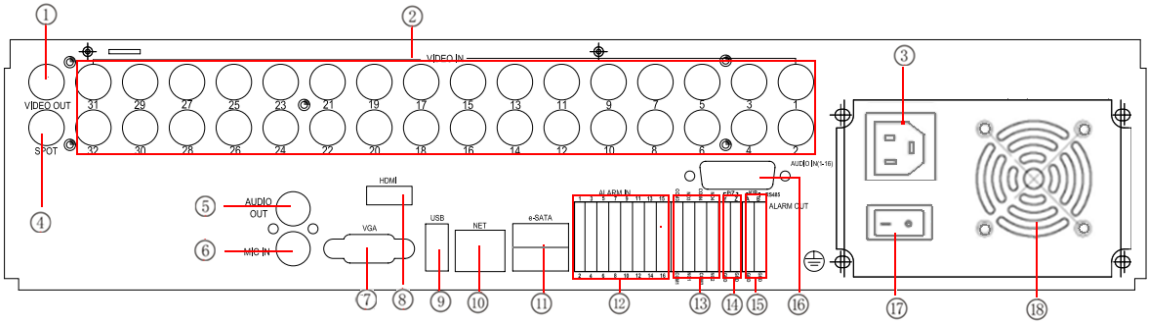


Fig 2.2 Rear Panel for 32-Channel

Item	Name	Description
1	Video out	Connect to monitor
2	Video in	Video input channels(from 1-24 for 24-ch DVR/ 1-32 for 32-ch DVR)
3	POWER INPUT	AC 110Vor 110V
4	Spot	Connect to monitor as an AUX output channel by channel. Only video display, no menu show
5	Audio out	Audio output, connect to the sound box
6	MIC IN	Talk
7	VGA port	VGA output, connect to monitor
8	HDMI port	Connect to high-definition display device
9	USB port	To connect external USB devices like USB flash, USB HDD for backup or update firmware; or connect to USB mouse
10	LAN	Network port
11	E-SATA	Connect to HDD for backup
12	ALARM IN	Connect to external sensor1-16

Item	Name	Description
13	ALARM OUT	4ch relay output. Connect to external alarm.
14	P/Z	Connect to speed dome
15	K/B	Connect to keyboard
16	Audio in	16 CH Audio input
17	POWER SWITCH	Switch on/off
18	FAN	For cooling the device

2.4 Remote Controller

It uses two AAA size batteries and works after loading batteries as following:

Step1: Open the battery cover of the Remote Controller

Step2: Place batteries. Please take care the polarity (+ and -)

Step3: Replace the battery cover

***Notice**: Frequently defect checking as following*

1. Check batteries poles

2. Check the remaining charge in the batteries

3. Check IR controller sensor is mask

If it still doesn't work, Please change a new remote controller to try, or contact your dealers

The interface of remote controller is shown in Fig2.3Remote Controller.

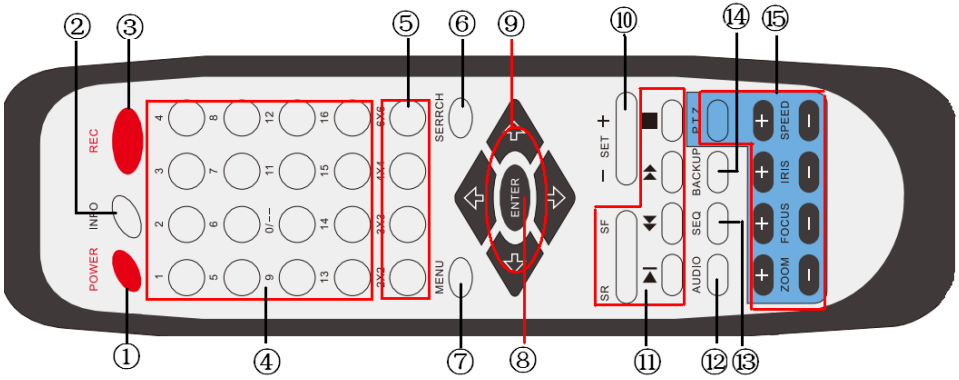


Fig 2.3Remote Controller

Item	Name	Function
1	Power Button	Soft switch off to stop firmware running. Do it before power off.
2	INFOR Button	Get information about the DVR like firmware version, HDD information
3	REC Button	To record manually
4	Digital Button	Input digital or choose camera
5	Multi Screen Button	To choose multi screen display mode
6	SEARCH Button	To enter search mode
7	MENU Button	To enter menu
8	ENTER Button	To confirm the choice or setup
9	Direction Button	Move cursor in setup or pan/title PTZ
10	+/- Button	To increase or decrease the value in setup
11	Playback Control Button	To control playback, Fast forward/rewind/stop/single frame play

Item	Name	Function
12	AUDIO Button	To enable audio output in live mode
13	Auto Dwell Button	To enter auto dwell mode
14	BACKUP Button	To enter backup mode
15	PTZ Control Button	To control PTZ camera: Move camera/ZOOM/FOCUS/IRIS/SPEED control

Operation processes with remote controller to control multi-DVR

The device ID of the DVR is 0. It's not necessary to reset the device ID when a remote is to be used to control a single DVR. However when controlling multiple DVR with multiple remote controllers, the user would need to configure the device ID, please refer to below steps:

Step1: Activate remote controller to control DVR: Turn the IR sensor of the remote controller to the IR receiver that on the front panel, press the number key 8 twice, then input device ID of the DVR to be controlled(Range from: 0-65535; the default device ID is 0.) After that, press ENTER button to confirm.

Step2: User can check the device ID by enter into System configuration→Basic configuration→device ID. User also can set other DVR with the same device ID. For more convenient to operate, we don't recommend user to set the device ID too long.

Step3: Cancel controller to control DVR: turn the IR sensor of the remote controller to the IR receiver that on the front panel, press the number key 8 twice, then input the device ID that needs to be cancelled from controlling, press ENTER button to confirm. After that, the DVR will not be controlled by remote controller.

2.5 Control with Mouse

2.5.1 Connect Mouse

It supports USB mouse through the ports on the rear panel.

***Notice**: If mouse is not detected or doesn't work, check below steps:*

1. Make sure the mouse plugs in the USB mouse port not the USB port.

2. Change a mouse to try.

2.5.2 Use Mouse

In live: Double-click left button on one camera to be full screen display. Double-click again to return to the previous screen display. Click right button to show the control bar at the bottom of the screen. Here are all control and setup. Click right mouse again to hide the control bar.

In setup: Click left button to enter. Click right button to cancel setup, or return to the previous.

If you want to input the value, please move cursor to the blank and click. An input window will appear as Fig2.4. It supports digitals, letters and symbols input.

Fig 2.4 Digital Numbers and Letters Input Window

Users can change some value by the wheel, such as time. Move cursor onto the value, and roll the wheel when the value blinks.

It supports mouse drag. I.e. Set motion detection area: click customized, hold left button and drag to set motion detection area. Set schedule: hold left button and drag to set schedule time.

In playback: Click left button to choose the options. Click right button to return to live mode.

In backup: Click left button to choose the options. Click right button to return to previous picture.

In PTZ control: Click left button to choose the buttons to control the PTZ. Click right button to return to live.

Notice: ***Mouse is the default tool in all the operation below unless Exceptional indication.***

3 Basic Function Instruction

3.1 Power On/Off

Before you power on the unit, please make sure all the connection is good.

3.1.1 Power on

Step1: connect with the source power; then switch on the power button near the power port on the rear panel.

Step2: the device will be loaded, and the power indicator will display blue.

Step3 before start, a WIZZARD window will be pop-up and show some information about time zone，time setup，network configuration, record configuration and disk management. User can setup here and refer to the concrete setup steps from the corresponding chapters. If users don't want to setup Wizard, please click Exit button to exit.

If there is no menu or only has live image display after the device is power on, user can long press ESC button to switch.

Notice: this serial device can only display options on either VGA monitor or BNC monitor at one time, if there is live image display without menu options, please check if there is display on other device/monitor, or long press ESC key to wait for login dialog box to appear. Long press ESC key can switch the output between BNC and VGA.

3.1.2 Power off

User can power off the device by using remote controller、keyboard and mouse.

By remote controller:

Step1: press Power button to display the Shut down window. Click OK and then the unit will power off after a while.

Step2: disconnect the power.

By keyboard and mouse:

Step1: enter into Menu → select "System Shut Down" icon. Then the Shut down window will appear.

Step2: after clicking OK, the unit will power off after a while.

Step3: disconnect the power.

3.2 Login

User can login and logout the DVR system. User cannot do any other operations except changing the multi-screen display once logout.

Fig 3-1 Login

Notice: the default user name and password is "admin" and 123456.

The concrete operation steps for change password, add or delete user please refer to User management configuration for more details.

3.3 Live preview

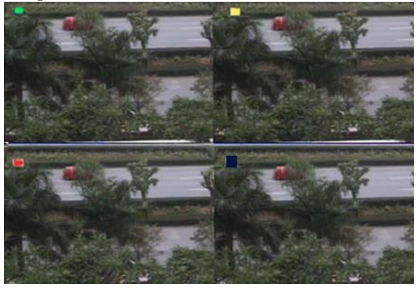


Fig 3-2 live preview interface

Symbol	Meaning
Green	Manual record
Yellow	Motion detection record
Red	Sensor Alarm record
Blue	Schedule record

3.3.1 Live playback

Click Play button to playback the record. Refer to Figure3-3. User can do concrete operation by click the buttons on screen.

Fig 3-3 live playback

4 Main menu setup guide

From the live screen, right click or press ESC button on the front panel to display the control bar at the bottom of the screen, refer to Fig 4-1:

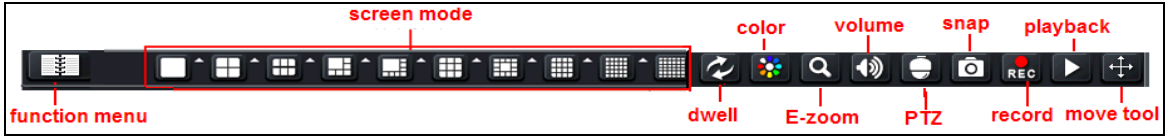


Fig 4-1 main menu toolbar

Click the icon beside the screen display mode to display a channel select dialog. 6/8/13 channels can realize single channel big screen. Images can drag to any place to display in the live interface.

Dwell: Dwell means to display live images from different cameras in a sequence. The images may be displayed as a single channel or in a grid fashion from different cameras. Dwell mode is enabled only when the chosen display mode is not able to display all the available cameras.

Color: Click this button to adjust the color of live pictures.

E-Zoom: Single channel large screen electronic amplification.

Left click the channel which needs to zoom. Right click select Zoom in button and then click to amplify the image. Left click & hold to drag the image. Double click to exit; right click to return to the main interface.

Volume: Enable sound.

PTZ: Click the PTZ button to control rotation position, speed of the dome, enable wiper and light and start track, auto scan or cruise in this interface. User can refer to PTZ configuration for more details.

Snap: click this button to snap the live pictures. These pictures will automatically be saved in the SATA disk.

Record: Click this button, user can start manual record.

Playback: Click this button, the device can playback the record files.

User can click button and drag the tool bar anywhere on screen display with the left mouse. Click Menu button to

display Login window. Input the user name and password to logon the system interface as shown in Fig 4-2. To see the main menu, press MENU button on the front panel or operate with remote controller. Clicking Setup icon will pop-up the configuration menu:

Fig 4-2 system setup

4.1 Basic configuration

Basic configuration includes three sub menus: system、date& time and DST.

4.1.1 System

Fig 4-3 basic configuration-basic

Step1: enter into system configuration→basic configuration→system; refer to Fig 4-3:

Step2: in this interface user can setup the device name, device ID, video format, max network users, VGA resolution and language. The definitions for every parameters display as below:

Device name: the name of the device. It may display on the client end or CMS that help user to recognize the device remotely.

Video format: two modes: PAL and NTSC. User can select the video format according to the camera.

Password check: If enabled, the user would need to input the user name and the password for performing corresponding operations.
Show time: display time in live.
Show wizard: if this item is selected, there will display an opening wizard with time zone and time setup information
Max network uses: set the max user amount of network connection
VGA resolution: the resolution of live display interface, range from: VGA800*600, VGA1024*768, VGA1280*1024 and CVBS
Note：When switch between VGA and CVBS will change the menu output mode, please connect to relevant monitor.
Language: setup the menu language.
Note: After changed the language and video output, the device needs to login again.

4.1.2 Time & date

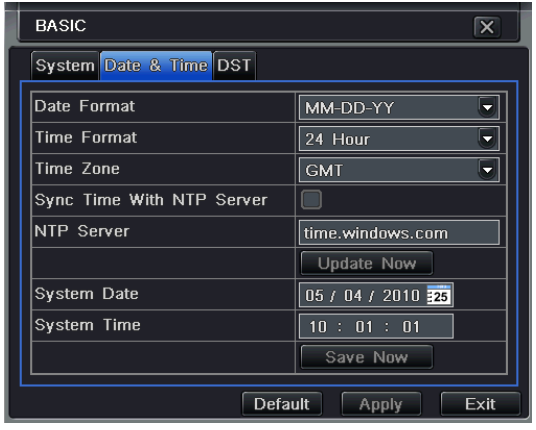


Fig 4-4 basic configuration-time & date

Step1: enter into system configuration→basic configuration→time & date; refer to Fig 4-4:
Step2: set the date format, time format, time zone in this interface; tick off “sync time with NTP server” to refresh NTP server date; user also can adjust system date manually

4.1.3 DST

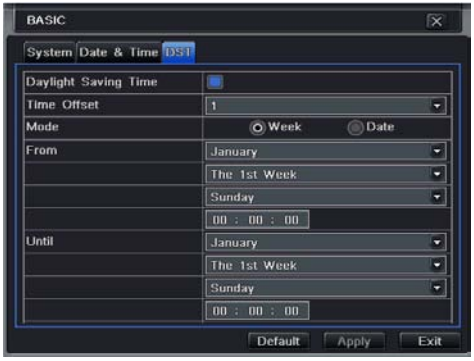


Fig 4-5 basic configuration-DST

Step1: enter into system configuration→basic configuration→DST; refer to Fig 4-5:

Step2: in this interface, enable daylight saving time, time offset, mode, start & end month/week/date, etc.

4.2 Live configuration

Live configuration includes four submenus: live, main monitor, Spot and mask.

4.2.1 Live

In this interface, user can setup camera name, adjust colors: brightness, hue, saturation and contrast.

Fig 4-6 live configuration→live

Step1: enter into system configuration→live configuration→live; refer to Fig 4-6:

Note: Click Camera Name, a soft keyboard will pop up. User can self-define the camera name. Click Shift button, user can input Capital letters; click Shift button again, user can input Chinese characters.

Step2: tick off camera name; click “setting” button, a window will pop-up as Fig 4-7:

Fig 4-7 live-color adjustment

Step3: in this interface, user can adjust brightness, hue, saturation and contrast in live; click “default” button to resort default setting; click “OK” button to save the setting.
Step4: user can setup all channels with same parameters, tick off “all” to do relevant setup.

4.2.2 Main monitor

Step1: enter into system configuration→live configuration→main monitor; refer to Fig 4-8:

Step2: select split mode: 1×1、2×2、2×3、3×3、4×4, 5×5, 6×6 and channel

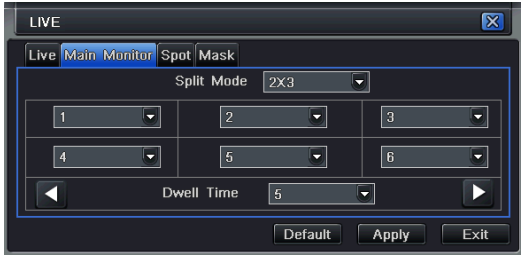


Fig 4-8 live configuration-host monitor

Step3: dwell time: the time interval for a certain dwell picture display switching to next dwell picture display

Step4: while selecting the split mode, user can setup the current picture group. Click button to setup the previous channel groups of dwell picture and click button to set the latter channel groups of dwell picture.

4.2.3 Spot

Step1: enter into system configuration→live configuration→Spot; refer to Fig 4-9:

Step2: select split mode: 1×1and channel.

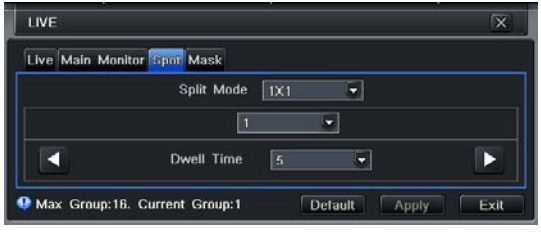


Fig 4-9 live configuration-Spot

Step 3: dwell time: the time interval for a certain dwell picture display switching to next dwell picture display

Step 4: while selecting the split mode, user can setup the current picture group. Click button to setup the previous channel groups of dwell picture, click button to set the latter channel groups of dwell picture.

4.2.4 Mask

User can setup private mask area on the live image picture, max threes areas.

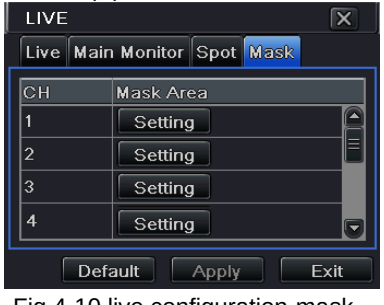
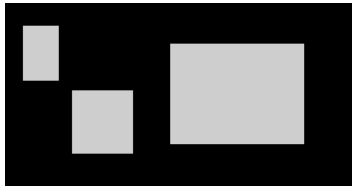


Fig 4-10 live configuration-mask

Setup mask area: click Setting button and then enter into live image. Next, press left mouse and drag mouse to set mask area referring to the left picture. Click Apply button to save the setting.

Delete mask area: select a certain mask area and left click to delete that mask area. Then click Apply button to save the setting.



Setup mask area

live image mask area

4.3 Record configuration

Record configuration includes six sub menus: enable, record bit rate, time, recycle record, stamp and snap.

4.3.1 Enable

Step1: enter into system configuration→record configuration→enable; refer to Fig 4-11:

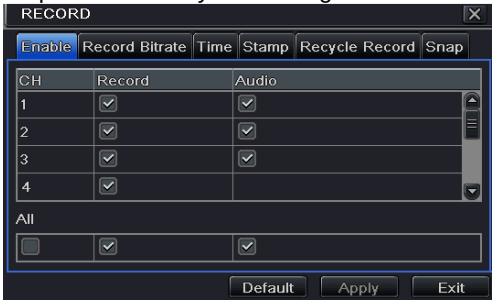


Fig 4-11 record configuration-enable

Step2: tick off record, audio and record time

Step3: user can setup all channels with same parameters, tick off “all”, then to do relevant setup.

Parameter	Meaning
Record	Record switch of every channels
Audio	Enable live record audio

4.3.2 Record stream

Fig 4-12 record configuration-record bit rate

Step1: enter into system configuration→record configuration→record bit rate; refer to Fig 4-12:
Step2: setup rate, resolution, quality, encode and max bit stream
Step3: user can setup all channels with same parameters, tick off “All”, then to do relevant setup.
Note: if the rate value set is over high the maximum resources of the device, the value will be adjusted automatically.

Definitions and descriptions of Record stream:

Parameter	Meaning
Rate	Range from: 1-30 (NTSC) 1-25(PAL)
Resolution	Support CIF and D1
Quality	The higher the value is, the clearer the recorded image is. Six options: lowest, lower, low, medium, higher and highest.
Encode	VBR and CBR
Max bit stream	Range from: 64 Kbps, 128 Kbps, 256 Kbps, 512 Kbps, 768 Kbps, 1Mbps, 2 Mbps

4.3.3 Time

Step1: enter into system configuration→record configuration→ time; refer to Fig 4-13:
Pre-alarm record time: the record time before event happen i.e. record time before motion detection or sensor alarm is triggered.

Post-alarm record: set post recording time after the alarm is finished, options: 10s, 15s, 20s, 30s, 60s, 120s, 180s and 300s.
Expire time: the hold time of saved records. If the set date is overdue, the record files will be deleted automatically.
Step2: user can setup all channels with same parameters, and then tick off “all” to do relevant setup.

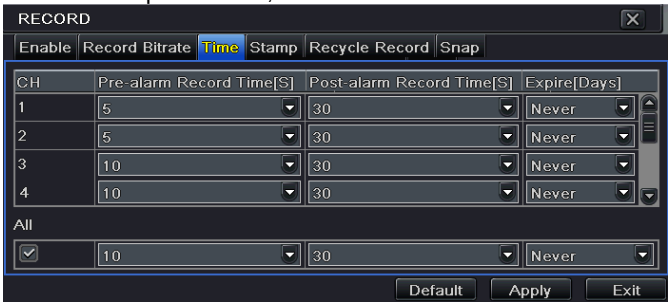


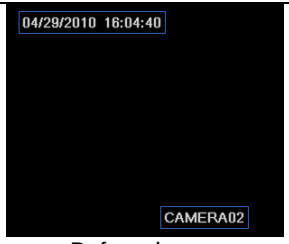
Fig 4-13 record configuration-time

4.3.4 Stamp

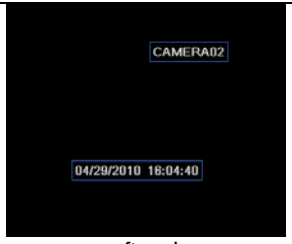
Stamp：User can overlap the channel name and time stamp on video.

Fig 4-14 record configuration-stamp

Step1: enter into system configuration→ record configuration→ stamp; refer to Fig 4-14:
Step2: tick off camera name, time stamp; click Setting button. User can use cursor to drag the camera name and time stamp in random positions, referring to below Figures:
Step3: user can setup all channels with same parameters. Tick off “all” to do relevant setup.



Before drag



after drag

4.3.5 Recycle record

Step1: enter into system configuration→record configuration→recycle record;

Step2: tick off recycle record to enable the recycle record function. It will cover the earlier recorded files and keep recoding when HDD is full; if user disenables this function, it will stop recording when HDD is full.

Step3: click “default” button to resort default setting; click “apply” button to save the setting; click “exit” button to exit current interface.

4.3.6 Snap

In this interface, user can set up Resolution, quality, snap interval and snap number.

4.4 Schedule configuration

Schedule configuration includes three sub menus: schedule, motion and alarm.

4.4.1 Schedule

The volume means the seven days of a week from Monday to Sunday, the row means 24 hours of a day. Click the grid to do relevant setup. Blue means checked area and gray means unchecked area.

Step1: enter into system configuration→schedule configuration→schedule; referring to Fig 4-15:

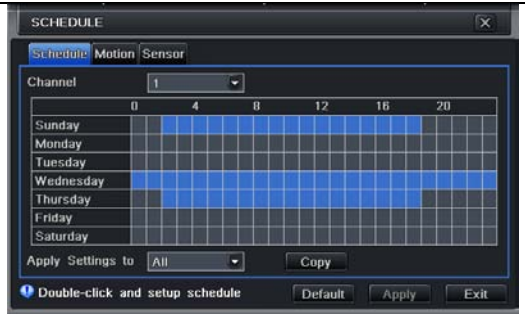


Fig 4-15 schedule configuration-schedule

Step2: select channel and double-click to pop up a dialog box as Fig 4-16. Now user can edit week schedule:

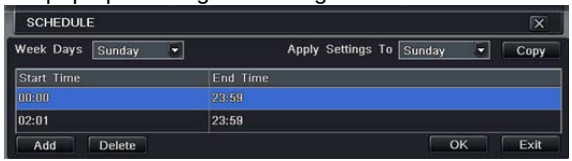


Fig 4-16 schedule-week schedule

① Click “add” button to add a certain day schedule; click “delete” button to delete the selected schedule;
Copy: user can copy the specify schedule to other dates.
Click “OK” button to save the setting; click “Exit” button to exit current interface.

② If user wants to apply the schedule setting of certain channel to other or all channels, just only select channel and click “Copy” button.

4.4.2 Motion

Step1: enter into system configuration→schedule configuration→motion; refer to Fig 4-17:
Step2: the setup steps of motion are familiar with schedule; user can refer to 4.4.1 Schedule for details.

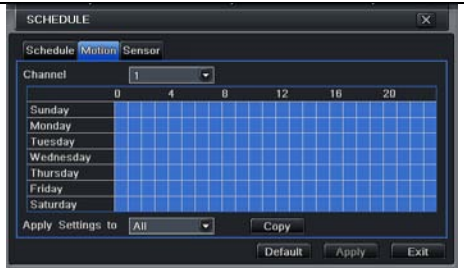


Fig 4-17 schedule configuration-motion

Note: the default schedule of motion detection is full-selected, that is, the color of schedule setting interface is blue.

4.4.3 Sensor

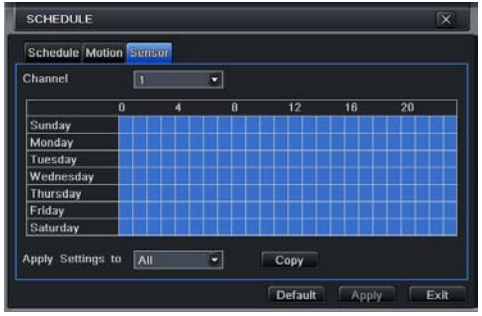


Fig 4-18 schedule configuration-sensor

Step1: enter into system configuration→schedule configuration→alarm; refer to Fig 4-18:

Step2: the setup steps of alarm are familiar with schedule; user can refer to 4.4.1 Schedule for details.

Note: the default schedule of sensor is full-selected, that is, the color of schedule setting interface is blue.

4.5 Alarm configuration

Alarm configuration includes five sub menus: sensor, motion, video loss, other alarm and alarm out.

4.5.1 Sensor

Sensor includes three sub menus: basic, alarm handling and schedule.

① Basic

Fig 4-19 alarm configuration-sensor-basic

Step1: enter into system configuration→alarm configuration→sensor→basic; refer to Fig 4-19:
Step2: enable sensor alarm and then set the alarm type according to triggered alarm type. Two option: NO and NC.
Step3: user can setup all channels with same parameters, tick off “all” to do relevant setup.

② Alarm handling

Step1: enter into system configuration→alarm configuration→sensor→alarm handling; referring to Fig 4-20:
Step2: select hold time and click Trigger to display a screen as shown in Fig 4-21:

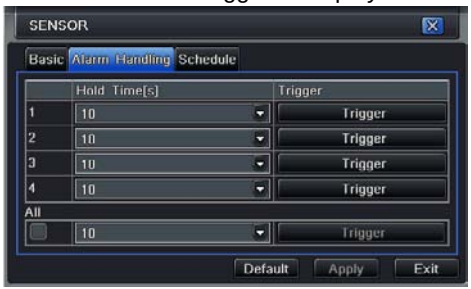


Fig 4-20 alarm configuration-sensor-alarm handling

Fig 4-21 alarm handling-trigger

Step 3: If Buzzer is selected, there will be triggered buzzer alarm out.
Full screen alarm: when alarm is triggered, there will pop up full screen alarm;
Email: Select this function. When an alarm is triggered, a notification email will be sent to user's designed email box including trigger events, time, snap pictures, device name, ID camera name etc.
Snap: Select channels. When an alarm is trigged, the system will automatically save the captured pictures from the selected channel. If user ticks off Email function, these pictures will also be sent to user's designed email box.
To alarm out: After selecting the channel, there will be triggered alarm out in the designated channel. Click OK button to save the setting; click Exit button to exit the current interface.
To record: Select recoding channels. It will record the camera when alarm is triggered. Click OK button to save the setting; click Exit button to exit the current interface.
To P.T.Z: set linked preset and cruise for alarm. User can select any channel and multi channels as linked channels. Click OK button to save the setting; click Exit button to exit the current interface.
Step4: user can setup all channels with same parameters. Tick off "all" to do relevant setup.

③ Schedule

Step1: enter into system configuration→alarm configuration→sensor→schedule; refer to Fig 4-22:

Step2: the setup steps of sensor schedule are familiar with schedule; user can refer to 4.4.1 Schedule for details.

Note: the default schedule of sensor is full-selected, that is, the color of schedule setting interface is blue.

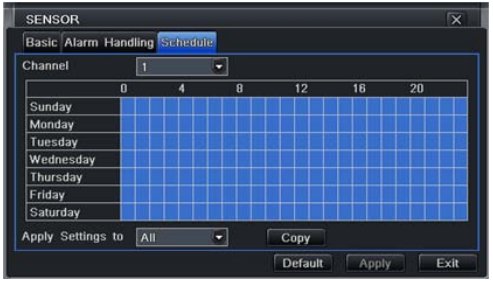


Fig 4-22 sensor-schedule

4.5.2 Motion

Motion includes two sub menus: motion and schedule.

① Motion

Step 1: enter into system configuration→alarm configuration→motion; refer to Fig 4-23:

Step 2: enable motion alarm and set alarm hold time which means time interval between two adjacent detective motions. If there is other motion detected during the interval period, it is considered continuous movement; otherwise, it will be considered that those two adjacent detective motions are two different motion events. While clicking Trigger, a window will pop-up:
Step 3: the setup steps of motion trigger are familiar with alarm handling; user can refer to Chapter 4.5.1 Sensor →alarm handling for more details.
Step4: while clicking Area button, a window will pop-up as Fig 4-24:

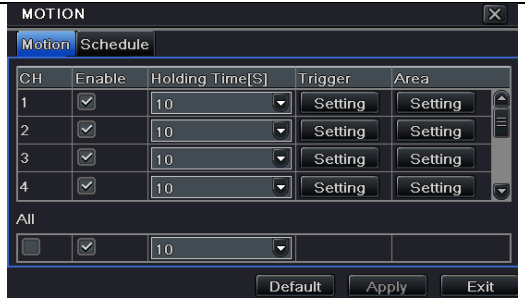


Fig 4-23 alarm configuration-motion

Fig 4-24 motion-area

Step 5: in the Area interface, user can drag slide bar to set the sensitivity value (1-8), the default value is 4. The higher the value is the higher sensitivity you get. Due to the sensitivity is influenced by color and time (day or night), user can adjust its value according to the practical conditions; click icon to set the whole area as detection area; click icon to clear the set detection area; click icon to test whether the sensitivity value and motion area are suitable accordingly **(** referring to following picture **)** ; Click icon to save the setting; click icon to exit current interface.

Note: when users drag mouse to set motion detection area, they have to click icon to clear all set detection area firstly, and then make the operation.

Step 6: user can setup all channels with same parameters.

② Schedule

Step 1: enter into system configuration → alarm configuration → schedule; refer to Fig 4-25:

Step 2: the setup steps of alarm schedule are familiar with schedule; user can refer to 4.4.1 Schedule for details.

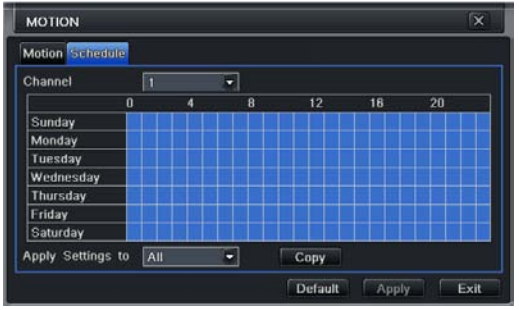


Fig3-25 alarm configuration-schedule

4.5.3 Video loss

Step 1: enter into system configuration→alarm configuration→video loss; refer to Fig 4-26:

Step 2: the setup steps of video loss trigger are familiar with alarm handling; user can refer to Chapter 4.5.1 Sensor →alarm handling for more details.

Step 3: user can setup all channels with same parameters.

Fig 4-26 alarm configuration-video loss

4.5.4 Other alarm

Step1: enter into system configuration→other alarm; refer to Fig 4-27:

Fig4-27 other alarm

Disk full: user can choose the capacity of the disk storage and select the related alarm. If the disk is full, the system will alarm according to the setup.

IP conflict: if there is an IP address conflict within the same network, the device will alarm after user selects buzzer and the channel to alarm out.

Disconnect: if the disconnect happens, the device will the device will alarm after the user selects buzzer and the channel to alarm out.

Disk Warning: if the disk reduces, the system will send email to the designated mailbox or alarm to notify the reducing information after the user has selected the corresponding function.

Step 2: select a hard disk in the pull down list box. When the disk capacity is lower than that value, there will appear some text

information on the lower right of the live image.

4.5.5 Alarm out

Alarm out includes three sub menus: alarm out, schedule and buzzer

① Alarm out

Step 1: enter into system configuration→alarm out; refer to Fig 4-28:

Step 2: in this interface, user can set relay alarm out name and select hold time which means the interval time between the two adjacent alarms.

Step 3: user can setup all channels with same parameters.

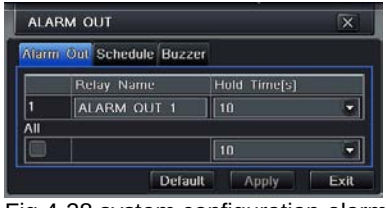


Fig 4-28 system configuration-alarm out

② Schedule

Step 1: enter into system configuration→schedule;

Step 2: the setup steps of alarm out schedule are familiar with schedule; user can refer to 4.4.1 Schedule for details.

Note: the default schedule of motion detection is full-selected, that is, the color of schedule setting interface is blue.

③ Buzzer

Step1: enter into system configuration→buzzer;

Step2: tick off Buzzer and set buzzer alarm hold time

4.6 Network configuration

Network configuration includes four submenus: network, sub stream, Email and other settings.

4.6.1 Network

Step 1: enter into system configuration→network configuration→network; refer to Fig4-29:

Step 2: HTTP port: the default value is 80. If the value changed, user needs to add the port number when typing IP address in IE address blank .i.e. set HTTP port to 82, IP address: http://192.168.0.25, user needs to input that address: http://192.168.0.25:82

into IE browser.

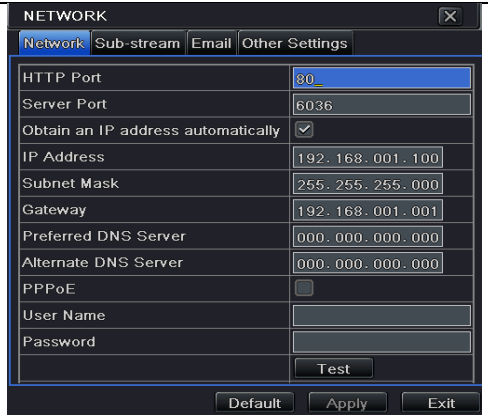


Fig 4-29 network configuration-network

Server port: communication port.

Step 3: If user selects the "Obtain an IP address automatically", the device will distribute IP address, subnet mask, and gateway IP and DNS server.

Step 4: enable PPPoE to directly connect the DVR to internet via ADSL, and then input the user name and password. Next, click TEST button to test the effectiveness of the relevant information.

4.6.2 Sub stream

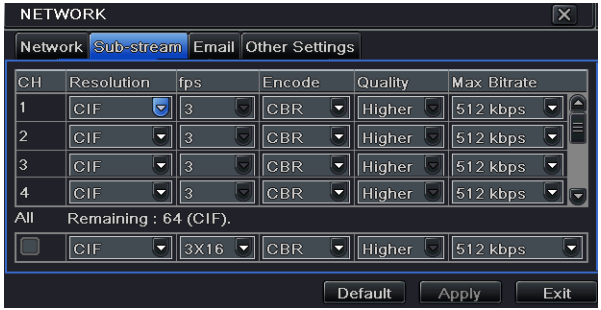


Fig 4-30 network configuration-sub stream

Step 1: enter into system configuration→network configuration→sub stream; refer to Fig 4-30:

Step 2: select fps, resolution, quality, encode and max bit rate

Step 3: user can setup all channels with same parameters. Tick off “all” to do relevant setup.

Definitions and descriptions of Sub stream:

Parameter	Meaning
FPS	Range from: 1-25
Resolution	Support CIF
Quality	The quality of the clients' image. The higher the value is, the clearer the record image. Six options: lowest, lower, low, medium, higher and highest.
Encode	VBR and CBR
Max bit rate	Range from: 64 Kbps、128 Kbps、256 Kbps、512 Kbps、768 Kbps、1Mbps、2 Mbps

4.6.3 Email

Step 1: enter into system configuration→network configuration→email; refer to Fig 4-31:

Fig 4-31 network configuration-email

SMTP Server/Port: the name and port number of SMTP server. After selecting "This server requires a secure connection (SSL)", user can setup mail servers (such as Gmail) according to actual needs.

Send address/password: sender's email address/password

Receive address: receiver's email address. Here user can add at least three mail addresses.

Click TEST button to test the validity of the mailbox.

Attaching image: After selecting it, the system will attach images when sending the emails.

4.6.4 Other settings

Step 1: enable DDNS server: user needs to input user name , password and host domain name of the registered website, click TEST to test the effectiveness of the relevant information.

Step 2: click “default” button to resort default setting; click “apply” button to save the setting; click “exit” button to exit current interface.

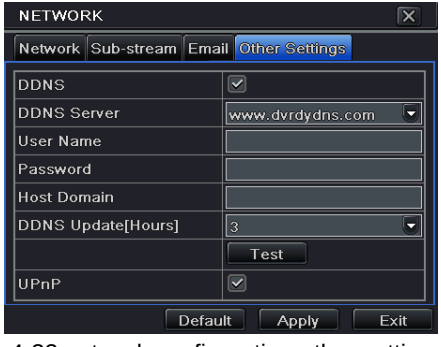
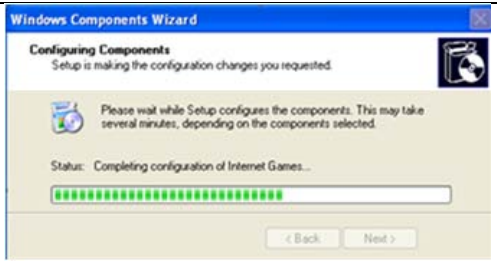


Fig 4-32 network configuration-other settings

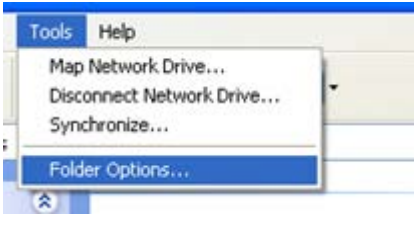
Note: The domain name server that selected by user is a banding domain name of DVR. User should logon the website which provided by the server supplier to register a user name and password firstly, and then apply for a domain name on line. After the successful application, user can access the server from the IE client by inputting that domain name.

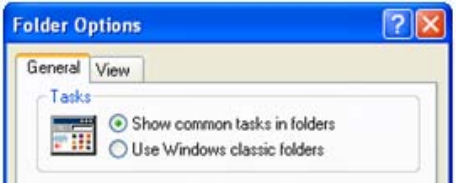
Enable UPnP: User may select UPnP and then enable UPnP function in the user’s router. Then user can access DVR through WAN. When accessing the DVR through IE, user can check the IP address by the following method: Double-click the “My Network Places” icon on the desktop in PC, select “Show icons for networked UPnP devices” in the “Network Tasks” list box, a information window will pop up, click “YES” button, “Windows Components Wizard” dialog box will pop up as shown as below picture, press “Next” to continue. After finished the installation of configuring components, the UPnP icons will display. Users can double-click certain icon and check the IP address of the device.



If “Show icons for networked UPnP devices” can’t display in the “Network Tasks” list box, please follow the below operation:

- Click “Tools”-- “Folder options”
- Select the “Show common tasks in folders” in the “Tasks” check box to display the UPnP icon.

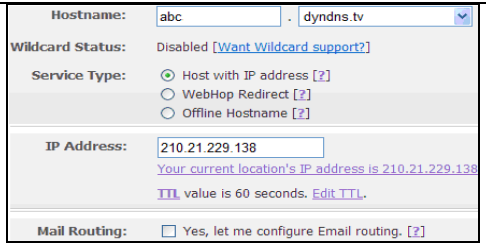




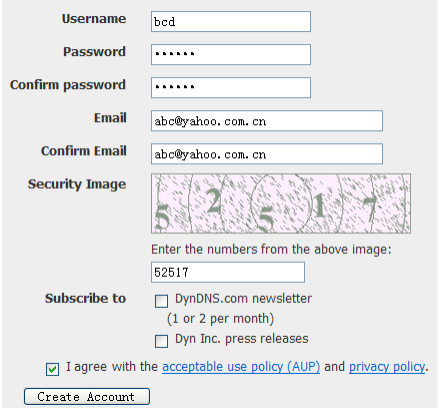
1． Domain name Registration （Take www.dyndns.com for example）

Note: Users can self-define the hostname, username and password.

Input www.dyndns.com in the IE address bar, user can access the domain name registration interface. Click”Dynamic DNS service”→”Create Free Hostname” to register. For example: Hostname is “abc.dyndns.tv. The picture is shown as follows:



After user fill in the blank, click “Add to cart”. Then Dynamic DNS Hosts dialog box will be displayed. Next, create user account. For example, the username is “bcd”, password is “123456”.



Click” Create Account” button to create user account.

2． DVR Setting

（1） Domain name

According to the domain name registration of “DDNS”，the domain name for DVR is “abc.dyndns.tv”

（2） Username and password

According to the above registration, username is “bcd”.

According to the above registration, password is “123456”

3． Application

Connect DVR to the Network Client.

① Enter into Main menu→Network→other settings, tick off DDNS, select “Dyndns” at the DDNS Sever pull down list box and input user name and password.

② Enter into configuration interface of the router to map the server port and IP address (if the user enables UPnP function, he can skip this step). Click Save button to save the setting

③ Login IE browser and input registered domain name “http://www.abc.dyndns.tv”, connect to DVR client.

Note **If the value changed, user needs to add the port number when typing IP address in IE address blank .i.e. set HTTP port to 82, IP address: http://192.168.0.25, user needs to input that address: http://192.168.0.25:82 into IE browser.**

Definitions and descriptions of network configuration:

DDNS server	
DDNS server	Website provided by dynamic domain name supplier. The optional: www.dns2p.net ， www.meibu.com ，www.dyndns.comandwww.no-ip.com
User name	User name for log in the website of domain name supplier
Password	Password for log in the website of domain name supplier
Host domain	The domain name user registered at the supplier’s website.
Update interval	The interval time of upgrading DVR IP address

4.7 User management configuration

Step 1: enter into system configuration→user management configuration; refer to Fig 4-33:

Step 2: click Add button to display a dialog box as Fig 4-34:

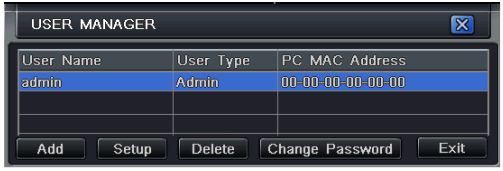


Fig 4-33 user management configuration

Fig 4-34 add-general

① General: Input user name, password; select user type: normal and advance, input the MAC address of the PC; click OK button. Then this user will be added into the user list box; click Exit button to exit the current interface.

Note: when the default value of binding PC MAC address is 0, the user is not bind with the specify computer; the, the user can log in DVR on the binding computer after set the specific binding MAC address.

② Authority:

Step 1: enter into Add user→authority; refer to Fig 4-35:

Step 2: In the authority interface, assign the definite operation right for that user.

Step 3: in the user management interface, click Setup button to modify user name, user type and binding PC MAC address.

Step 4: select the user that user wants to delete in the user list box and then click Delete button to delete this user.

Step 5: click Change password button to modify the password; click Exit button to exit the current interface.

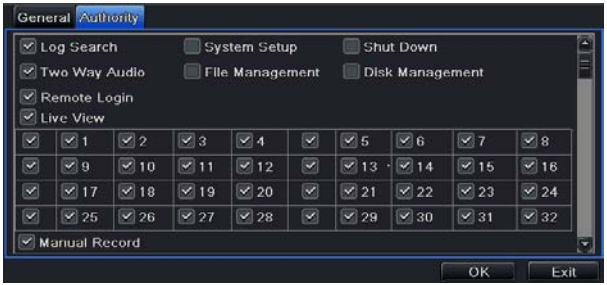


Fig 4-35 add user-authority

4.8 P.T.Z configuration

P.T.Z configuration includes two submenus: serial port and advance

① Serial port

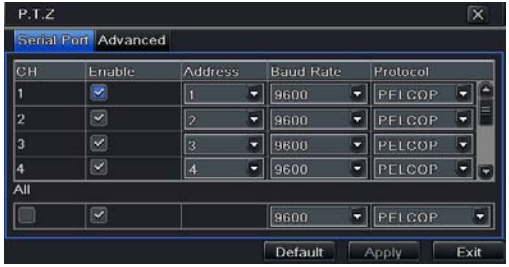


Fig 4-36 P.T.Z configuration-serial port

Step 1: enter into system configuration → P.T.Z configuration→serial port; refer to Fig 4-36:
Step 2: tick off Enable and then setup the value of address, baud rate and protocol according to the settings of the speed dome.
Step 3: user can setup all channels with same parameters.

Definitions and descriptions of network stream:

Parameter	Meaning
Address	The address of the PTZ device
Baud rate	Baud rate of the PTZ device. Range form: 110, 300, 600, 1200, 2400, 4800, 9600, 19200, 34800, 57600, 115200, 230400, 460800, 921600.
Protocol	Communication protocol of the PTZ device. Range from: NULL, PELCOP, PELCOD, LILIN, MINKING, NEON, STAR, VIDO, DSCP, VISCA, SAMSUNG, RM110, HY, N-control.

③ Advance

Step 1: enter into system configuration→ P.T.Z configuration→advance; refer to Fig 4-37:
Step 2: in the Advance interface, click preset “Setting” button to see a dialog box as Fig 4-38:

Fig 4-37 P.T.Z configuration-advance

Fig 4-38 advance-preset setting

a. in the preset set interface, while clicking Setting button, a dialog will pop-up as Fig 3-39:

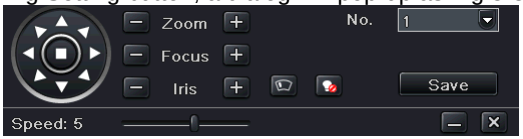


Fig 4-39 preset set-setting

b. user can control the dome rotates up, up left, down, right down, left , left down, right and up right and stop rotating; adjust the rotate speed and the value of zoom, focus and iris of the dome;

c. select the serial number of the preset point. Click button to enable the PTZ wiper and click button to enable the PTZ light.

Note: PTZ must support wiper and light, these two functional buttons can take effect. At the same time these two buttons are just available when selecting PELCOP or PELCOD.

Click Save button to save the settings, click icon to hide the tool bar, right-key can remerge it; click icon to exit the current interface.

d. in the preset interface, click OK button to save the setting; click Exit button to exit current interface.

Step 3: in the Advance interface, while clicking cruise “Setting” button, a dialog box will pop-up as Fig 4-40:

Fig 4-40 cruise set

a. click Add button to add cruise line in the list box (max 8 cruise line can be added); select a cruise line and click Setup button to see a dialog box as Fig 4-41:

b. click Add icon to set the speed and time of preset point; select a preset point and then click Delete icon to delete that preset point; click Modify icon to modify the setting of a preset point. User can click those icons to adjust the position of preset point. Click Preview button to preview the cruise line; click OK button to save the setting; click Exit button to exit current interface.

c. select a preset point in the cruise line list box. Click Delete button to delete that cruise line; click Clear all button to clear all cruise line from the list box; click OK button to save the setting; click Exit button to exit current interface.

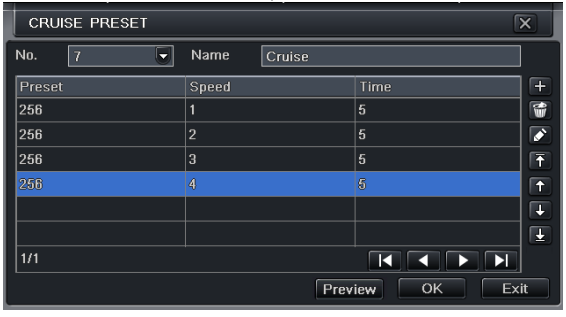


Fig 4-41 cruise set-modify cruise line

Step4: in the Advance interface, while clicking track “Setting” button, a dialog box will pop-up as Fig 4-42:

Fig 4-42 track setting

a. user can control the dome rotates up, up left, down, right down, left, left down, right and up right and stop rotating; adjust the rotate speed and the value of zoom, focus and iris of the dome; click Start Record button to record the move track of PTZ; click this button again can stop record; click Start track button to play recorded track; click this button again can stop play.

b. click icon to hide the tool bar, right-key can remerge it; click icon to exit the current interface.

4.9 Advanced

Advanced configuration includes three submenus: reset, import/export and Block/Allow list.

4.9.1 Reset

Reset all settings the device will reboot.

4.9.2 Import/Export

User can export the data files into mobile storage devices as backup function, and then import specified data files from mobile storage device to DVR.

4.9.3 Block/Allow list

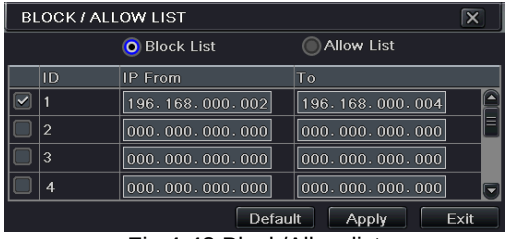


Fig 4-43 Block/Allow list

Here authorized user can prohibit computer users within a certain IP address segment from accessing to DVR or admit computer users within a certain IP address segment into DVR. For example, if authorized user don't want computer users within IP address segment from 196.168.000.002 to 196.168.000.004 to access to DVR, authorized user can tick off Block list, and then input such IP address segment. After that, click Apply to save settings. If authorized users allow computer users within a certain IP address segment to access DVR, they can tick off Allow-list, and then operate in the same way.

5 Record search & playback and backup

Search configuration includes four submenus: time search, event search, file management and image.

5.1 Time search

Step1: enter into Search configuration→time search; refer to Fig 5-1:

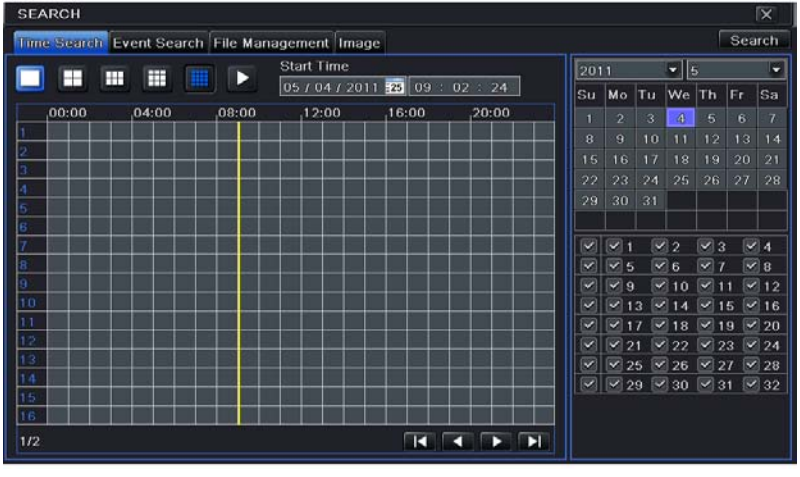


Fig 5-1 Search configuration-time search

Step2: To search a record select date and channels on the right hand side and press the 'Search' button. A date with highlighted borderline indicates presence of data.

Step 3: Use the grid on the left hand side to identify the presence of data as per the required time. Blue patches indicate presence of data. This can be selected by clicking a particular grid or by entering the specific value in the time field.

Note: the vertical column means hours, horizontal column means channels.

Step4: click Play button to playback record; click the relevant buttons on the screen to do operation:

Playback buttons

Note: when the monitor resolution is VGA800*600, the time search interface will appear a hide button, click this button, the whole interface can be expanded.

5.2 Event search

Step 1: enter into Search configuration→event search; refer to Fig 5-2:

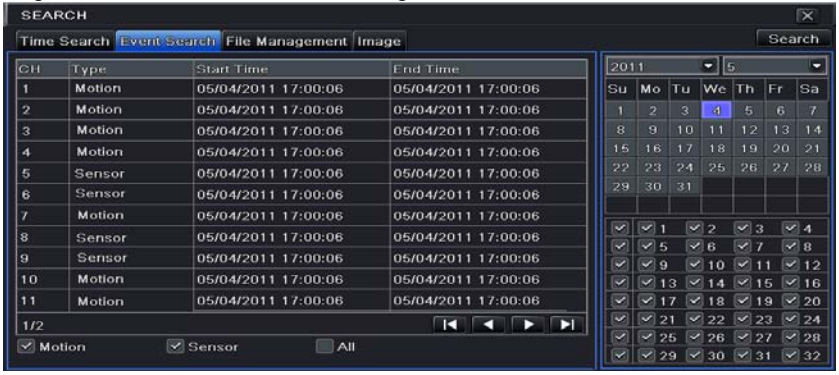


Fig 5-2 Search configuration-event search

Step 2: while clicking Search button, the searched event information will displayed in the event list box. User can select date, channel and tick off Motion, Sensor or All accordingly.

Step 3: double check a certain record file to playback.

Note: when the monitor resolution is VGA800*600, the event search interface will appear a hide button, click this button, the whole interface can be expanded.

5.3 File management

Step 1: enter into Search configuration→file management; refer to Fig 5-3:

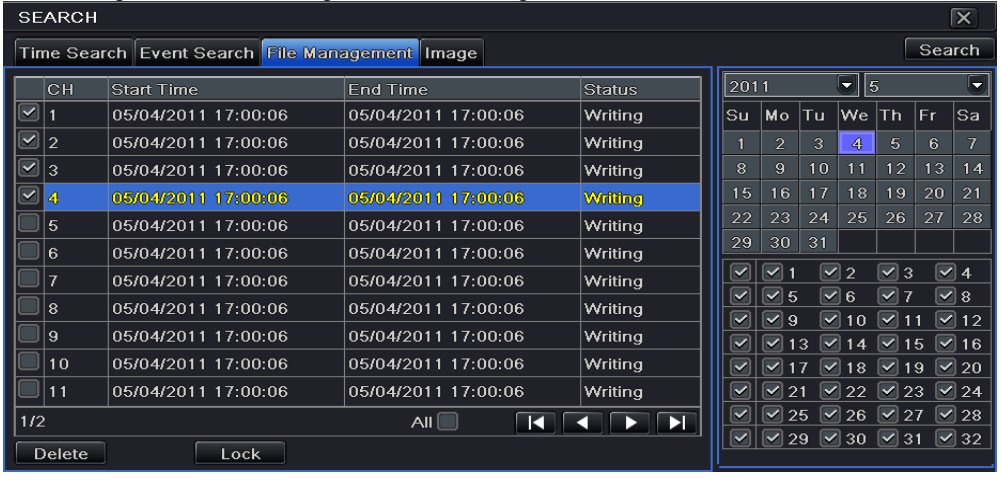


Fig 5-3 Search configuration-file management

Step 2: After clicking Search, the searched files will be displayed in the file list box; user can select date and channels accordingly.

Lock: select a file and click Lock button to lock this file, after that, that file will not be deleted or covered.

Unlock: select a locked file and click Lock button to unlock this file

Delete: select an unlocked file and click Delete button to delete this file.

Step 3: After clicking “All”, user can lock/unlock or delete all files in the file management column.

Step 4: double click an unlocked item to playback.

Note: when the monitor resolution is VGA800*600, the file management interface will appear a hide button, click this button, the whole interface can be expanded.

5.4 Image

In this interface, user can set start, end time and channels to search the captured images and save, lock or delete these images. There are at most 2000 images which can be saved in the SATA disk. If there are more images saved in the SATA disks than 2000 images, those additional images will supersede prior images. Double click the image with the left mouse, it will automatically playback from the time of the image captured.

5.5 Backup

This unit supports backup by built-in SATA DVD Writer with USB Flash, through the USB port on the front panel. User also can make backup by IE browser via internet. Refer to 7.3.2 Remote backup.

Step 1: enter into backup configuration referring to Fig 5-4:

Step 2: set the start & end time and select channels. After clicking Search button, the searched data will be displayed in the data backup list box

Step 3: select a data file or tick off “All” to select all data files. Click Backup button to display Backup information dialog box.

Step 4: in the backup information interface, user can check the relevant information of backup files, storage type, save file type, etc. click Start button to starting backup.

Note: when the monitor resolution is VGA800*600, the file management interface will appear a hide button. Click this button to expand the whole interface.

Fig 5-4 backup configuration

6 Manage DVR

6.1 Check system information

Check system information includes five submenus: system, event, log, network and online user.

6.1.1 System information

In this interface, user can check the hardware version, MCU version, kernel version, device ID, etc.

6.1.2 Event information

In this interface, user can check record events according to the set date.

Note: if there are overlapping files, a "+" character will show behind the channel ID.

6.1.3 Log information

In this interface, user can check relevant log information according to set date.

User can export the data files into mobile storage devices as backup function.

6.1.4 Network information

In this interface, user can check relevant parameters of network.

6.1.5 Online information

In this interface, user can check the details of the current connection of online users.

Refresh: refresh the current interface.

Disconnect: the administrator authorized to disconnect the client terminal. When disconnected, that PC will not be able to access the device within five minutes.

6.2 Manual alarm

In this interface, user can check the relevant parameters of manual alarm.

6.3 Disk management

1. **Format the disk**

Step1: enter into disk management interface

Note: please format the hard disk before record. If not being formatted, it will show the status of the disk-free space, and total space show OM at the bottom of screen.

Step2: click Refresh button to refresh the disk information of the list box; set the property of the disk then click Apply button to save the setting

Step3: select a hard disk and click Format button to star format.

Note: all recorded files in the hard disk will be lost after formatted.

2. **Advanced**

User may check model, S/N, firmware, health status of the disk in this interface. User also can monitor the temperature, internal circuit, dielectric material of the disk, analysis the potential problems of the disk and warn so as to protect its data.

6.4 Upgrade

At present, it only supports USB update. Get the software from your vendor when there is a new software version, and make sure it is corresponding with the DVR. User can check the USB information in Disk management.

Upgrade method: the user needs to copy the upgrade software which gets from vendor into the USB storage device and then connect it to the USB port. Enter Menu→Upgrade, the upgrade software name is displayed in the upgrade list box. Next, select that software and then click upgrade button. It will upgrade automatically. Please wait for a while when the system is rebooted. Never cut off power during upgrading.

6.5 Logoff

While clicking Log off icon, a log off dialogue box will popup. Then click OK button to log off. If user wants to log in again, click icon to enter into user name and password to re-login.

7 Remote Surveillance

7.1 IE Remote Surveillance

In order to view the DVR from a network it must be connected to a LAN/WAN or internet. The network setup should be done accordingly. Please refer to 4.6 Network Setup. This DVR supports IE browser, on Windows XP and Vista platform.

7.1.1 On LAN

Step 1: Enter into the DVR's Main Menu→Setup→Network interface to input IP address, Subnet Mask, etc .If using DHCP, please enable DHCP in both the DVR and the router.

Step 2: Enter Record Setup to set network video parameters like resolution, frame rate etc.

Step 3: Open IE on a computer on the same network. Input the IP address of the DVR in IE address bar and press enter.

Step 4: IE will download ActiveX component automatically. Enter the username and password in the subsequent window

***Notice**:* If HTTP port is not 80, other number instead, need add the port number after IP address. For example, set HTTP port as 82, need input IP address like 192.168.0.25:82.

User name and password here are the same with that used on the DVR. The default is admin and 123456.

7.1.2 On WAN

There are two ways for the DVR to connect to internet.

1. Connect the DVR to internet through router or virtual server

Step 1: Enter into the DVR's Main Menu→Setup→Network interface to input IP address, Subnet Mask, etc. If using DHCP, please enable DHCP in both the DVR and router.

Step 2: Forward IP address and port number in Virtual Server setup of the router or virtual server. Configure the firewall to allow accessing the DVR. (If the user has enabled the UPnP function in both the DVR and router, he can skip this step.)

Step 4: If users want to utilize dynamic domain name, please apply for a domain name in a DNS server supported by the DVR or router. Then add to the DVR or router.

This unit supports www.dns2p.com , www.meibu.com , www.dyndns.com , and www.no-ip.com.

Step 5: Open IE browser, input IP address, or dynamic domain name and enter. If HTTP port is not 80, add the port number after IP address or domain name.

Step 6: IE will download ActiveX automatically. Then a window pops up and asks for user name and password. Input name and password correctly, and enter to view.

***Note**: If you cannot download and install ActiveX, please refer to Appendix A FAQ Q8.*

2. Connect the DVR to internet directly.

Step 1: Enter into the DVR's Main Menu→Setup→Network interface to enable PPPoE and then input user name and password received from your ISP. Next, click 'Apply'. The DVR will connect to the server and would give a confirmation message.

Step 2: When accessing the remote interface of DVR, user can input WAN IP to access directly (user can enter into Main menu→Information→Network interface to check IP address). The browser will download Active X control

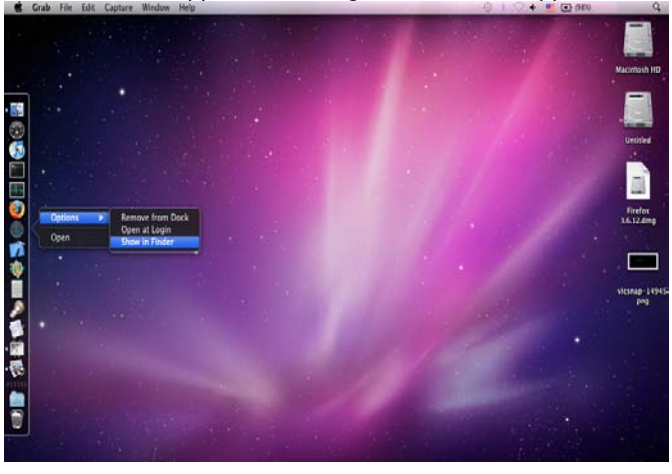
Step 3: The following setting steps are as the same as Step4, Step 5 and Step 6 in Point 1.

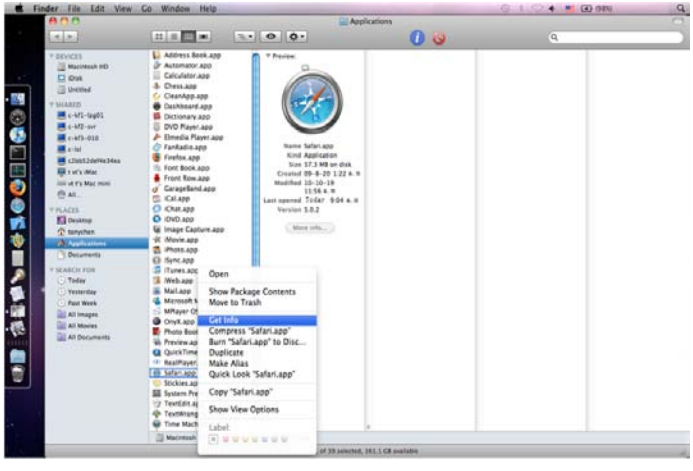
Fig 7-1 View with IE browser

7.2 Remote Surveillance through Apple PC

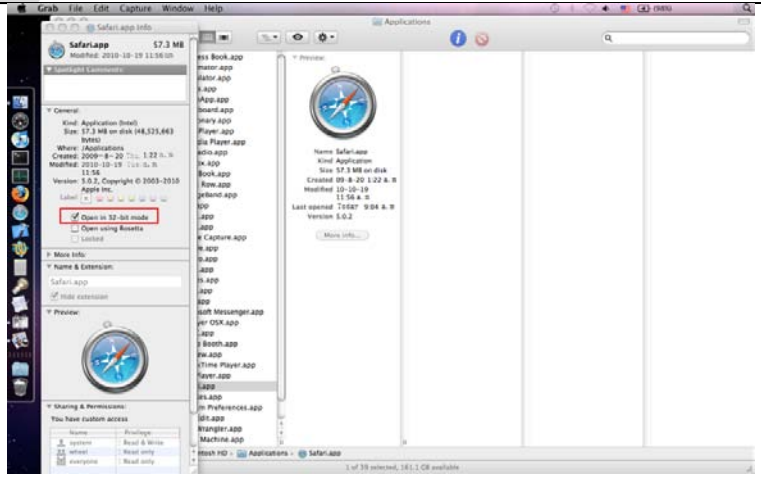
Note: Because the current plug-in version of client end just only supports 32-bit mode, so the safari browser shall start 32-bit mode. If the browser is the earlier MACOS version, the default setting is 32-bit mode and the setting can be skipped.
The Setting steps are as follows:

First: Right click safari icon and select “Show in Finder”.
Second: Select Applications→Right click “Safari. App”→Select “Get Info”.



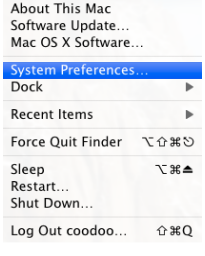


Third: Select “open in 32- bit mode”.

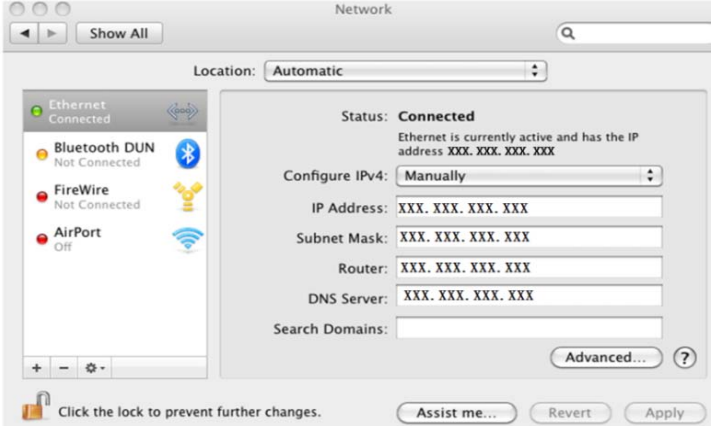


7.2.1 On LAN

Step 1: After starting Apple computer, click icon. The following window will pop up. Please select “System Preferences”→”Internet &Wireless”→click “Network”



Step 2: Enter into Network interface and then click “Ethernet Connected” to check the internet connection of Apple PC.



Step 3: After acquiring the IP address, Subnet Mask and so on, please enter into the DVR’s Main Menu→Setup→Network interface to manually input IP address, Subnet Mask and Gateway according to the configuration of PC. The network segment should be the same as the PC. If using DHCP, please enable DHCP in the DVR and router.

Step 4: After finishing the above information, users can enter LAN IP and http port in the Safari browser. For example: input http://192.168.1.100:81(here 192.168.1.100 is LAN IP of DVR, 81 is the http port of DVR). Click “ ↻ ”button, the browser will download Active X control as shown below:

Step 5: Click icon and then select the Active X control, the welcome interface will be shown. Click “Continue”→”Install” button，the following window will pop up：

Input the name and password of Apple PC and then click “OK” to install this Active X control.

Step 6: After finishing installing the Active X control, please quit from the Safari browser. Right click icon on the desktop and then select “Quit” button to quit the browser. Then restart Safari browser. Input the IP address and http port to enter into the login interface of DVR.

7.2.2 On WAN

There are also two ways for DVR to connect to Internet.

1. Connect the DVR to internet through router or virtual server

Step 1: The network setups are the same as step one to step four of point 1 on WAN of IE remote surveillance.

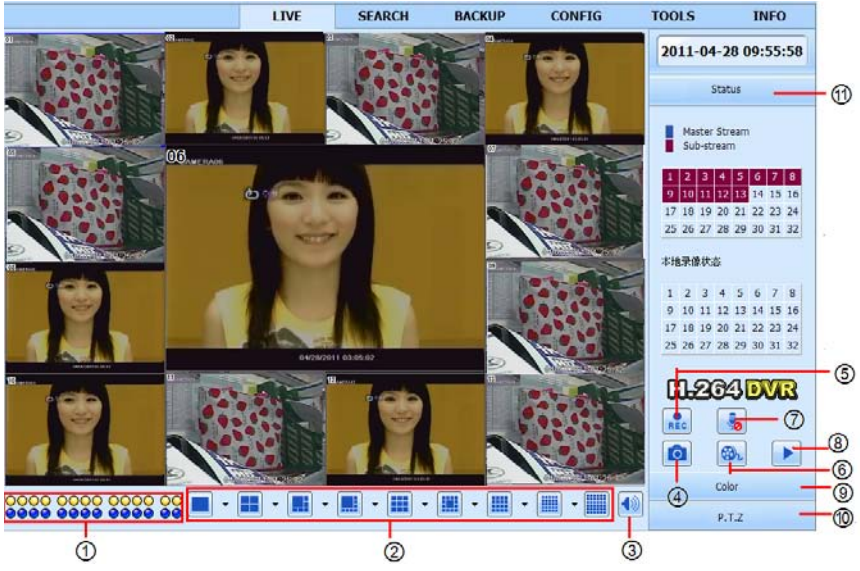
Step 2: Enter WAN IP and http port in the Safari browser to install the Active control. The concrete steps are the same as step 5 and 6 of Chapter 7.2.1.

2. Connect the DVR to internet directly.

Step 1: The network setups are the same as step one of point 2 on WAN of IE remote surveillance.

Step 2: Enter WAN IP and http port in the Safari browser to install the Active control. The concrete steps are the same as step 5 and 6 of Chapter 7.2.1.

7.3 The remote live preview interface



①	Channel indicator	②	Screen display mode
③	Volume	④	Snapping picture
⑤	Start manual record	⑥	Start IE record
⑦	Bidirectional talk	⑧	Playback
⑨	Color	⑩	PTZ control
⑪	Master/sub stream status		

Fig 7-2 Remote live preview interface

Note: click REC **button to record manual and the record file will be saved in user's PC.**

Screen display mode: Click the icon beside the screen display mode to see the channel select box.

Snap pictures

Click "Snap" icon, the system will automatically capture pictures and save those pictures in the computer.

User should set up the save path for those picture in the Remote Preview interface→Configuration→Local configuration.

Color adjustment:

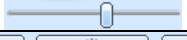
Drag the slide bar to adjust Brightness, Contrast, Hue, and Saturation. Click Default to reset them to original value.

Buttons	Description
	Drag the scroll bar to adjust the brightness of channel
	Drag the scroll bar to adjust the contrast of channel
	Drag the scroll bar to adjust the saturation of channel
	Drag the scroll bar to adjust the hue of channel
	Click this button to recover the default value of brightness, contrast, saturation and hue.
	Save the adjustment

PTZ control

Please connect speed dome to the device via RS485 firstly, make sure the protocol of the speed dome is supported by the device and set the relative parameters manually. User can control the dome up, down, right, left or stop rotating on Control Center, adjust rotation speed, Iris and zoom, focus on the dome, and set the presets, etc.

Buttons definition:

Buttons	Description
	means the dome rotate up. means the dome rotate up left. means the dome rotate up right means the dome rotate down. means the dome rotate left down. means the dome rotate right down. means the dome rotate left. means the dome rotate right. means the dome stop rotating.
	Drag the scroll bar to adjust rotating speed of the dome.
	'Iris' button. Click button near 'Iris' button to increase light of the dome. Click button near 'Iris' button to decrease light of the dome.

	'Zoom' button. Click button near 'Zoom' button to zoom in the locale picture of this camera. Click button near 'Zoom' button to zoom out the locale picture of this camera.
	'Focus' button. Click button near 'Focus' button to have long focus. Click button near 'Focus' button to have short focus.
	Go to the Preset
	Select and do auto cruise
	Track
	Auto scan
	Wiper button
	Light button

When clicking the right mouse on the live interface, a pull-down menu will appear as below

Stream: this DVR supports master stream and sub stream. Master stream has higher frame rate, max 25FPS(PAL)/30 FP (NTSC) for every channel, but it needs higher network bandwidth simultaneously; second stream has low frame rate, max 6FPS (PAL)/7FPS (NTSC) for every channel, it requires low network bandwidth. Therefore, users can select the stream according to their bandwidth.

All to master/sub stream: set all channel to master stream or sub stream.

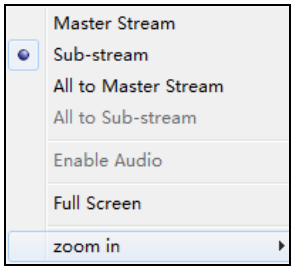


Fig 7-3 right key sub menu

Enable audio: enable or disenable audio

Full screen: In the full screen status, the live preview picture will display with full screen, the tool bar will be hided; double click left mouse or click right mouse to return

Zoom in: Single channel large screen electronic amplification

Left click the channel which needs to amplify; Click the right mouse, select Zoom in button and then click the left mouse to amplify the image. Press left mouse to drug the cursor, user can view the image. Double-click the left mouse to exit. Click the right mouse to return to the main interface.

7.4 Remote playback & backup

7.4.1 Remote playback

Click button to enter into record playback interface, refer to Fig 7-4:

Select the record date and channels; double-click the file name in the file list box, user can play that file and preview the picture.

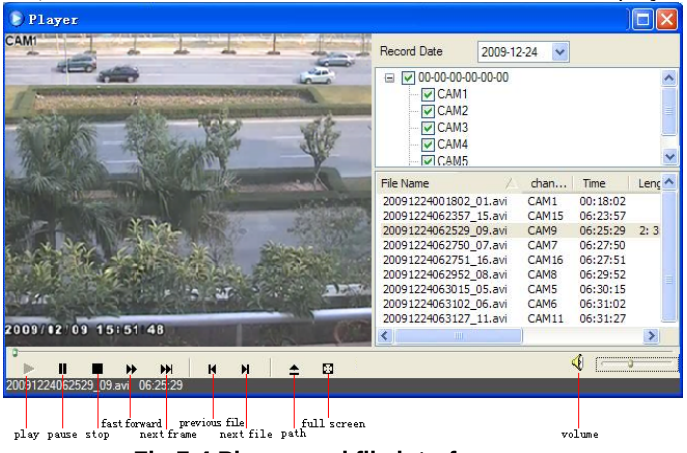


Fig 7-4 Play record file interface

This DVR supports remote time search, event search and file management.

By Time Search:

Step1: Enter into Search→time search; refer to Fig 7-5:

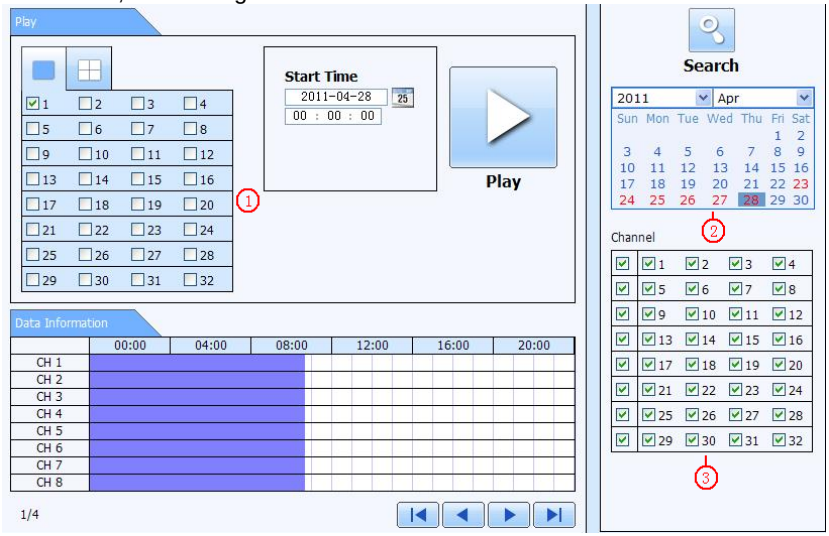


Fig 7-5 time search interface

Step2: click “Search” button. The record data will be displayed in the data information list box; the highlight date in the area② means have record data; click those data; select the record channels in area③

Step3: User can set the data playing time and display mode in the area① as required

Step4: Select certain item from the data information list box, click “play” button to playback

Step5: Click the relevant buttons in the interface; user can do some operations such as: FF, pause, change channel mode,

research, etc. refer to Fig 7-6:

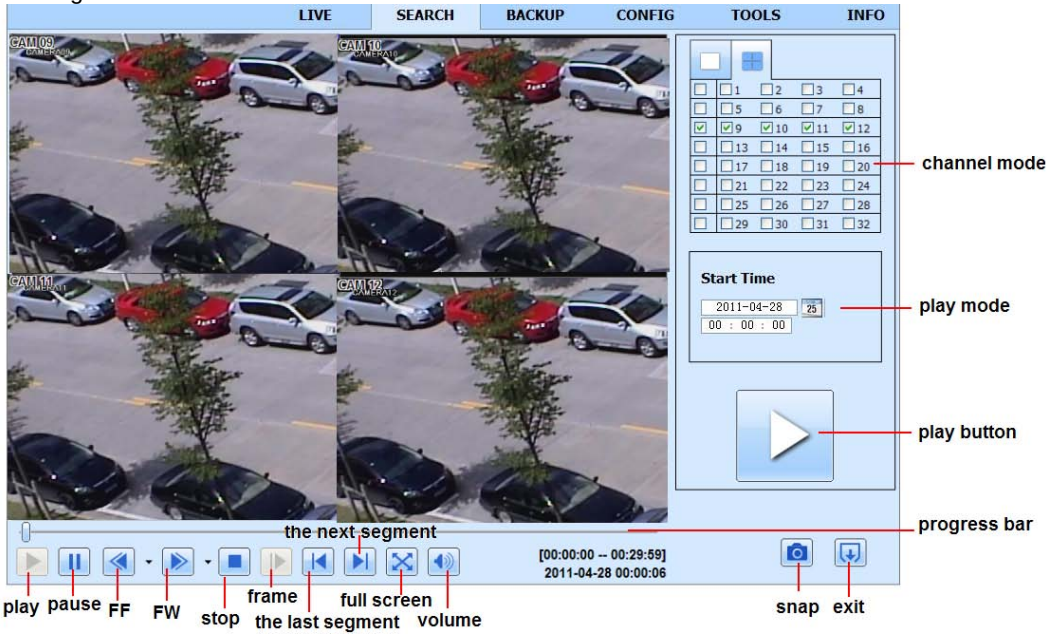


Fig 7-6 Time search playback

By Event Search:

Step1: Enter into Search→event search; refer to Fig 7-7:

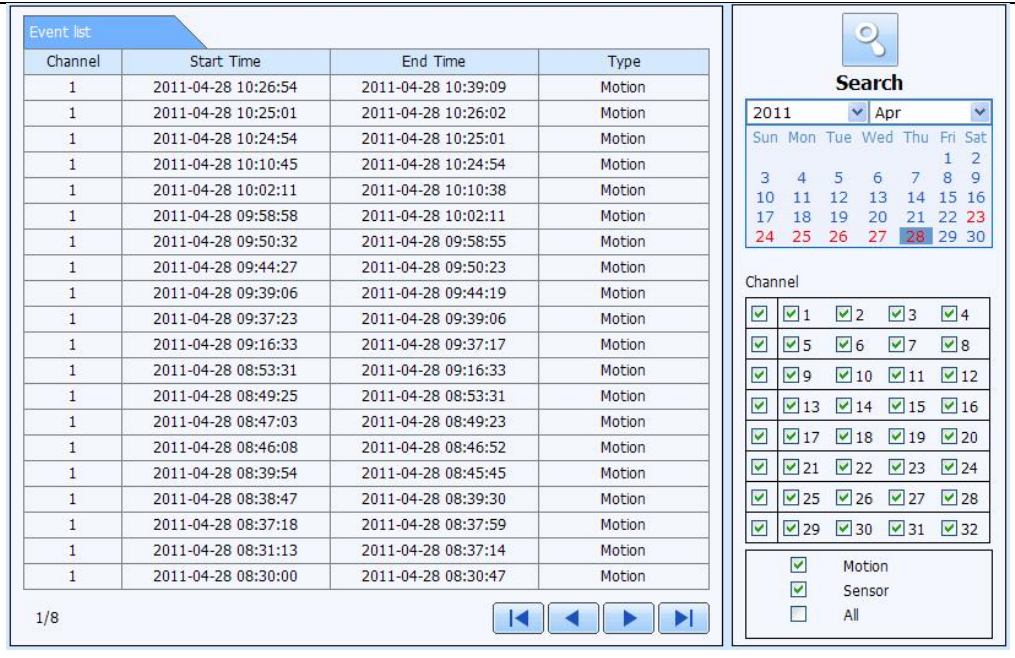


Fig 7-7 event search interface

Step2: click the highlight date, select record channels and then tick off the event type: motion and sensor, click “search” button

Step3: the events will be display in the event list box. Double-click a certain item to playback.

File Management

Step1: Enter into Search→file management; refer to Fig 7-8:

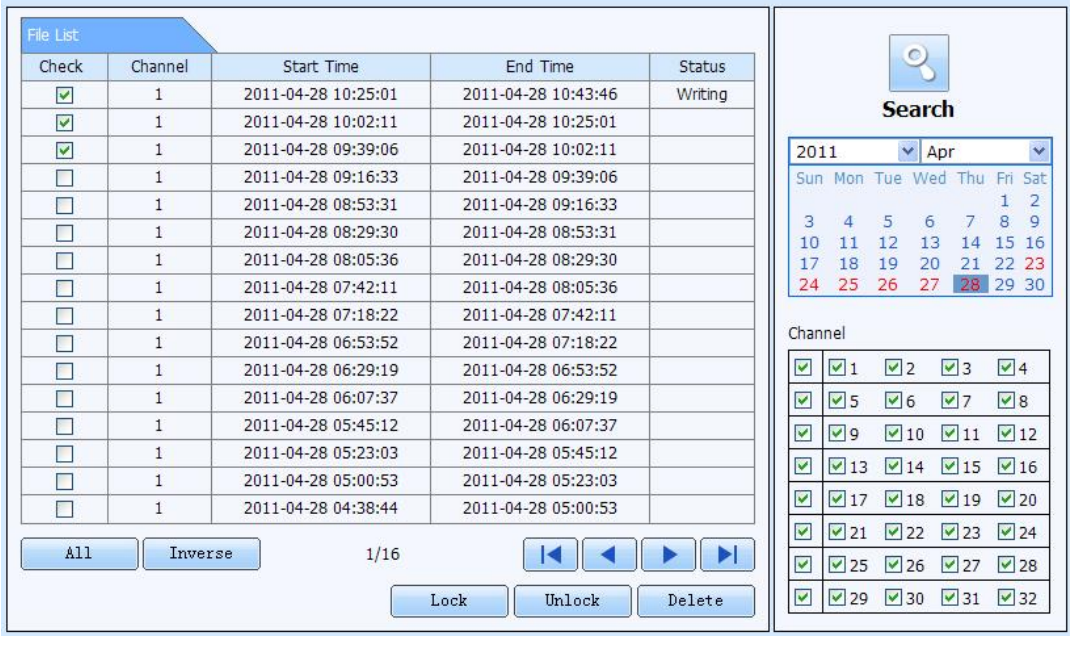


Fig 7-8 file management interface

Lock: select certain file item in the file list box and click “Lock” button to lock this file that ca not be deleted or overlaid

Unlock: select a locked file and click “unlock” button to unlock this file

Delete: select an unlock file and click “delete” button to delete this file from file list

7.4.2 Remote backup

Click Backup button to enter into backup interface, refers to Fig 7-9:

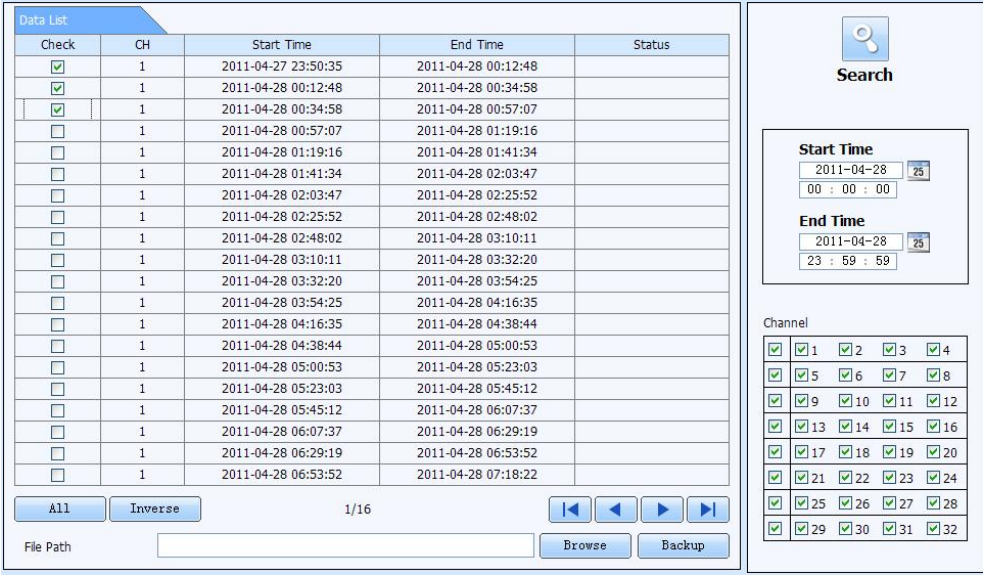


Fig 7-9 remote backup interface

Step1: select channels, set the start and end time, and then click “search’ button. The file information will be displayed in the file list box

Step2: select backup files, click “browse” button to set the save path, and then click “backup” button to start backup. The backup files will be saved on user’s PC.

7.5 Remote System configuration

User can remote setup the parameters of the device. Functions of remote configurations include: basic configuration, live configuration, record configuration, schedule configuration, alarm configuration, network configuration, PTZ configuration and user configuration. User should firstly select an item in the menu list on the left, and then setup the relative parameters. When one user setup parameters of a certain item, others cannot setup this one. Click Config to enter into the below interface refer to Fig 7-10:

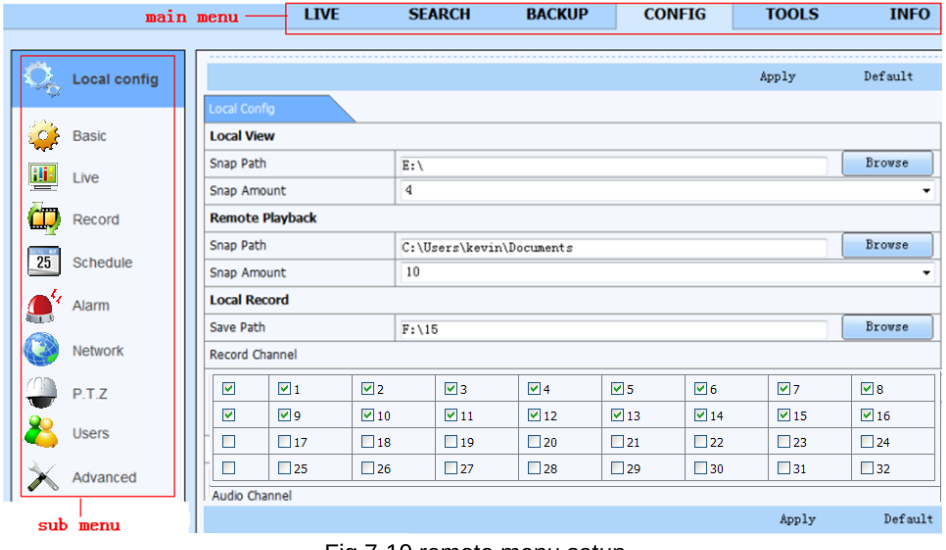


Fig 7-10 remote menu setup

The sub menu lists and the options in every item are similar with those on the DVR. Please refer to Chapter 3 Main Menu Setup Guide for more details.

Click “Apply” button to save above settings; click “default” button will recover the original settings.

7.6 Remote Management

Remote Information Search

The system will automatically record the working condition and operation process during the period of work. User can view information, such as username, IP address and so on. Enter into INFO→Log, user can set the start time to view the log record as follows:

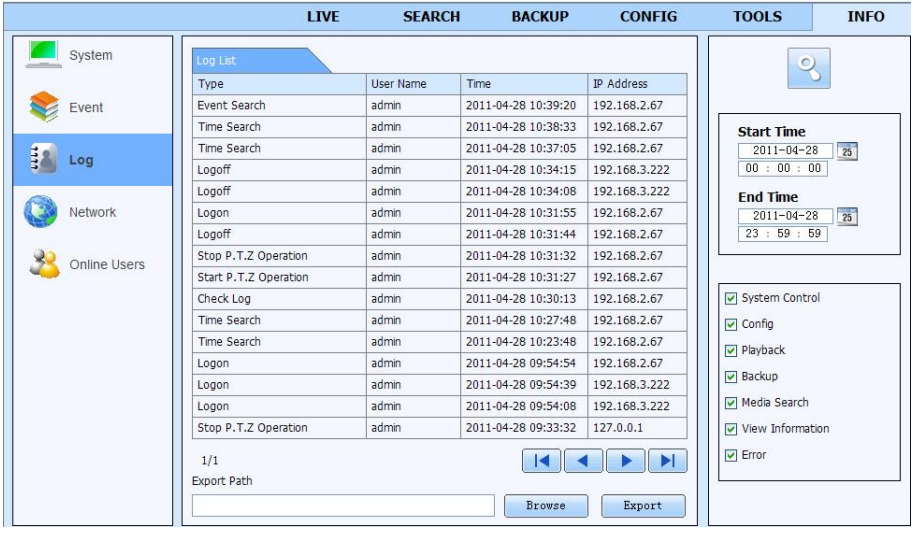


Fig 7-11 Remote information search

Note: There may be subtle differences with respect to functions of remote surveillance between through IE and through Apple PC. Here we only take IE remote access for example.

8 Mobile Surveillance

This DVR supports mobile surveillance by Iphone, Gphone，blackberry or smart phones with Windows mobile and symbian OS. At the same time, it supports 3G network. We tested Dopod D600 (WM5) and Dopod S1 (WM6), which work fine with the DVR.
It wants to make mobile surveillance, need first enable network service on the DVR, and refer to Chapter 4.6 Network configuration. The below is the use instructions on mobile client end for two OS.

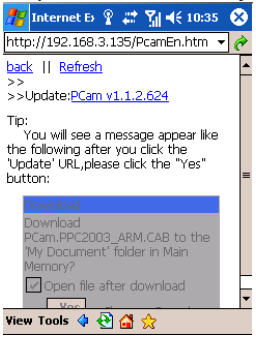
8.1 By Phones with Windows mobile

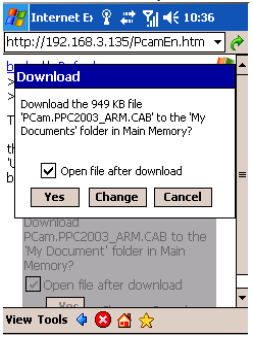
Step1： Firstly activate the network access on mobile phone and then run “Internet Explorer”. Input the server’s address and the connection is built up shown as below picture in the left:

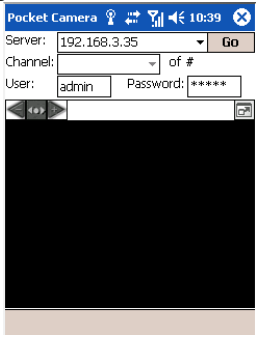
Step2： Click on the software name. A dialog box pops up as below picture in the middle:

Step3： Click “Yes” to start downloading and installing:

Step4： PCam will be opened automatically after installed. Refer picture in the right:

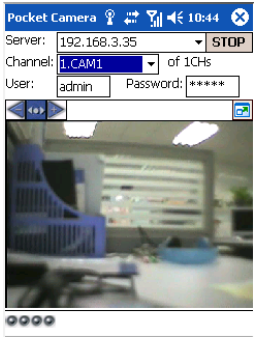


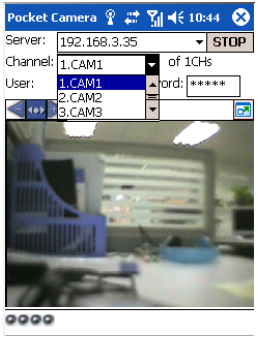




Step5 : Input the server's address, ID and password respectively in the columns of "Server", "User" and "Password", and click "Go" to log on the server. It will show the picture if access successfully. Refer below picture in the left:

Step6 : Camera 1 is the default channel after login. Change the channel in rolling-down menu of "Channel": please refer to below picture in the right:





Notice: User name and password here are the same with that used on the DVR. The default is admin and 123456.

8.2 By Phones with Symbian

Please use the smart phones with symbian version supported by this unit. The detail information is as follows:

Symbian S40	support
Symbian UIQ	support
Symbian S80	support
Symbian S60	support
Symbian S60 3rd Edition-Symbian OS v9.1	support
Symbian S60 3rd Edition with FP 1-Symbian OS v9.2	support
Symbian S60 3rd Edition with FP2-Symbian OS v9.3	support

Symbian S60 5th Edition-Symbian OS v9.4	support
Symbian S60 5.1 Edition-Symbian OS v9.5	support

Step1 : Firstly enable the network access on mobile phone. Then run Web browser.

Step2 : Input the DVR server's IP address in a new-built bookmark. Click this bookmark to connect to the DVR. Refer picture in the left:

Step3 : A welcome window will pop up and requires a package. Click the software name to download. Refer picture in the right:

Live view: to do mobile live view
Image view: to check the pictures Snapped in live view
System setting: Login setting And Alarm setting.
Help: function indication and help

Step4 : A security windows will pop up after downloading and ask if install the package. Click YES to install.

Step5 : A Scam shortcut icon appears on the system menu after finished.

Step6 : Run Scam program. It will enter a function interface. Refer picture in the left:

Step7 : Click System setting--->Login Setting to enter login interface. Refer picture in the right:

Step8 : Input the server's address, ID and password respectively. Then save.

***Notice**: About Access point, there may be different access points in different countries or from service providers.*

Step9 : Enter Live View, it will connect the server and display pictures. Refer picture in the left:

***Notice**: User name and password here are the same with that used on the DVR. The default is admin and 123456.*

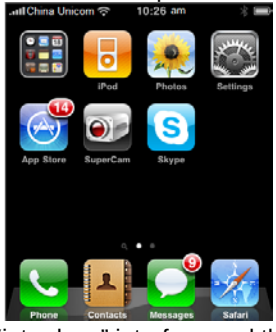
Step10 : In Live View, users can do snapshot, change channels and control PTZ. Refer picture in the right:

8.3 The Software installation for iPhone mobile clients

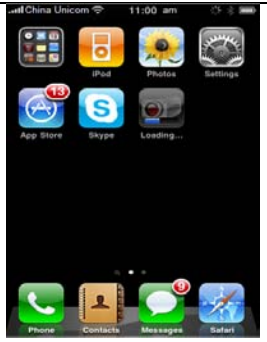
1. Install through iphone.

Step 1. Open App Store function of iphone

Step 2. Enable “search” function to search “SuperCam”



Step 3: Click SuperCam, enter into “introduce” interface and then click “FREE”. It will change into “INSTALL”



Step 4: Input iTunes Store password and then click “OK”. The software will be installed automatically.

Note: if it was the first time for user to operate, please enter user ID; if there is no Store account, user needs to apply one.

2. Install through PC.

Step 1: Install iTunes store in PC and then login

Step 2: Connect iPhone and PC

Step 3: Enable “search” function to search “SuperCam”

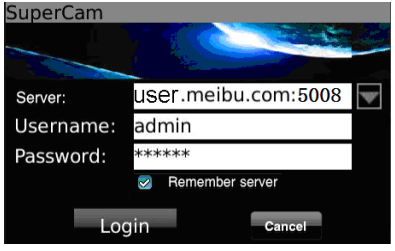
Step 4: Click “free application” button

Step 5: Input apple ID and password, then click “acquire”

Step 6: Tick off “synchronously apply program” and “SuperCam”, and then click “apply” button

Operation Instruction for SuperCam (iphone)

1. Login interface



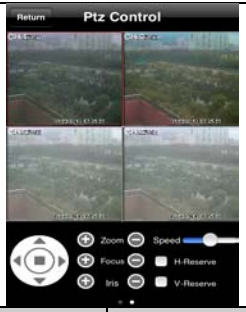
Enter server's IP address (or domain name), user name and password

Click "Remember server" to save the setting; click ▼ button can quick input saved server address, user name and password.

2. Main Interface

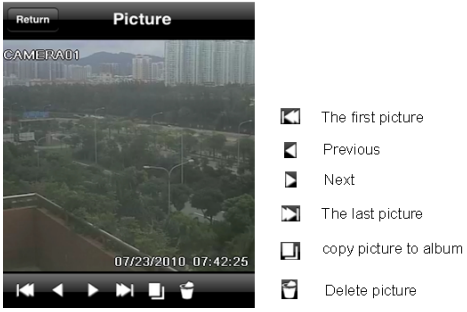
【Playback】	playback record file	【Image】	image view
【Log】	log record	【Server List】	device list
【Live】	live view	【Settings】	software setting
【Information】	device information view	【Help】	software help center
【Logoff】	logoff and return to login interface		

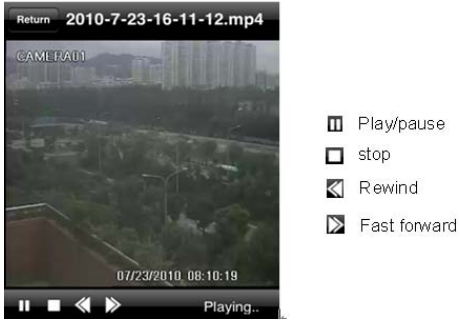
3. Live View Interface



Mark 1	Current viewing channel	Mark 2	Channel status
	Switch channels		PTZ, click to switch to Fig 2 interface
	Snap picture		Record
	Close the video of the current channel		Live audio
	Switch to the single image		Switch to four images
	Upward rotates the PTZ		Downward rotates the PTZ
	Leftward rotates the PTZ		Rightward rotates the PTZ
	Stop rotating the PTZ		Zoom In/Focus In/Iris Add
	Zoom Out/Focus Out/Iris Sub	Preset	elect the preset point
Group	Set the cruise line	Speed	Rotate speed of the PTZ
H-Reverse	Horizontal- Reverse	V-Reverse	Vertical- Reverse

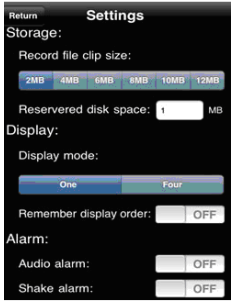
4. **Image view interface, refer below picture in the left:**
5. **Record Playback interface, refer below picture in the right:**





Click the record file to playback.

6. **Server list Interface, refer to below picture in the left:**
7. **Config interface, refer to below picture in the right:**



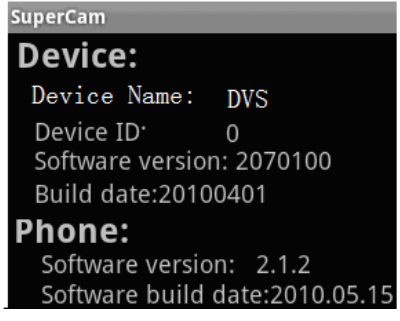
Main parameters for mobile phone video config

Record file clip size: Single video size. When the video size is greater than setup value, change another video files
Reserved disk space: Reserved SD Card disk space, when the disk space is less than setup value, the video will be stopped
Display config **:**

Display mode: User can select one live picture display or four live picture displays
Remember display order: User can choose whether to remember display order or not.

Alarm config **:** Select Audio Alarm. When Video Loss/Sensor/Motion happens **,** trigger sound alarm. Select shake Alarm. When Video Loss/Sensor/Motion happens **,** trigger vibrate alarm.

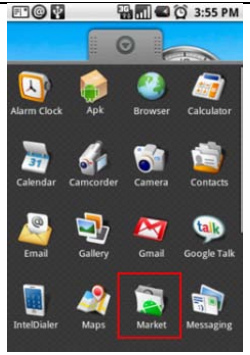
8. Information View Interface



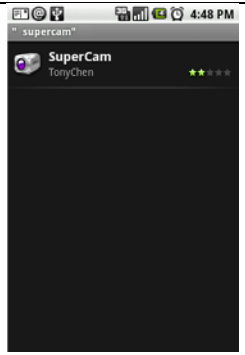
Device name: the current device name
Device ID: the current connection device ID
Software version: the current connection device software version
Build date: the current connection device build date
Software version: the software version of mobile phone in use
Software build date: the software build date of mobile phone in use

8.4 The installation & operation methods for Android mobile clients

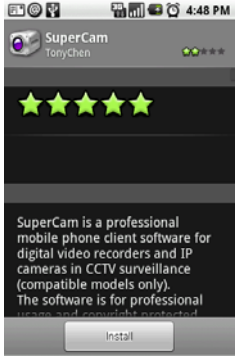
Software Installation



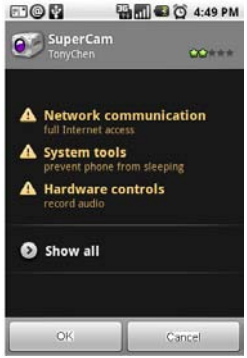
Step 1: run Google Market program



Step 2: search"SuperCam"



Step 3: press “Install” button



Step 4: click “OK” button

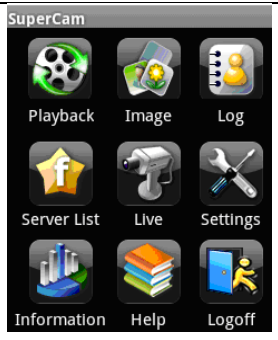
Step 5: user can view the download and install process in notifications. Finished downloading, the software will install automatically.

Login

Enter into server's IP address (or domain name), user's ID and password.

Click "Remember server" to save the setting; click ▼ button can quick input saved server address, user name and password.

Main menu



【Playback】	playback record file	【Image】	image view
【Log】	log record	【Server List】	device list
【Live】	live view	【Settings】	software setting
【Information】	device information view	【Help】	software help center
【Logoff】	logoff and return to login interface		

Live view

(Fig 1)

(Fig 2)

Mark 1	Current viewing channel	Mark 2	Channel status
	Switch channels		PTZ, click to switch to Fig 2 interface
	Snap		record
	talk		Live audio
	Full screen		Return
	Upward rotates the PTZ		Downward rotates the PTZ
	Leftward rotates the PTZ		Rightward rotates the PTZ
	Stop rotates the PTZ		Zoom In/Focus In/Iris Add
	Zoom Out/Focus Out/Iris Sub	Preset	Select the preset point
Group	Set the cruise line		

Image view

	Previous		Next
	Zoom out		Delete
	Zoom in		Return to main menu

Record playback

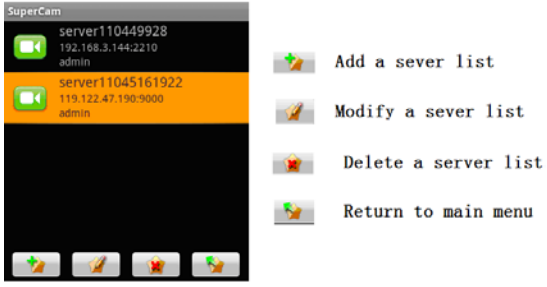
(Fig 3)

(Fig 4)

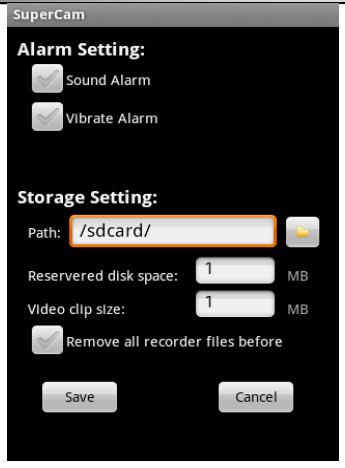
	Play/pause
	Full screen
	stop
	Return to record file interface (Fig 3)

Click the record file (Fig 3) to playback (Fig 4)

Server list

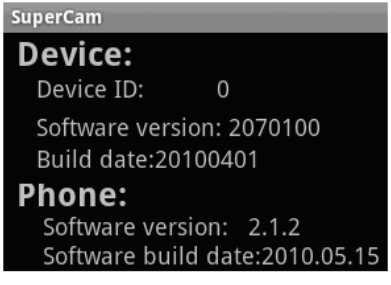


Config interface



Alarm setting	Tick off Sound Alarm , when Video Loss/Sensor/Motion happen , trigger sound alarm; Tick off Vibrate Alarm, when Video Loss/Sensor/Motion happen , trigger vibrate alarm
Storage setting	User can setup the relevant parameters of mobile video. This function can be valid only insert SD card.
Path	Save path for mobile video files, the default catalog is /SDCard/. Click button to change path.
Reserved disk space	reserved SDCard disk space, when the disk space is less than setup value, the video will be stopped
Video clip size	Single video size. When the video size is greater than setup value, change another video files
Remove all recorder files before	delete all current video files

Information view



Device ID: the current connection device ID

Software version: the current connection device software version

Build date: the current connection device build date

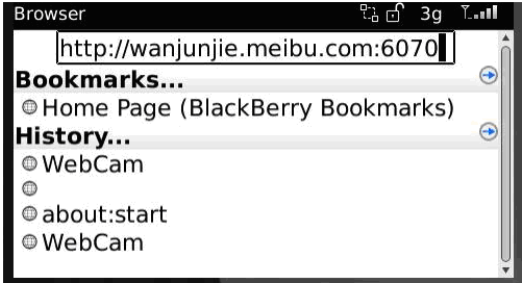
Software version: the software version of mobile phone in use

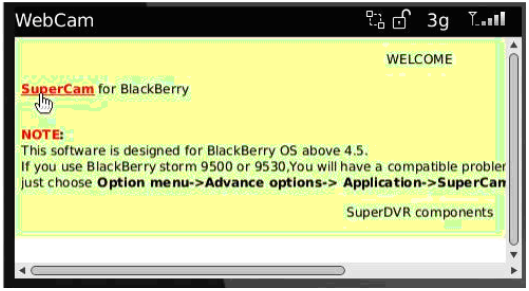
Software build date: the software build date of mobile phone in use

8.5 Installation and operation Methods for BlackBerry Mobile phone Client

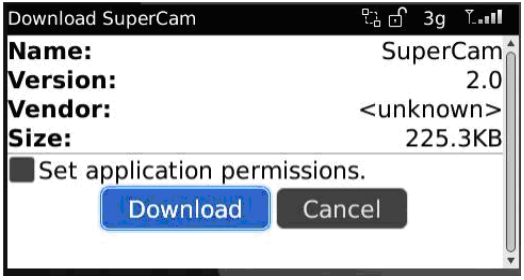
8.5.1 Installation instruction for BlackBerry Mobile phone Client

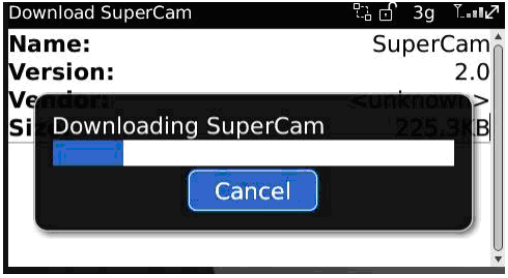
1. Open the browser of BlackBerry phone and enter sever address
2. Click “SuperCam” to link



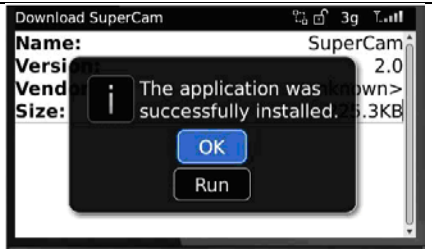


3. Click “Download” button on the popup interface and the download progress will be shown.





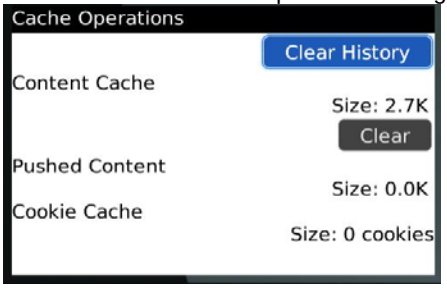
4. Finished downloading, the software will be installed automatically.



Note: If the software fails to download, please check in accordance with the following steps:

1. Check whether the network of mobile phone is normal or not
2. Check whether DVR server connect network normally or not
3. Modify the option of Browser Configuration.

(1) Enter into Menu->Option->Browser Configuration referring to the following figure in the left.
(2) Enter into Menu->Option->Cache Operations to clear up browser cache. Please refer to below picture in the right:



Note：When user uses the SuperCam software in mobile phone with touch screen, there will be compatible problem.

Solution: Enter into Options Menu->Advance options->Applications->SuperCam and click “Disable Compatibility” button. This problem will be solved.

8.5.2 Operation method for Blackberry mobile phone client

1. Login

Enter server's IP address (or domain name), user's ID and password.

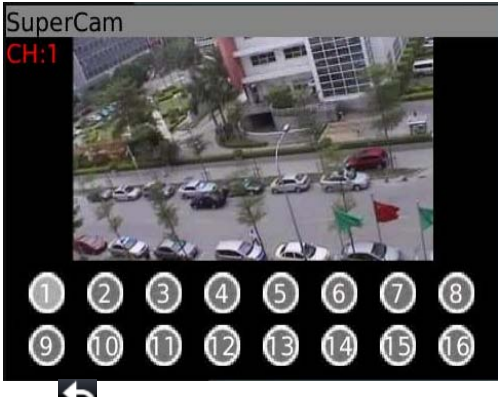
Click "Remember server" to save the setting; click ▼ button can quick input saved server address, user name and password.

2. Main interface

Playback	playback record file	**Image**	image view
Log	log record	**Server List**	device list
Information	device information view	**Help**	software help center
Logoff	logoff and return to login interface	**Settings**	software setting
Live	live view		

3. Live view

4.



Note: User can click Return button on the Blackberry phone to return the previous interface.

Mark 1	Current viewing channel	Mark 2	Channel status
	Switch channels		PTZ, click to switch to Fig 2 interface
	Snap		Full screen
	Background alarm		Stop rotating the PTZ
	Upward rotates the PTZ		Downward rotates the PTZ
	Leftward rotates the PTZ		Rightward rotates the PTZ
	Zoom In/Focus In/Iris Add		Zoom Out/Focus Out/Iris Sub
Preset	Select the preset point	Group	Set the cruise line

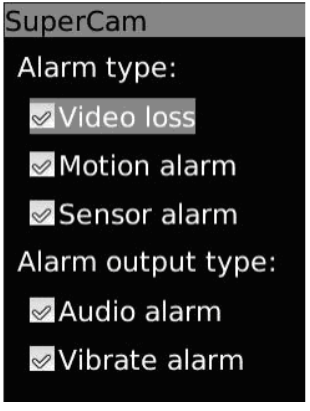
5. Server list

[Add] Add a server list

[Modify] Modify a server list

[Delete] Delete a server list

6. **Software configuration**



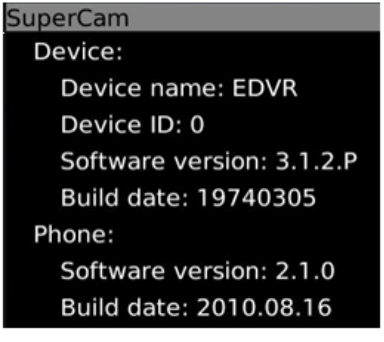
Alarm type: Setup the type of background alarm

(Video Loss/Sensor/Motion)

Alarm output type: Setup prompt type of backgound

Alarm (sound alarm/ bibrate alarm)

7. **Information view**



Device ID: the current connection device ID

Software version: the current connection device software version

Build date: the current connection device build date

Software version: the software version of mobile phone in use

Software build date: the software build date of mobile phone in use

Appendix A FAQ

Q1. Why the DVR cannot start after connected to the power?

a. The adapter has been damaged. Please change an adapter

b. The power of the adapter is not enough. Please remove the HDD to check

c. Hardware problem

Q2. There is not menu output or only has live image display

a. Check up whether other devices can display menu or long press ESC key to wait for login dialog box to appear.

Q3. The indicator of the DVR lights, but no output. Why?

a. The power of the adapter is not enough. Please remove the HDD or change an adapter to try.

b. The video format of the DVR is different from that of the monitor.

c. Connection problem. Please check the cable and the ports of monitor and DVR.

Q4. Why are no images displayed on parts or all of the channels of the DVR?

a. Connection problem. Please check the cable and the ports of camera and DVR.

b. Camera problem. Please check the cameras.

c. The video format of the DVR is different from that of the cameras. Please change DVR system format.

Q5. Cannot find HDD

a. The power of the adapter is not enough. Please change an adapter to try.

b. Connection problem. Please check the power and data cables.

c. The HDD is damaged. Change a new one.

Q6. Cannot record

a. Don't format HDD. Please format it manually first.

b. Don't enable record function or incorrect setup. Please refer to Chapter 5 Record search & playback and backup.

c. HDD is full and not enables recycle function. Please refer to Record Configuration. Chang a new HDD or enable recycle.

d. The HDD is damaged. Change a new one.

Q7. Cannot use mouse.

a. wait 1-2 minutes after mouse connected.

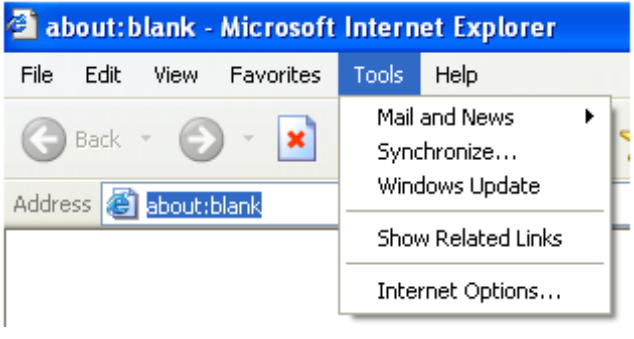
b. Not detected. Plug/unplug several times.

c. The mouse is incompatible. Please change a mouse.

Q8. Cannot download ActiveX control.

a. IE browser blocks ActiveX. Please do setup following below.

① Open IE browser. Click Tools-----Internet Options….



② select Security------Custom Level….Refer to Fig 8-1

③ Enable all the sub options under “ActiveX controls and plug-ins” refer to Fig 8-2

④ Then click ok to finish setup.

b. Other plug-ins or anti-virus block ActiveX. Please uninstall or close them.

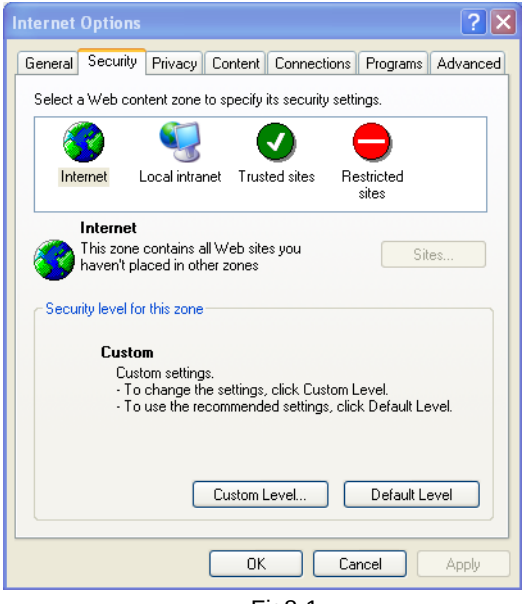


Fig8-1

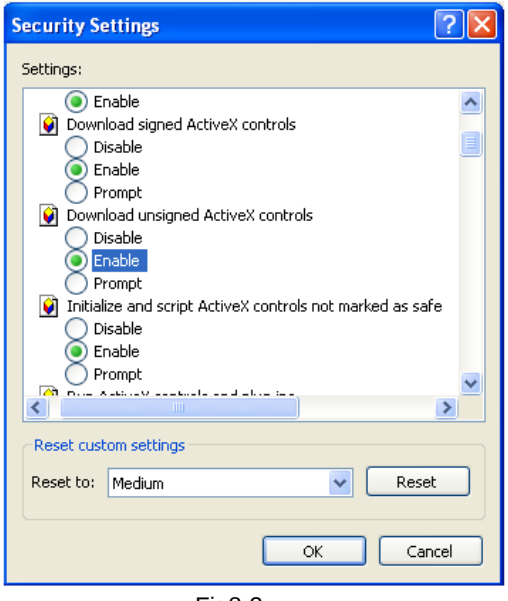


Fig8-2

Q9: How to deal with when DVR starts, it displays “please wait…”all the time

First possible reason: hard-disk cable and data cable are not well connected.
Solution: Please check the connection of hard-disk cable and data cable and make sure they are well connected; If still not working, please unplug them and then try re-plugging again;
Second possible reason: It is forced to stop because hard disk has disabled track which causes the system checking hard disk cannot skip
Solution: Change another new hard disk or reformat the broken one

Q10: How to input password and digital numbers

The method to input password and digital numbers is to click the box behind *password* or *items* needing to input by numbers, and then the small keyboard will appear. Please select number or letter to input (the initial password is 123456), or you can use the digital keys in the front panel, or the digital keys on the remote controller.

Q11: Why is the hard disk used in a DVR identified a new hard disk if directly used to another same type DVR? And why must we format it again?

When DVR only uses one hard disk, the hard disk removed from one to another same type DVR can work normally without format. However, when a DVR adds to a new hard disk, it will identify the hard disk as a new one and inquire whether to format no matter whether this hard disk used or not in another same type DVR before. In this condition, it can be used normally after formatted according to the guide; if two or more hard disks used in different DVR, when used in another DVR with the same type, they will be identified to be two or more new hard disks, and all of them need to format. In general, please do not try using more disks removed from different DVR into another one in case the data lose.

Q12: What are the minimum configurations of PC for clients connecting?

PC Module	Parameters
CPU	Intel Celeron 2.4G
Motherboard	Intel 845
HDD	80G

RAM	512M
VGA	NVIDIA GeForce MX440/FX5200 ATIRADEON 7500/X300
OS	Windows 2000(SP4 above) /Windows XP(SP2 above) /VISTA
DirectX	9.0

Q13: What are the PC configurations for 16-ch real time product with fully open channel mainstream?

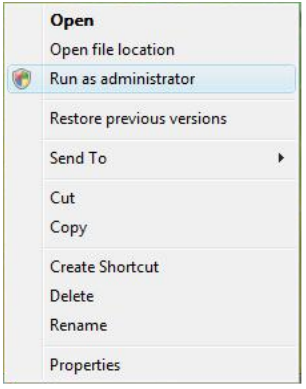
PC Module	Parameters
CPU	Intel Core(TM)2 Duo CPU E4600
Motherboard	G31/P31 chip
HDD	80G
RAM	1GB
VGA	GMA3100/NVIDIA GeForce 8400/ ATI RADEON HD3450
OS	Windows 2000(SP4 above) /Windows XP(SP2 above) VISTA
DirectX	9.0

Q14: How to handle the situation when codec Control is blocked to install in the VISTA or Win7 system?

If user gets this problem, may have two ways to fix it:

a. Enter Control Panel→User Account and Family Safety → User Account Control(refer to below picture); click Turn User Account on or off. Cancel Use User Account Control (UAC) to help protect your computer.

b. Right click IE browser (refer to Fig 14-2), select Run as administrator to run browser.



Appendix B Calculate Recording Capacity

Users can calculate the size of hard disk according to the saving time and DVR recording settings. The DVR uses fixed video bit rate. The below are the details at different settings.

Resolution	Frame Rate	Video Quality	Bit Rate(kbps)	Used Space (MB/h)
D1	30 (NTSC) 25 (PAL)	highest	2048	915
		Higher	1536	700
		Medium	1024	465
		Low	768	297
		Lower	512	241
CIF	30 (NTSC) 25 (PAL)	Highest	1024	450
		Higher	768	337.5
		Medium	512	225
		Low	512	225
		Lower	384	168.75
		Lowest	256	112.5

The calculation format is: **Total Recording capacity =Used space per hour (MB/h) (coverage rate of hard disk) × recording time (hour) ×channel numbers**

For instance, one customer uses PAL cameras, set resolution to CIF, video quality to Lowest, frame rate to 25 fps for enabling total 16 channels. He wants the unit to record continuously in a month. Below is the calculation: **Total Recoding capacity =112.5 (mb/h) X 24(hours/day) X30(days) X16(channels) = 1296000(MB) = 1296(GB)**

Therefore, customers just install one SATA HDD with 1000GB plus one SATA HDD with 320GB, it can almost record for one month.

Appendix C Compatible Devices

1. Compatible USB drive after test.

Brand	Capacity
SSK	512MB, 1G, 2GB
Netac	4GB
Kingston	2GB
Aigo	2GB
Smatter vider	1GB
SanDisk	4GB

Tab C.1 Compatible USB drive

2. Compatible SATA CD/DVD writers after test

Brand	Model
TECLAST	GH22NP20/TL-22XD
BENQ	DW220S-0K4
LITEON	DH—20A6S01C
LITEON	DH-20A4P02C
SAMSUNG	TS-H653B

Tab C.1 Compatible CD/DVD writers

3. Compatible HDD list

Seagate Barracuda LP ST3200542AS 2TB	support
Seagate Barracuda 7200.11 ST31500341AS 1.5T	support
Seagate SV35.3 ST31000340SV 1T	support
Seagate Pipeline HD.2 500G	support
Seagate Barracuda 7200.10 320G	support
Seagate Barracuda 7200.10 ST3250310AS 250G	support
Seagate Barracuda 7200.11 ST3160813AS 160G	support
Seagate Barracuda 7200.10 ST380815AS 80G	support
Maxtor Diamondmax 21 STM3160215AS 160G	support
HITACHI Deskstar HDS721616PLA380 160G	support
HITACHI Deskstar 80G	support
WD WD1600JS 160G	support
Sanmsung HD161HJ 160G	support

Appendix D 24-CH Specifications

Compression format	Standard H.264 Baseline
Video output	Composite：1.0V p-p/75Ω BNC×2, VGAX1
Video Input	Composite：1.0V p-p/75Ω BNC×24
VGA Resolution	1280*1024 /1024*768/ 800*600
Record Resolution	352*288/704*576 (PAL), 352*240/704*480(NTSC)
Display Frame Rate	600FPS (PAL), 720FPS (NTSC)
Record Frame Rate	600 (PAL), 720 (NTSC)
Audio Input	RCA X16
Audio output	RCA X1
Alarm Input	NO or NC 16CH
Alarm output:	4CH
Record Mode	Manual / Sensor /Timer / Motion detection
Simplex/Duplex/Triplex	Pentaplex
Network Interface	RJ45 (LAN, INTERNET)
PTZ control	YES
Communication interface	RS485 x 2; USB2.0 x 2(one for backup, another for USB mouse)
Disk info	SATA x 3+DVD-RW x 1 or SATA x 4(SATA x8 optional)
Remote controller	YES
Power Supply	AC 220V or 110V
Temperature	0℃-50℃
Humidity	10%-90%
Average Operating Power （Excluding HDD）	≤50W

Appendix E 32-CH Specifications

Compression format	Standard H.264 Baseline
Video output	Composite：1.0V p-p/75Ω BNC×2, VGAX1
Video Input	Composite：1.0V p-p/75Ω BNC×32
VGA Resolution	1280*1024 /1024*768/ 800*600
Record Resolution	352*288/704*576 (PAL), 352*240/704*480(NTSC)
Display Frame Rate	800FPS (PAL), 960FPS (NTSC)
Record Frame Rate	800 (PAL), 960 (NTSC)
Audio Input	RCA X16
Audio output	RCA X1
Alarm Input	NO or NC 16CH
Alarm output:	4CH
Record Mode	Manual / Sensor /Timer / Motion detection
Simplex/Duplex/Triplex	Pentaplex
Network Interface	RJ45 (LAN, INTERNET)
PTZ control	YES
Communication interface	RS485 x 2; USB2.0 x 2(one for backup, another for USB mouse)
Disk info	SATA x 3+DVD-RW x 1 or SATA x 4 (SATA x8 optional)
Remote controller	YES
Power Supply	AC 220V or 110V
Temperature	0℃-50℃
Humidity	10%-90%
Average Operating Power (Excluding HDD)	≤50W

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