DVR User Manual

For H.264-8-channel /16-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**
- **We do not warrant all the content is correct. 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. If not in use for a long time, pull out the plug from the socket**
- **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 at normal recording condition! The correct operation to shut off DVR is to stop recording firstly, and then select "shut-down" button at the right of the menu bar to exit, and finally to cut off the power.**
- **This machine is indoor using equipment. Do not expose the machine in rain or moist environment. In case any solid or liquid get into the machine's case, please cut off the power supply immediately, and ask for qualified technicians to check the machine before restart**
- **Refer all servicing to qualified service personnel. No any parts repaired by yourself without technical aid or approval.**
- **This manual is suitable for 8-channel and 16-channel digital video recorders. All examples and pictures used in the manual are from 16-channel DVR. For 8-channel DVR, its function is conform with 16-channel DVR.**

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CHAPTER 1 Introduction

1.1 DVR Introduction

This DVR adopts high performance video processing chips and embedded Linux system. It utilizes many 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. it has very powerful functions and high stability. It can be widely used in bank, telecommunication, transportation, factories, warehouse, irrigation, etc.

1.2 Main Features

COMPRESSION FORMAT

- Standard H.264 compression with low bit rate.

LIVE SURVEILLANCE

- Support VGA output
- Support channel security by hiding live display
- Display the local record state and basic information
- Support USB or PS/2 mouse to make full control

RECORD MEDIA

- Support 2 X SATA HDD to record to save long time, without limitation limited

BACKUP

- Support USB 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
- 64MB for every video file packaging
- 4 audio channels available
- Two record search mode: time search and event search
- Support single and 4 screen playback
- Support deleting and locking the recorded files one by one
- Support remote playback in Network Client through LAN or internet

ALARM

- 16 channel alarm input and 4 channel alarm output 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 and auto cruise of the corresponding channel

PTZ CONTROL

- Support various PTZ protocols
- Support 128 presets and 32 auto cruise tracks
- Support remote PTZ control through internet

SECURITY

- Two level user group management: advance and normal, rights authorized by administrator
- Support one administrator and 15 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 max 5 connection simultaneously
- Support dual stream. Network stream adjustable independently to fit the network bandwidth and environment.
- Support picture snap and color adjustment in remote live
- Support remote time and event search, mouse drag search, single 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 or PDA with WinCE OS, 3G network available
- Support CMS to manage multi devices on internet

CHAPTER 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. Support two SATA hard drive. Please use the hard drive the manufacturers recommend specially for security and safe field.*
2. Please calculate HDD capacity according to the recording setting. Please refer to "Appendix B Calculate Recording Capacity".

STEP1 Unscrew and Open the top cover
STEP2 Connect the power and data cables. Place the HDD onto the bottom case as below.

Fig 2.1 Connect HDD

STEP3 Screw the HDD as below.
Note: For the convenience to install, please connect the power and data cables firstly, and then screw to fix.

Fig 2.2 Screw HDD

2.1.2 Install DVD Writer

Notice: *1. The writers must be the compatible devices we recommend. Please refer to "Appendix C Compatible Devices"*
2. This device is only for backup

STEP1 Unscrew and Open the top cover

STEP2 Connect the power and data cables. Place the DVD writer onto the bottom case as below.

Fig 2.3 Connect the DVD Writer

STEP3 Screw the DVD writer as below.

Fig 2.4 Screw the Writer

2.2 Front Panel Instruction

The Front Panel interface is shown as

Fig 2.5 Front Panel.

Fig 2.5 Front Panel for 8-channel and 16-channel DVR

Item	Name	Function
1	Digital button	Input digitals or choose camera
2	+/Menu button	1. Increase the value in setup 2. Enter menu in live
3	-/Backup	1. Decrease the value in setup 2. Enter backup mode in live
4	RECORD	Record manually
5	REW	Rewind
6	PLAY	Enter playback interface
7	10+	Choose channel 10 above with other digitals 0-9, and double-click is 10.
8	SEARCH	Enter search mode
9	FF/PTZ	1. Fast forward 2. Enter PTZ mode in live
10	STOP/ESC	1. Quit playback mode 2. Exit the current interface or status
11	USB port	To connect external USB devices like USB flash, USB HDD for backup or update firmware
12	Indicator	Working indicators of power, HDD, network, etc
13	Direction/Multi-screen button	1. Direction buttons. Move cursor in setup or pan/title PTZ 2. Change screen display like single, 4, 9 and 16 screens
14	Enter button	To confirm the choice or setup
15	IR Receiver	For remote controller

Tab 2.1 Definition of Front Panel Buttons

2.3 Rear Panel Instruction

2.3.1 Rear Panel Interface

The rear Panel interface is shown as

Fig 2.6 Rear Panel.

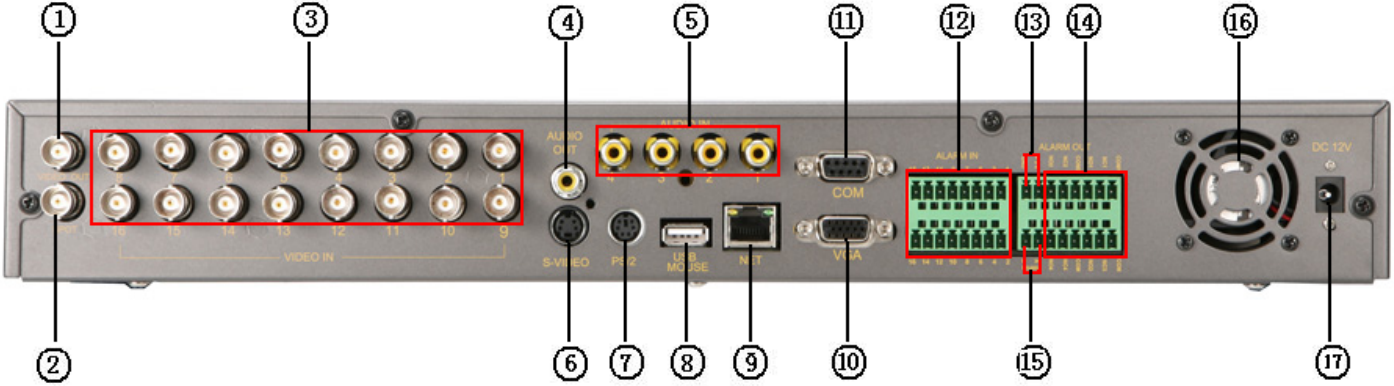


Fig 2.6 Rear Panel for 16-channel DVR

Item	Name	Description
1	VIDEO OUT	Connect to monitor
2	SPOT	Connect to monitor as an AUX output channel by channel. only video display, no menu show
3	VIDEO IN	16ch Video input
4	AUDIO OUT	Audio output, connect to the sound box
5	AUDIO IN	Audio input, connect to MIC or other audio capture devices
6	S-VIDEO	S-Video output, connect to monitor
7	PS/2 port	Connect to PS/2 mouse
8	USB port	Only for USB mouse
9	RJ45 port	Connected to internet
10	VGA port	VGA output, connect to monitor
11	COM port	For debug

Item	Name	Description
12	ALARM IN	Connect to external sensor1-16. Please refer to 2.3.2 Install Sensor &Alarm
13	+5V and GND	+5 Voltage and Ground
14	ALARM OUT	Relay output1-4. Connect to external alarm. Please refer to 2.3.2 Install Sensor &Alarm
15	RS485	Connected to speed domes
16	FAN	For cooling the device
17	POWER INPUT	DC 12V

Tab 2.2 Definition of Rear Interface

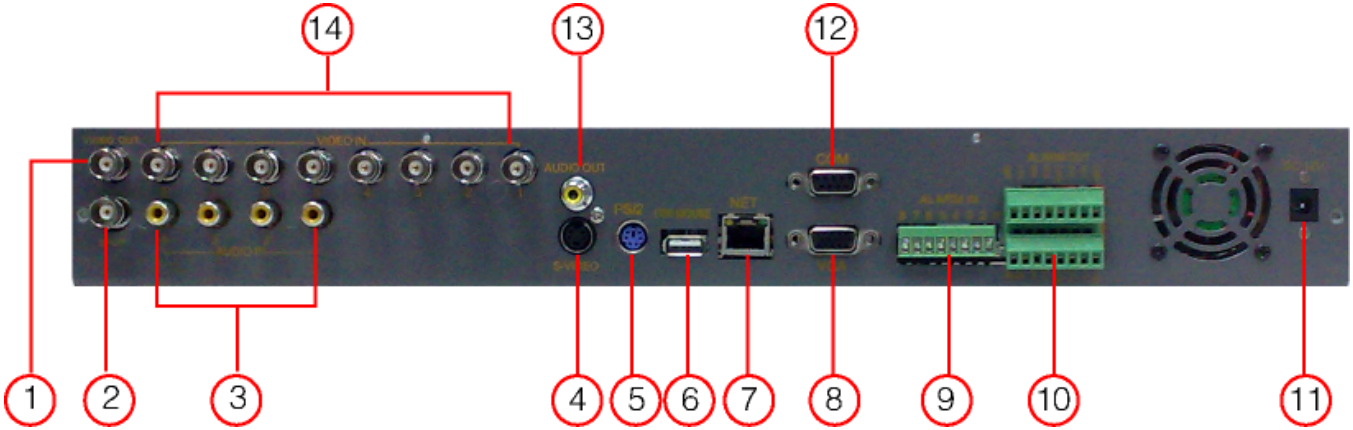


Fig 2.7 Rear Panel for 8-channel

Item	Name	Description
1	VIDEO OUT	Connect to monitor
2	SPOT OUT	Connect to monitor as an AUX output channel by channel. only video display, no menu show

Item	Name	Description
3	AUDIO IN	8-channel Video input
4	S-VIDEO	S-Video output, connect to monitor
5	PS/2 port	Connect to PS/2 mouse
5	AUDIO OUT	Audio output, connect to the sound box
6	USB MOUSE port	Only for USB mouse
7	RJ45 port	Connected to internet
8	VGA port	VGA output, connect to monitor
9	ALARM IN	Connect to external sensor 1-8. Please refer to 2.3.2 Install Sensor &Alarm
10	ALARM OUT	Relay output 1-4. Connect to external alarm. Please refer to 2.3.2 Install Sensor &Alarm
11	POWER INPUT	DC 12V
12	COM port	For debug
13	AUDIO OUT	Audio output, connect to the sound box
14	VIDEO IN	Connect camera

Tab 2.3 Definition of Rear Interface

*Notice: The resolution of VGA output is 800*600/60Hz. If connected through VGA port, please assure your display supports the display mode.(For most of LCD screens, they can adapt to it automatically without adjustment manually)*

2.3.2 Install Sensor &Alarm

The DVR has 16 channel alarm input and 4-channel alarm output.

Alarm Input:

The alarm input is triggered by electric level (High: 5V, Low: 0V). Users can connect external sensors, like gas detector, smoke detector and infrared detector. Once the DVR detects that the electric level meets the setting users make, it will trigger DVR to record or alarm out.

For example, a sensor is connected to alarm input1. If the sensor gives relay out(switch on/off), user need set the sensor according to the switch status at alarm. If the switch is open at alarm, users need set SENSOR TYPE as NC(Normal Close),. Cable A and B will be disconnected once the sensor detect event. It will detect +5V (high level) to sensor1 when events happen. DVR is triggered. it will record and output alarm.

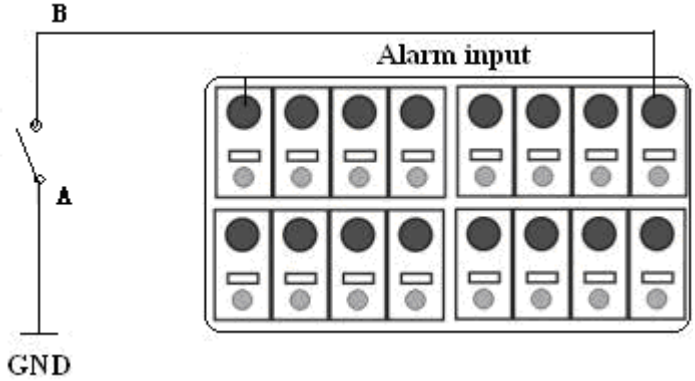


Fig 2.8 Alarm status

Alarm output:

The DVR has 4-channel relay alarm output, which just give on/off signal to external alarm. The status of these pin are illustrated as 2.8.

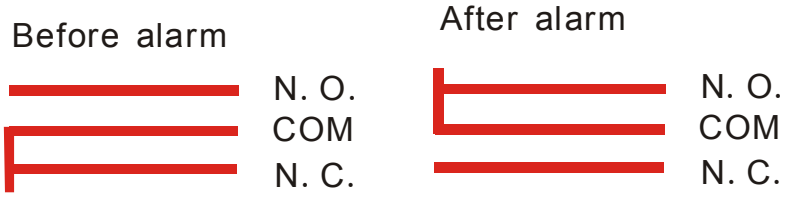


Fig 2.9 Relay Output Status

Users need connect their alarm according to the NO or NC type of the alarm. One connection example as Fig 2.1

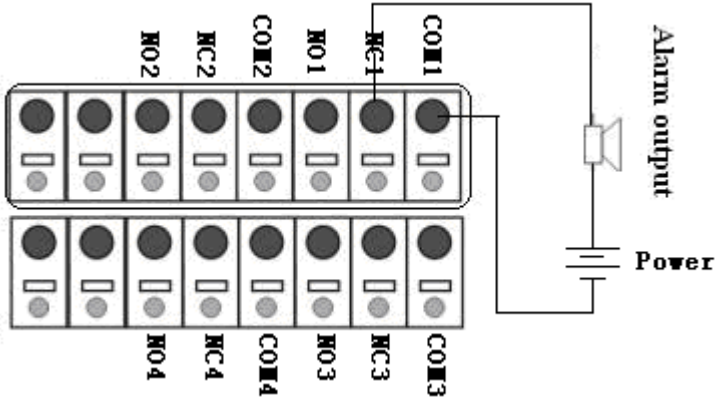


Fig 2.10 Alarm Output Connection

Notice: The power in series must be 277VAC/10A or 30VDC/10A or below

2.4 Remote Controller

It uses two AAA size batteries and works after loading batteries as below

STEP1 Open the battery cover of the Remote Controller
STEP2 Place batteries. Please take care the poles (+ 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 doesn't still work, Please change a new remote controller to try, or contact your dealers

The interface of remote controller is shown in

Fig 2.11 Remote Controller

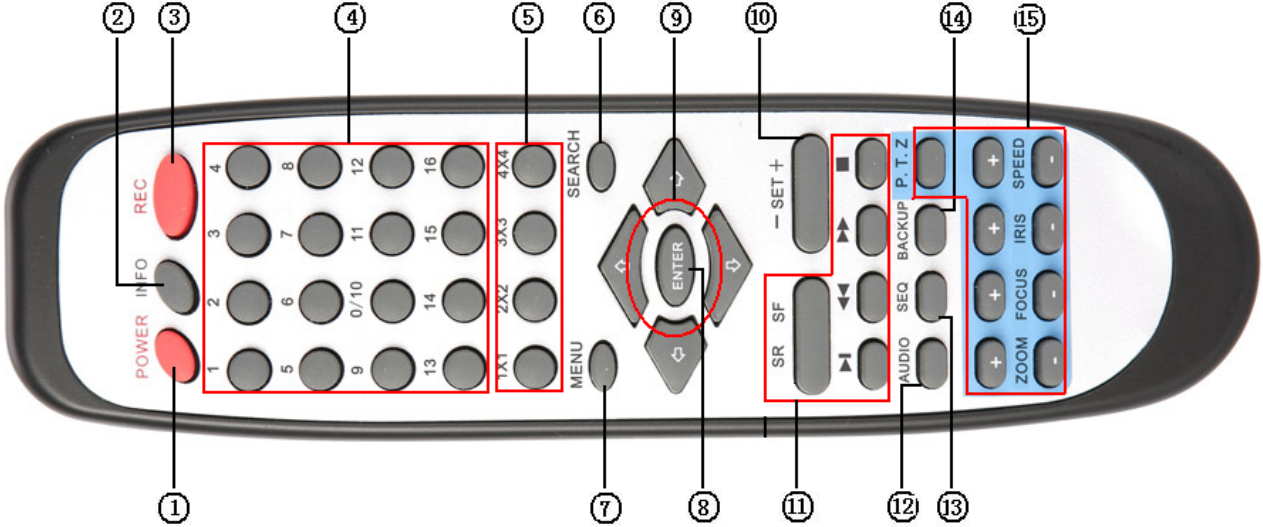


Fig 2.11 Remote Controller

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

Item	Name	Function
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
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

Tab 2.4 Definition of Remote Controller

2.5 Control with Mouse

2.5.1 Connect Mouse

It supports PS/2 or USB mouse through the ports on the rear panel, please refer to Fig 2.11 Remote Controller.

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

1. Unplug/re-plug several times

2. Power off/on several times

3. Change a mouse to try

2.5.2 Use Mouse

The structure of the main menu is shown in Fig 2.11 Remote Controller

In live:

Click left button on one camera to be full screen display. Click again to return to the previous screen display.

Click right button to show the control bar at the bottom of the screen as

Fig 2.11 Remote Controller. 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 want to input the value, move cursor to the blank and click. A input window will appear as

Fig 2.11 Remote Controller. It supports digitals, letters and symbols input.

Fig 2.12 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 searching mode.

In backup:

Click left button to choose the options. Click right button to return to live.

In PTZ control:

Click left button to choose the buttons to control the PTZ. Click right button to return to searching mode.

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

CHAPTER 3 Basic Function Instruction

3.1 Power On/Off

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

Connect with the source power, switch on *POWER* button, and the system will be loaded. The screen show as Fig 3.1 System Loading

Fig 3.1 System Loading

After that, it will enter live in 16 screens. The meaning of letters or symbols on screen is as the form below.

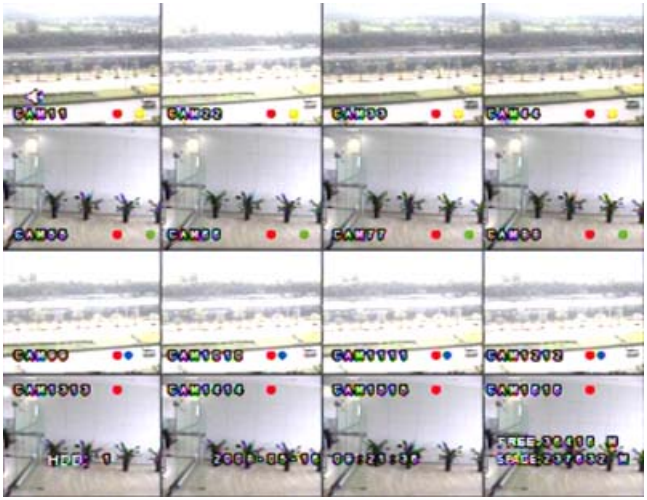


Fig 3.2 Preview

Symbol	Meaning	Symbol	Meaning
	Enable audio in live		Disable audio in live
(green)	Manual record	(blue)	Timer record
(yellow)	Motion detection record	(red)	Alarm record
HDD	Current working HDD	Space	Size of current HDD
Free	Free space of current		USB devices connected
	HDD full		

Tab 3.1 Symbols in Live

Power off safely, please follow the below. Users can close the unit by remote controller, front panel and mouse.

By remote controller:

STEP1 Press POWER button, the screen below will appear.

Fig 3.3 Shut down

STEP2 Choose OK to enter. The unit will power off automatically after a while
STEP3 Disconnect the power

By front panel or mouse:

STEP1 Press ENTER button or click right mouse to show menu bar, referring to Fig 4.1 Control Bar.
STEP2 Click Shut down button, referring to Fig 3.3 Shut down
STEP3 Click OK to enter on the pop-up window. The unit will power off automatically after a while
STEP4 Disconnect the power

3.2 Login &User Management

Users can logout and login the DVR system. Users cannot do any other operations except changing the multi screen display once logout. It is in logout once it starts or restarts.

Login:

If it is in logout, please press right mouse to show the control bar. Press Login, Search or System etc. A login window will

appear, asking for ID and password as Fig 3.4 Login.

Fig 3.4 Login

***Notice**: The default is admin and 123456.*

Change password:

Every one can change his own password.

STEP1 In login state, click Log in/out on the control bar. A window will appear with two options. One is for logout, another for password modification. Click Password, the window will appear as Fig 3.5 Change Password.

Fig 3.5 Change Password

STEP2 Input the old password. Then input new password 2 times.
STEP3 Press OK button to change.

Add &Delete users:

This unit has a default administrator and two user groups, advance and normal user. It supports 1 administrator and 15 users totally. Administrator can add or delete other users, and change their group level. Administrator cannot be added or deleted.

Press right mouse to show the control bar. Enter Menu---->System.

STEP1 Enter USER configuration. Click Add button, please see Fig 3.6 Add User.

Fig 3.6 Add User

STEP2 Input user name and password. Choose the user group.
STEP3 Click OK button to add a new user
STEP4 Choose a user, a symbol will display at the end of the user information. Click Authority button to change the group level.
STEP5 Press Delete button to delete the user. A security window will appear as below.

STEP6 Click OK button to delete the user

***Notice**: illumination of users' rights*

Administrator: have all rights to do every thing.

Advance: do others except entering USER to manage users

Normal: do others except entering SYSTEM to change the settings.

The user name and password are the combination of digitals, letters, or symbols. The number of characters must be one or above.

3.3 Recording

3.3.1 Record Setup

Users need install and format a HDD, and set all the recording parameters before recording. It has four recording modes. Users can enable them simultaneously. However, they have different priorities as below.

Motion detection recording > Sensor recording > Manual recording > Timer recording

Press right mouse to show the control bar, referring to Fig 4.1 Control Bar. Enter Menu---->System.

STEP1 Enter RECORD configuration, referring to Fig 3.7 Record Setup. Select cameras.

Fig 3.7 Record Setup

STEP2 Set Video quality, Frame rate, and Resolution.

STEP3 Have Audio checked if you input audio and want to record. Check Time stamp to record

STEP4 Enable recording function for cameras in Record option.

Notice: *If have camera uncheck here, it will not record in any recording mode.*

STEP5 Set Alarm record hold time. It is for post alarm recording.

STEP6 Enable Recycle. It covers old video once HDD full. If you have it unchecked, it will stop recording auto once HDD full

STEP7 Click OK to finish

Notice: *The higher the used storage of every hour, the higher the value of Video quality, Frame rate and Resolution.*

This Unit supports pre-alarm recording. But no option to set the pre-alarm recording time, the default is 10 seconds

3.3.2 Manual Recording

Just press REC button on the front panel after quitting system setup. Press Stop button to stop recording.

Or press REC button on remote controller, click again to stop.

Or click REC button on the control bar with mouse, click again to stop.

3.3.3 Timer Recording

Users can set different schedule time for every day in one week. If you want a special schedule for one day, you can use Holiday function.

STEP1 Enter SCHEDULE configuration. Select channels and *Always*, see Fig 3.8 Schedule Setup.

Fig 3.8 Schedule Setup

STEP2 The volume means the 7 days of one week. The row means 24 hours. Set the schedule time. Green means checked. Transparence means unchecked.

STEP3 Press Add button to select the date if you want a special schedule for a certain day. A window will appear as Fig 3.9 Calendar.

Fig 3.9 Calendar

STEP4 Select the date and set the schedule time. If want to delete this special schedule, click Delete button

STEP5 Click OK button to finish

Then the DVR will auto record once it goes to the time you set.

3.3.4 Motion Detection Recording

This unit supports recording channels and PTZ linking. This means it will record any cameras, or trigger any speed dome to preset or do auto cruise once motion detected.

STEP1 Enter MOTION configuration, see Fig 3.10 Motion Detection Setup. Select cameras

Fig 3.10 Motion Detection Setup

STEP2 Enable Detection first. Enter Area to set Sensitivity and detection Area. In detection area, red means unchecked, transparence means available, see Fig 3.11 Motion Detection Area Setup.

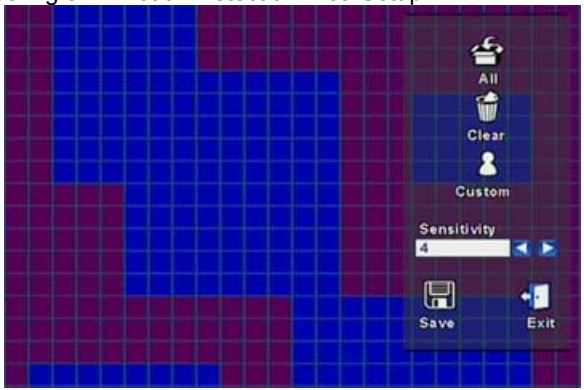


Fig 3.11 Motion Detection Area Setup

STEP3 Enter Trigger configuration, see Fig 3.12 Alarm Out Setup

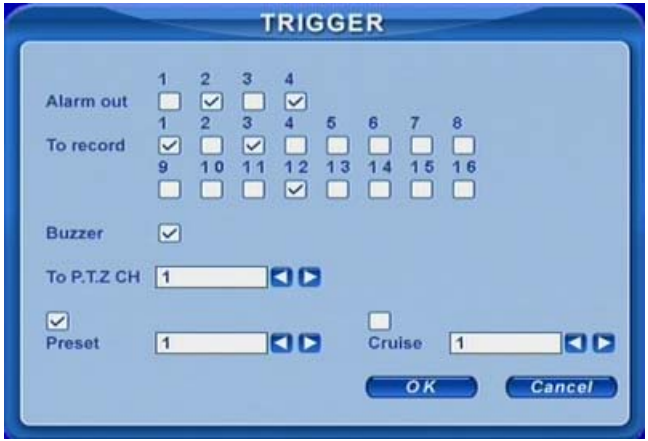


Fig 3.12 Alarm Out Setup

STEP4 Select alarm out and recording channels. It can trigger any alarm out and cameras to record once motion detected.

STEP5 Enable or disable Buzzer on board. Select speed dome and enable preset or auto cruise. Press OK to save

STEP6 Set Hold time. It is the interval time between the two adjacent efficient motions. If a second motion is detected in Hold time again, it is recognized as a continuous motion. If a second motion is detected after hold time, this motion and the previous are recognized as two different motion events.

STEP7 Click OK to save settings

STEP8 Enter SCHEDULE configuration. Select Motion and relative cameras to set, referring to chapter 3.3.3 Timer Recording.

Notice: *About preset and auto cruise, users can only select one at same time.*

The actual post-alarm record time equals Hold time in RECORD and Hold time in MOTION

3.3.5 Alarm Recording

This unit supports recording channels and PTZ linking after alarm.

STEP1 Enter ALARM configuration, see Fig 3.13 Sensor Alarm Setup. Select cameras

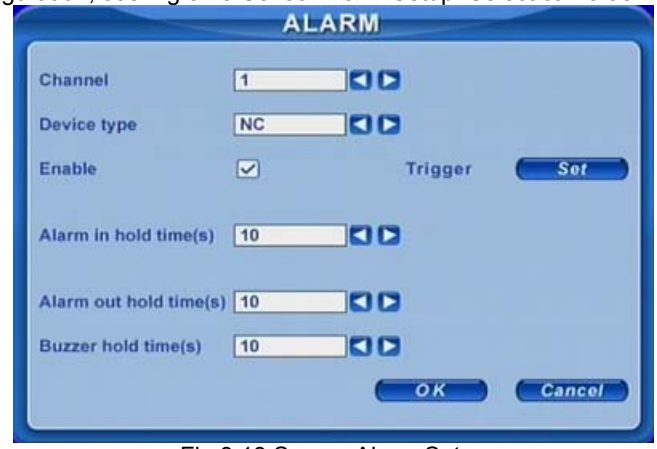


Fig 3.13 Sensor Alarm Setup

STEP2 Enable Detection first. Set Device type.

STEP3 Enter Trigger configuration. Set alarm out, recording cameras and linked PTZ, referring to 3.3.4 Motion Detection Recording STEP4-5

STEP4 Set Alarm in hold time. It is the interval time between the two adjacent efficient alarms. This is similar with Hold time in MOTION configuration.

STEP5 Set Alarm out hold time and Buzzer hold time. Click OK to save settings

STEP6 Enter SCHEDULE configuration. Select Sensor and relative cameras to set, referring to chapter 3.3.3 Timer Recording.

Notice: *About preset and auto cruise, users can only select one at same time.*

The actual post alarm record time equals Hold time in RECORD and Hold time in MOTION

3.4 Playback

This unit supports time search and event search. It displays full or 4 screens in playback. Click right mouse to show the control bar, referring to Fig 4.1 Control Bar. Click Search, the window below will appear on screen.

Fig 3.14 Search Menu

Time search:

STEP1 Enter Search configuration, select Time search. A window will appear as Fig 3.15 Calendar Search. If it recorded in a day, the date will show highlight.

Fig 3.15 Calendar Search

STEP2 Choose a day in the time search interface, as Fig 3.16 Time Search.

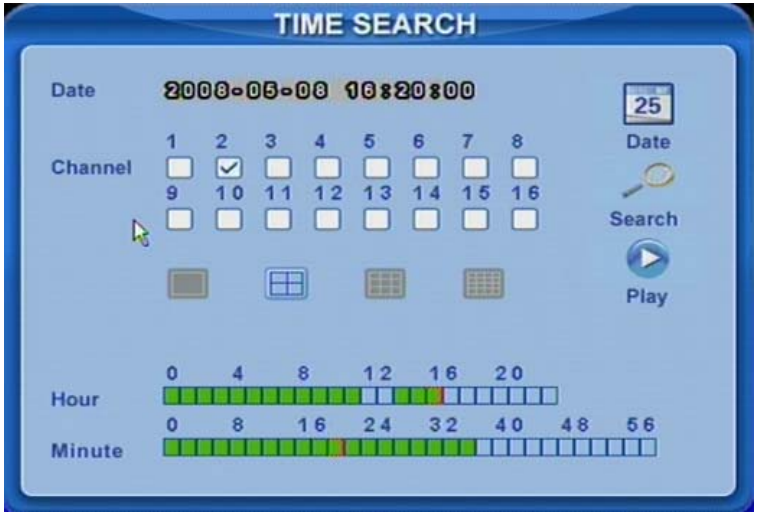


Fig 3.16 Time Search

STEP3 This unit has full and four-screen playback. Select the screen display mode and the channels.

STEP4 If want to change the date, press Date button. Set hour and minutes of start time. If it recorded at that time, the boxes will show green.

STEP5 Click Play button. It will play from the time point you set.

STEP6 Click the relative buttons on the screen to do fast forward/backward, pause, stop, and change the screen mode and re-search, See Fig 3.17 Playback.

Fig 3.17 Playback

Event search:

STEP1 Enter Search---->Event search. The calendar window will appear as that of time search

STEP2 Choose a day in the event search interface, as Fig 3.18 Event Search

Fig 3.18 Event Search

STEP3 Choose camera and event type, motion or sensor.
STEP4 Double click one video file to play.

3.5 Backup &View

This unit supports backup by built-in SATA DVD Writer, with USB Flash, USB HDD, and USB DVD writer through the USB port on the front panel. Users can also make backup by IE browser via internet, referring to 6.3.2 Remote Backup.

Take USB flash backup as an example. Press right mouse to show the control bar, referring to Fig 4.1 Control Bar.

At DVR location:

STEP1 Enter Backup interface, see Fig 3.19 Backup Setup

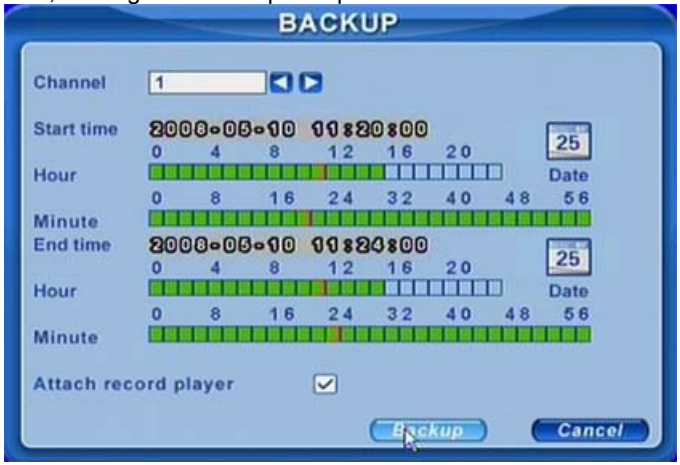


Fig 3.19 Backup Setup

STEP2 Choose the camera. And set the start and end time. Click Date button to change the date.

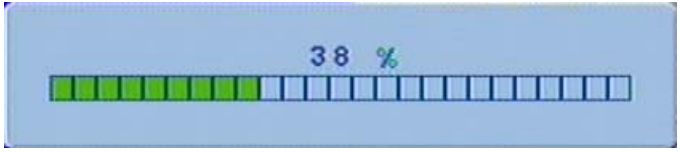
STEP3 Enable “Attach record player”, it will save a special player simultaneously when backup. With this player, users can make time search and event search when checking the backup.

STEP4 Click OK button. A window will appear as Fig 3.20 Backup Information.

Fig 3.20 Backup Information

***Notice**: If users install built-in DVD writer and USB device, it will show USB device in previous.*
It will show CD-ROM even though users install DVD writer

STEP5 Press OK button. It will begin to write video from HDD inside DVR to backup device, and show the process as below.



STEP6 It will show “Backup complete” after finished, as below.

Check &View:

The steps to view the backup with the special software are as following:

STEP1 Remove the backup device to a computer. Enter the backup folder and open the viewer.

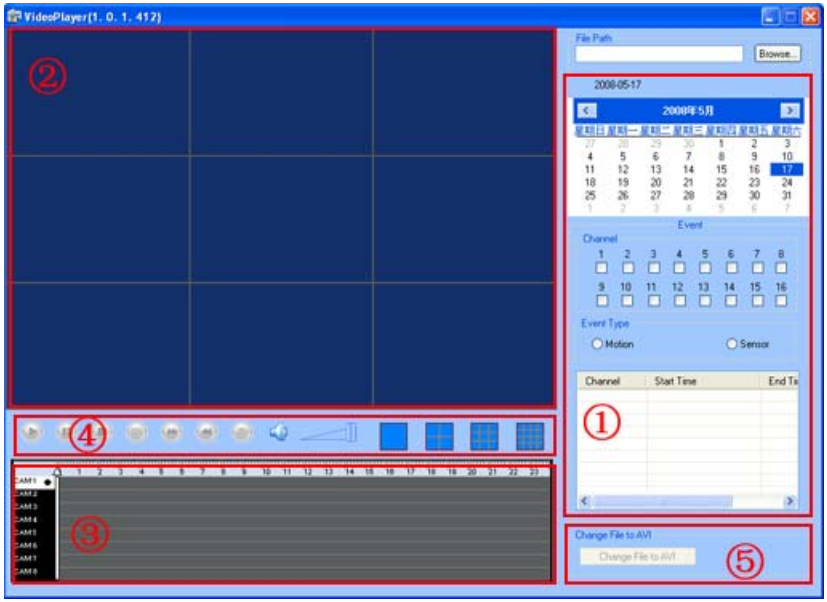


Fig 3.21 Backup Player

① Search area ② video display area

③ Video data area ④ Control area

⑤ AVI converting

STEP2 Click Browse to choose the folder which contains the video backup, as Fig 3.22 Choose Backup Folder.

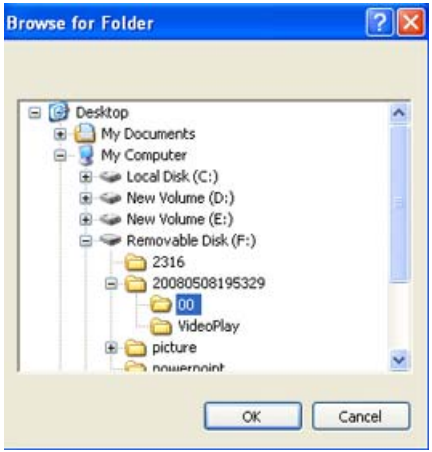


Fig 3.22 Choose Backup Folder

STEP3 Set the date and channels. It will show the recorded video in area③ with green at the bottom as Fig 3.23 Backup Data Search.

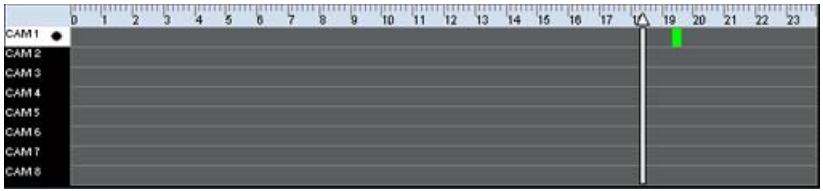


Fig 3.23 Backup Data Search

If using event search, it will list event files at the bottom of area①

STEP4 Drag the slide bar to the start time point, click play button to view. It supports multi screen display. Users can do fast forward/backward, record, play audio etc, as below.

Fig 3.24 Play Backup Files

Index	Definition	Index	Definition	Index	Definition	Index	Definition
①	Play	②	Pause	③	Stop	④	Next frame
⑤	Forward/ Rewind	⑥	Snap	⑦	Volume	⑧	Screen mode

Tab 3.2 Backup View Control

STEP5 It supports AVI converter. Click “Change File to AVI”. The converter will appear.

STEP6 Click Browse to choose the folder which contains the video backup first. Set the start/end time, select the channels, and then Click search button. It will show backup files in the file display area as Fig 3.25 AVI Converter

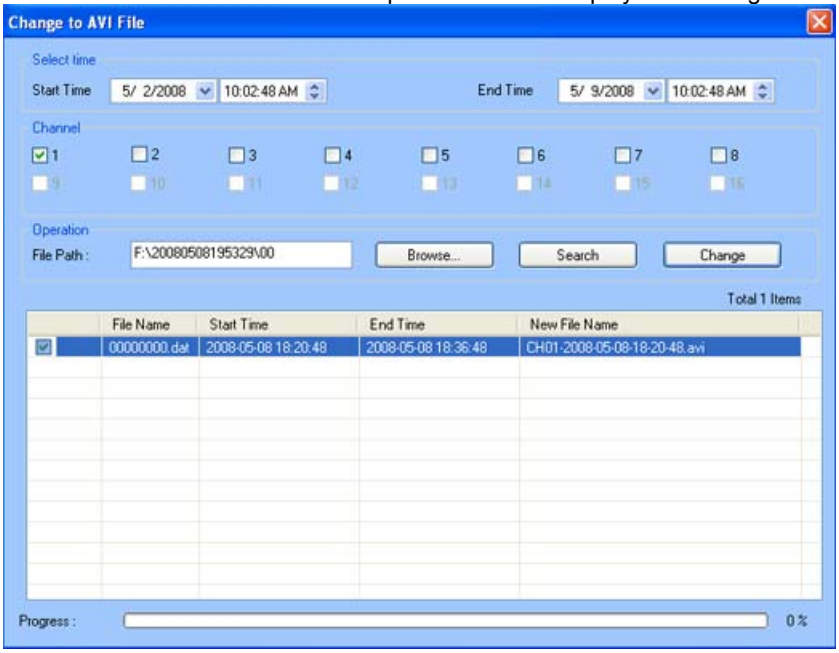


Fig 3.25 AVI Converter

STEP7 Select the files. Click Change button, it will start converting the files and show the process at the bottom.

STEP8 It is finished when the process show 100%. Users can play the AVI files with the third player directly.

About network backup, please refer to 6.3.2 Remote Backup.

3.6 PTZ Control

Please connect speed domes to the DVR via RS485 first, referring to 2.3.1 Rear Panel Interface. And make sure the speed dome has the protocols this DVR supports and set the parameters according to its manual.

STEP1 Press right mouse to show the control bar. Enter Menu---->System--->P.T.Z, see Fig 3.26.

Fig 3.26 PTZ Setup

STEP2 Set protocol, baudrate, address according to the parameters of the speed dome.

STEP3 Click Set button at right of Preset. Here users can set presets as Fig 3.27 Set Presets. Adjust the speed dome. Select a preset and click Save to a preset. Users can set 16 presets totally.

Fig 3.27 Set Presets

STEP4 Click Set button at right of Cruise. Here users can set cruise track, as Fig 3.28 Set Cruise. Choose the preset, set stay time of every preset. Click + button to add the preset to the left preset for cruise track.

Fig 3.28 Set Cruise

STEP5 Select a preset in left preset list, click – button to delete the preset. Click ⇧, ⇩, ⇧, ⇩ to adjust the sequence of the presets in the auto cruise. Click Save to save and return to the previous interface.

STEP6 Click OK button to save and exit. Press right mouse to show the control bar. Click PTZ to enter PTZ control, as Fig 3.29 PTZ Control.

Fig 3.29 PTZ Control

STEP7 Select the speed dome. Click the direction buttons to move the camera. Click the relative + and – buttons to adjust zoom, focus, IRIS and speed. Click ☐ button to stop the change.

STEP8 Select the preset, the speed dome will go to the point directly. Select Cruise, it will do auto cruise.

CHAPTER 4 Menu Setup Guide

4.1 Menu Navigation

Menu	Option	Menu	Option
Basic	Device name &ID Video format Language Date &time setup Live audio switch Authorization check switch	Live	Camera name Camera mask Name &time switch SPOT out switch Color adjustment
Record	Video quality Frame rate Record switch Resolution Recycle switch Post alarm record time	Schedule	Recording schedule Motion schedule Sensor schedule
Alarm	Alarm Switch Sensor type Alarm out &out time setup Recorded cameras and PTZ linking	Motion	Motion switch Sensitivity &detection area setup Alarm out &out time setup Recorded cameras and PTZ linking

Network	HTTP &server ports IP address setup PPPoE Network video setup DDNS	PTZ	Protocol, baud rate and address Speed setup Presets setup Cruise setup
User	Add users Delete users Change authorization	Tools	Disk manager Update Load default

Tab 4.1 Menu Navigation

4.2 Main Menu Setup

Click right mouse, or press ENTER button on the front panel, the control bar will show on the bottom of the screen as Fig 4.1 Control Bar.

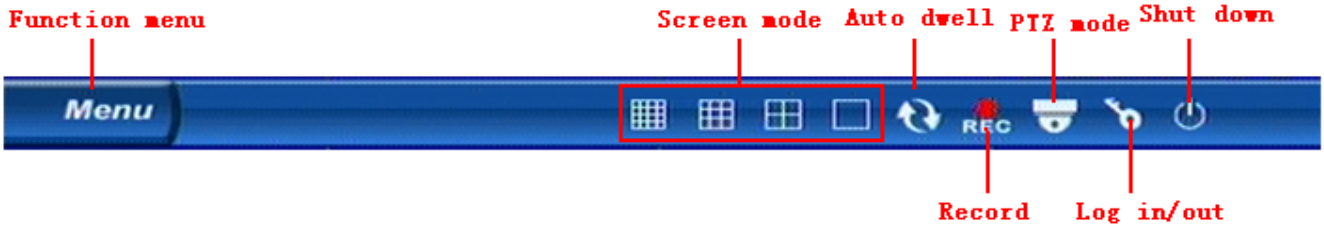


Fig 4.1 Control Bar

Move the cursor to Menu and click, the up list menu will show as Fig 4.2 Up-listed Menu

Fig 4.2 Up-listed Menu

Select System. A graphic user interface will show as Fig 4.3 System Setup.

Fig 4.3 System Setup

Press MENU button on the front panel or remote controller. The interface above will also appear.

***Notice**: Only administrator and advance user can enter system setup and do setup.*
It need reboot after some parameters changed, like video format.

4.2.1 Basic Configuration

Click BASIC to enter basic configuration as Fig 4.4 Basic .

Fig 4.4 Basic Configuration

Here users can set video system, menu language, audio, time and authorization check. The following are the definitions of every option.

Device name: The name of the unit. It may display on the client end or CMS, which help users to recognize the unit remotely. Now it does not work.

Device ID: It is used to multi devices at the same place. Users can manage them by remote controller. Now it does not work.

Video format: It has PAL and NTSC. Users make the choice according to that of that of cameras.

Language: set the menu language.

Authorization check: It needs user name and password when user want system setup, playback, backup etc, if enable this.

Audio: enable audio in live. Users can choose a random channel.

Date format: three formats, YY-MM-DD, DD-MM-YY, MM-DD-YY.

System time: set the time. If the unit is recording, users cannot change the time. When recording, click Adjust button, a security window will appear.

4.2.2 Live Configuration

Click LIVE to enter live configuration as Fig 4.5 Live Configuration

Fig 4.5 Live Configuration

Here users can set name/time display, picture color and hide cameras. The following are the definitions of every option.

Camera name: set camera name. it is the combination of digitals, letters and symbols.

Show name: display camera name in live.

Hide: hide the picture in live. Unauthorized users cannot view the camera. But it still works in the background, like record.

Show time: display time in live.

Dwell time: it is available for both Sequence and SPOT simultaneously. This unit has 2ch video output, referring to 2.3.1 Rear Panel Interface. One is main output, and the other is spot output. Users can set the display time of cameras in auto dwell and spot out.

SPOT enable: enable spot output.

Click Set button, a window will appear as Fig 4.6 Color Adjustment.

Fig 4.6 Color Adjustment

Adjust Brightness, Hue, Saturation, and Contrast in live here.

Default: set the color to the default value.

4.2.3 Record Configuration

Click RECORD to enter record configuration as Fig 4.7 Record Configuration.

Fig 4.7 Record Configuration

Here users can set record quality, frame rate, resolution, and recycle. The following are the definitions of every option.

Video quality: it has 5 options from lowest to highest. The higher the value is, the clearer the recorded picture is.

Frame rate: set recorded frame rate.

Audio: enable audio to record.

Time stamp: record the current time to video file if checked.

Record: Switch on/off recording function for every camera. It records the camera only if having the camera checked here. Then you can use manual, timer, motion detection, and sensor alarm recording.

Resolution: it supports CIF and D1. Now only CIF works.

Alarm record hold time(S): set the post record time after alarm finishes. It has 4 options, 30, 60, 120, and 180.

Recycle: enable recycle. It unchecked here, it will stop recording when HDD full.

***Notice**: Video quality, frame rate, and resolution are tightly related with the used storage. The higher the value is, the higher the bit rate and the*

used storage are.

4.2.4 Schedule Configuration

Click SCHEDULE to enter schedule configuration as Fig 4.8 Schedule Configuration.

Fig 4.8 Schedule Configuration

Here users can set schedule for timer, motion detection, and sensor alarm respectively. The following are the definitions of every option

Always, Motion and Sensor: refer to record schedule, motion schedule and alarm schedule respectively.

The volume means the 7 days of one week from Monday to Sunday. The row refers to 24 hours. Click the boxes or hold mouse to drag to set the schedule time. Green means checked. Transparence means unchecked.

Add: users can set schedule for a certain day by date. Click Add to add date as Fig 3.9 Calendar.

Delete: delete holiday schedule.

4.2.5 Alarm Configuration

Click ALARM to enter alarm configuration as Fig 4.9 Alarm Configuration.

Fig 4.9 Alarm Configuration

Here users can set sensor type, alarm trigger and alarm time. The following are the definitions of every option.

Device type: NC and NO (Normal Close and Normal Open). Set the value according to the alarm signal level of the sensors.

Enable: enable sensor alarm.

Trigger: set alarm output, recording channel and speed dome linking. Click Set button, a window will appear as Fig 4.10 Alarm Out Configuration.

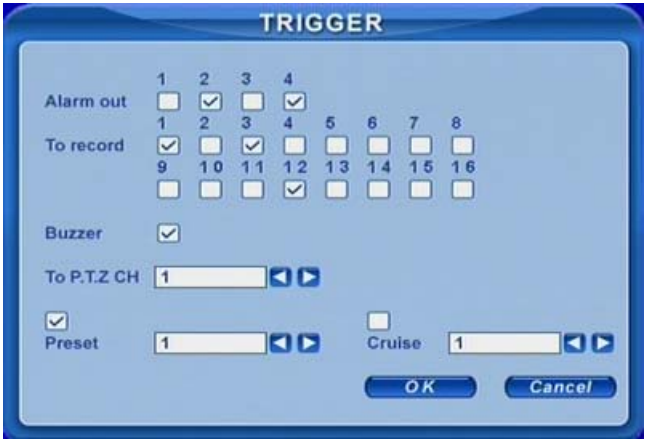


Fig 4.10 Alarm Out Configuration

Alarm out: set relay alarm out channel. You can select any alarm channels.

To record: set recording channels. You can select any record channels. It will record the cameras you choose here when alarm triggered.

Buzzer: enable buzzer on board for alarm.

To P.T.Z CH: set linked preset and cruise for alarm. You can select any channel and multi channels as linked channels.

Alarm in hold time(S): the interval time between the two adjacent efficient sensor alarms. If a second alarm is detected in Hold time again, it is recognized as a continuous alarm. If a second alarm is detected after hold time, this alarm and the previous are recognized as two different alarm events.

Alarm out hold time(S): set relay alarm out time after alarm triggered.

Buzzer hold time(S): set on board buzzer time after alarm triggered.

4.2.6 Motion Configuration

Click MOTION to enter motion configuration as Fig 4.11 Motion Configuration.

Fig 4.11 Motion Configuration

Here users can set motion sensitivity, detection area and alarm out. The following are the definitions of every option.

Enable: enable motion detection.

Trigger: setup similar with that of sensor alarm. But linked speed domes must be different front current channel. I.e. now users enable motion detection of camera1, the linked speed domes must be camera2-16.

Area: set sensitivity and motion detection area. It supports multi detection area as Fig 4.12 Detection Area Configuration. Click the blocks or drag mouse to enable or disable. Red means unchecked, transparence means available. Click Save to save and exit.

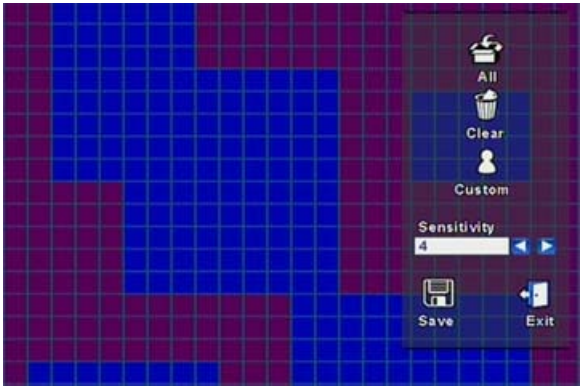


Fig 4.12 Detection Area Configuration

Sensitivity: set detection sensitivity from 1-8. The default is 4.

Exit: quit without saving

Hold time(S): the interval time between the two adjacent efficient motions, similar with that of sensor alarm.

4.2.7 Network Configuration

Click NETWORK to enter network configuration as Fig 4.13 Network Configuration.

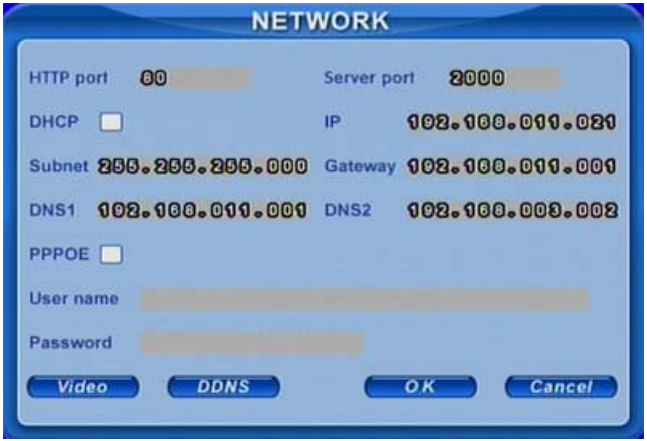


Fig 4.13 Network Configuration

This unit supports DHCP, PPPoE, DDNS. Users enable network function, and configure IP address, DDNS, transmission video parameters here. The following are the definitions of every option.

HTTP port: the default is 80. If users change the value, they need add the port number when typing IP address in IE address blank. I.e. set HTTP port to 82, IP address to 192.168.0.25. Users need input http://192.168.0.25:82 in IE browser.

Server port: communication port.

DHCP: enable DHCP. It wants this feature work, need enable DHCP in the router or virtual server. The unit will get IP address automatically, not inputting IP, Subnet, Gateway manually.

IP, Subnet, Gateway, DNS1 and 2: IP address information. If users don't enable DHCP, it is necessary to input the value manually here.

PPPoE: enable PPPoE. If users connect the DVR to internet directly by ADSL, not through a router or a virtual server, please enable it.

User name, Password: account information of PPPoE. Input what you get from your ISP.

Click DDNS, a window will appear as Fig 4.14 DDNS Configuration. Now it supports DNS2P and 88IP. Users need register at www.dns2p.com or www.88IP.net. Then input register ID and password here. Click OK button. the unit will connect DNS2P or 88IP.

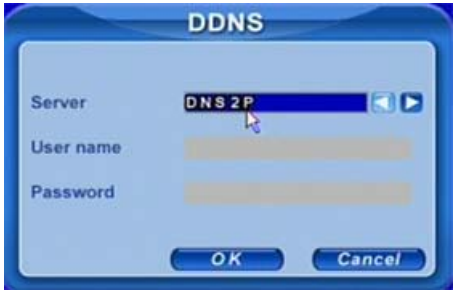


Fig 4.14 DDNS Configuration

Server: select DDNS server.

User name and Password: input register information.

This unit supports dual stream. Users can set picture quality, frame rate, and resolution separately for network, according to the network bandwidth. Click Video to enter the configuration interface as Fig 4.15 Network Video Configuration.

Fig 4.15 Network Video Configuration

Video quality: network picture quality.

Frame rate: it has two options, 1, and 3 fps.

Resolution: now it only has CIF.

Time stamp: display time in remote preview.

4.2.8 P.T.Z Configuration

Click P.T.Z to enter PTZ configuration as Fig 4.16 PTZ Configuration.

Fig 4.16 PTZ Configuration

Here users can set protocol, baud rate, address, presets and auto cruise track here. The following are the definitions of every option.

Protocol, Baud rate, Address: please set the value according to the settings of the speed dome.

Speed: set the speed of speed domes.

Preset, Name: select a preset and rename it. Click Set, a window will appear as Fig. 4.17. Select a preset, and adjust the speed dome. Click *Save* button to save it and exit.

Fig 4.17 Set Presets

Cruise, Name: select a cruise track and rename it. Click Set in Cruise row. A window will appear as 3.6 PTZ Control.

***Notice**: It has 16 presets and 16 cruise tracks totally*

4.2.9 User Configuration

Click USER to enter user management interface as Fig 4.18 User Configuration.

Fig 4.18 User Configuration

Administrator can add, delete users, and change their authorization. Please refer to 3.2 Login &User Management.

***Notice**: It supports one administrator and max 15 users.*

4.2.10 Tools Configuration

Click TOOLS to enter tools configuration as Fig 4.19 Tools Manager.

Fig 4.19 Tools Manager

Disk manager: please refer to 5.1 Format Hard Disk.

Update: please refer to 5.2 Update Firmware.

Load default: please refer to 5.3 Load Default Setup.

CHAPTER 5 Manage DVR

5.1 Format Hard Disk

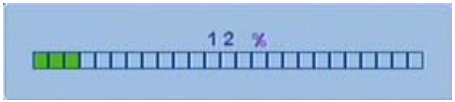
If wanting to record, it is necessary to format the hard disk at first. If not being formatted, it will show the position of the disk; free space and total space show 0M at the bottom of screen.

STEP1 Enter USER configuration, referring to 4.2.10 Tools Configuration. Press Disk manager, a window will pop up as Fig 5.1 Disk Manager.

Fig 5.1 Disk Manager

STEP2 If a disk has never been formatted, Status will show “new”. Select hard disks, press Format button to begin.

STEP3 A security window will remind user that this will delete all data on HDD. Press OK to continue. A process will display on the screen as below.



STEP4 It will return to the previous automatically after finished. And status will show “normal” after formatted.

***Notice**: All recorded files will be lost after formatted.*

5.2 Update Firmware

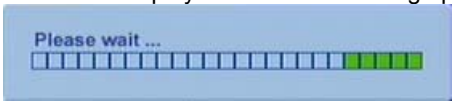
Now it only supports USB update. Get the firmware from your dealer, and Make sure the firmware is corresponding with the DVR. Users can check USB information in disk manager, please refer to Fig 5.1 Disk Manager.

STEP1 Plug an USB flash to the computer. Copy the firmware to the flash. The extension of firmware is tar.

STEP2 Remove the USB flash to the DVR. Enter TOOLS configuration, referring to 4.2.10 Tools Configuration.

STEP3 Click Update. A window will appear, which reminds users that it will automatically load default settings after update.

STEP4 Press OK to begin. The process bar will display on the screen during update.



STEP5 After finished, the unit needs restart.

***Notice**: If a "no device or no file" error appears, it is possible that the USB device is incompatible. Please change an USB flash.*

Please be patient to wait. It will take 2-3 minutes to update.

5.3 Load Default Setup

The DVR has different setup blocks, like Basic, Record, Schedule, Motion etc. Users can choose any block to do default, as Fig 5.2 Reset Blocks.

Fig 5.2 Reset Blocks

STEP1 Enter TOOLS configuration, referring to 4.2.10 Tools Configuration.

STEP2 Click Load default. Select setup blocks; please refer to Fig 5.2 Reset Blocks.
STEP3 Press OK to do default. It will return to TOOLS interface after finished.

5.4 Check System Information

Users can check system information like firmware version, IP address etc.

STEP1 Press right mouse to show the control bar. Click Menu, referring to Fig 4.2 Up-listed Menu.
STEP2 Click Info, the window below will appear.

Fig 5.3 Status Interface

STEP3 Click System, the window below will display. Check firmware version, recording parameters here.

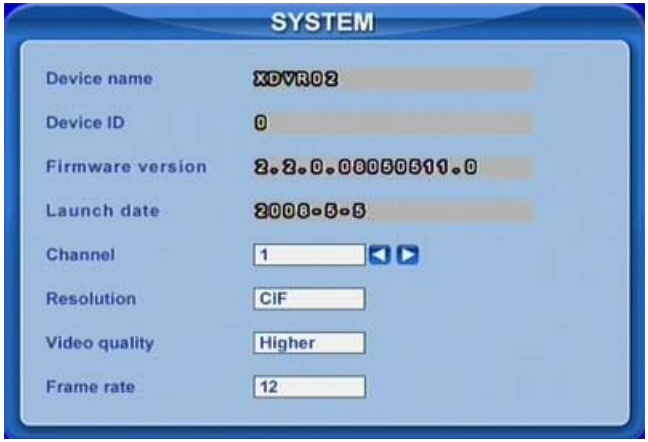


Fig 5.4 System Information.

STEP4 Return to the previous interface, and click Network. The window below will display. Check IP address, DVR Mac address, network video quality.

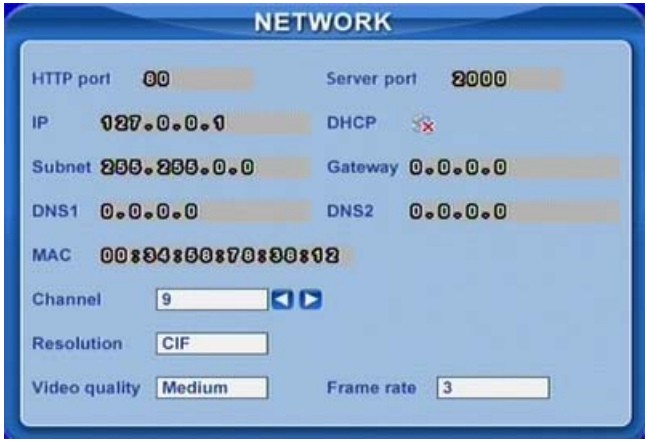


Fig 5.5 Network Information.

5.5 Check System Log

This unit supports system log. It records its working state and operation automatically. And it divides the record to two groups, events ands operation. The form below is the details of the two groups.

Group	Details
Events	Motion, Video Loss, Alarm
Operation	Delete File, Lock File, Search, Login, Enable check, Boot, Shutdown, Reset, Start Record, Stop Record, Setup Basic, Setup Live, Setup Record, Setup Schedule, Setup Alarm, Setup Network, Setup P.T.Z

Tab 5.1 Details of System Log

STEP1 Press right mouse to show the control bar. Click Menu---->Status---->Events, the window below will appear.

Fig 5.6 Events LOG

STEP2 Click Date to change date by a calendar. Click Type to select the event type. Then click Search button. It will refresh the event list.

STEP3 Click |⇦, ⇦, ⇨, ⇨| to do pgdn or pgup

STEP4 Click right mouse to return to the previous interface. Click Operation to search operation Log

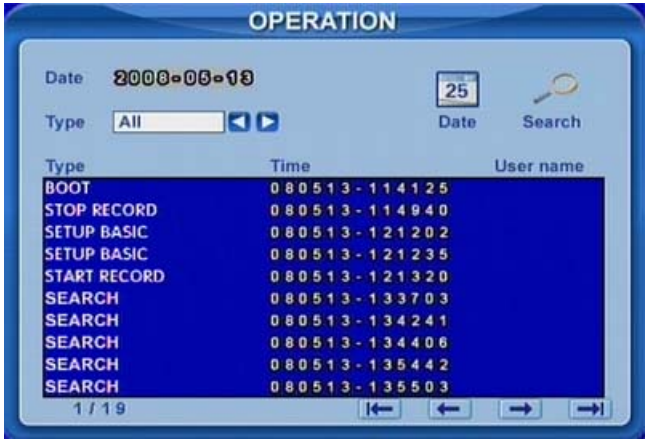


Fig 5.7 Operation Log

STEP5 The operating is similar with searching events log.

Notice: *The log files are saved to the HDD inside. If HDD not installed, it won't record any thing. The number of log files is unlimited.*

5.6 Check On-line Network Users

Press right mouse to show the control bar. Click Menu---->Online users. It will show the details of the current connections as below.

Fig 5.8 Details of Current Network Connections

5.7 Lock &Delete Files

Users can control every video file, locking and deleting them. Once users lock an important file, it cannot be covered or deleted. But the locked files can still be cleared by formatting.

STEP1 Press right mouse to show the control bar. Click Menu, referring to Fig 4.2 Up-listed Menu.
STEP2 Click Search----->File manager, the window below will appear.

Fig 5.9 File Manager

STEP3 Click Date to change date by a calendar, click Search to refresh the list. The files found will be listed in the file area of file manager at bottom. It show the details of every file, like start/end time, lock state.

STEP4 Select the files and click Lock, it will lock the selected files. At this time, a letter “L” display at the end of the file rows as Fig 5.9 File Manager.

STEP5 Select the files which is unlocked, click Delete. A window display and remind users. Click Ok to delete them.

CHAPTER 6 Remote Surveillance

6.1 Accessing DVR

If want to make remote view, the DVR must be connect to LAN or internet. And then enable network server in the unit. Please refer to 4.2.7 Network Configuration.

This unit supports IE browser, not any client software installed. And it supports XP and Vista.

6.1.1 On LAN

STEP1 Input IP address, Subnet, Gateway. If using DHCP, please enable DHCP in both the DVR and router.
STEP2 Enter Video to set network video parameters like resolution, frame rate etc.
STEP3 Open IE browser on a computer on the same LAN. Input the IP address of the DVR in IE address blank and enter.
STEP4 IE will download activeX automatically. Then a window pops up and asks for user name and password.
STEP5 Input name and password correctly, and enter. It will show the picture as below.

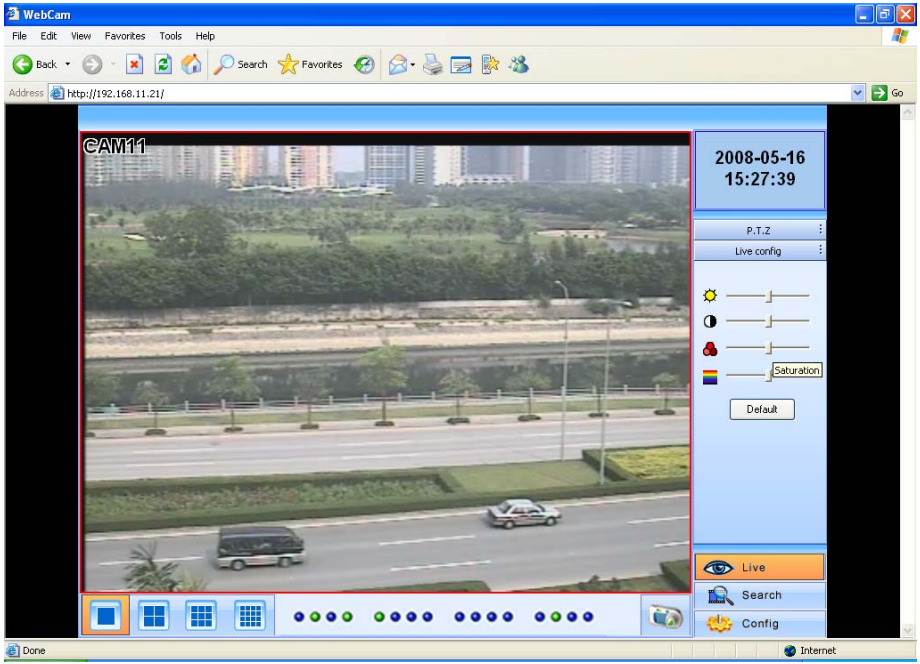


Fig 6.1 View with IE browser

***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 are admin and 123456.

6.1.2 On WAN

There are two ways that the DVR is connected to internet.

1. connect the DVR to internet through a router or virtual server.

STEP1 Input IP address, Subnet, Gateway. If using DHCP, please enable DHCP in both the DVR and router.
STEP2 Enter Video to set network video parameters like resolution, frame rate etc.
STEP3 Forward IP address and port number in Virtual Server setup of the router or virtual server. Close firewall.

Notice: *Forwarding block may be different in different routers and server, please check your router manual.*

STEP4 If users want to utilize dynamic domain name, need apply for a domain name in a DNS server supported by the DVR or router. Then add to the DVR or router.
Now this unit only supports www.dns2p.com or www.88IP.net.
About the router, please check in the router manual.
STEP5 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.
STEP6 IE will download activeX automatically. Then a window pops up and asks for user name and password.
STEP7 Input name and password correctly, and enter to view.

Notice: *If you cannot download and install activeX, please* refer to Appendix A FAQ Q7.

2. Connect the DVR to internet directly.

STEP1 Input IP address, Subnet, Gateway gotten from your ISP. If using ADSL, please input user name and password, and click OK. The DVR will connect the server and show “connection succeeds”.
STEP2 The following steps are the same as STEP4-7 of the connection way above.

6.2 Remote Preview

It will first enter remote preview interface as below.

Fig 6.2 Remote Preview Interface

① Full screen, 4/9/16 screens display mode.

② Camera indicators

③ Picture snapshot

④ Remote preview: adjust the color of cameras, control PTZ by this.

⑤ Remote playback and backup: make remote playback and backup, check system log. Please refer to 6.3 Remote Playback &Backup.

⑥ Remote menu setup: set the parameters remotely. Please refer to 6.4 Remote Menu Configuration.

④, ⑤, and ⑥ are the function blocks. When one is active, the button will show orange.

Snap pictures:

STEP1 Click on a channel to choose. Click the button, a window will appear as Fig 6.3 Preview Snap.

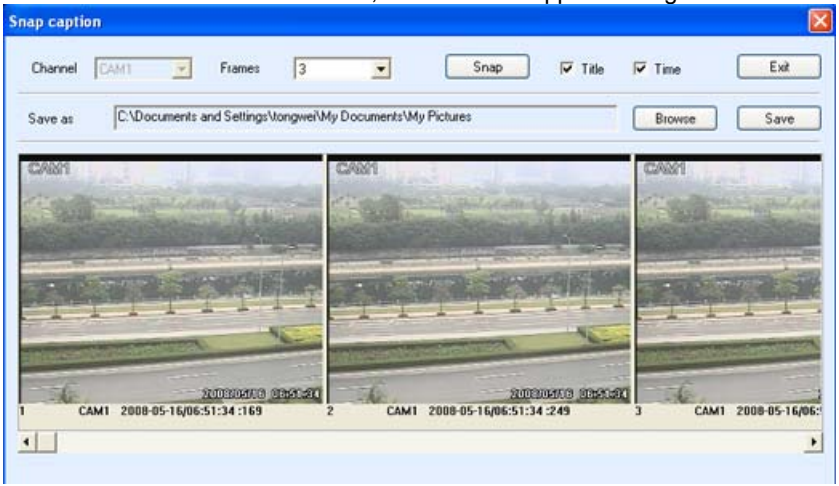


Fig 6.3 Preview Snap

STEP2 Select frames captured one time. Enable Title and Time, it will capture title and time simultaneously.

STEP3 Click Snap to capture pictures.

STEP4 Click Browse to set saving path. Click Save to save pictures to HDD on the computer. And the saving folder window will pop up.

STEP5 Click Exit to return to live preview interface.

Color adjustment:

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

PTZ control:

Click P.T.Z to enter the interface as below. Click on a channel to select the speed dome.

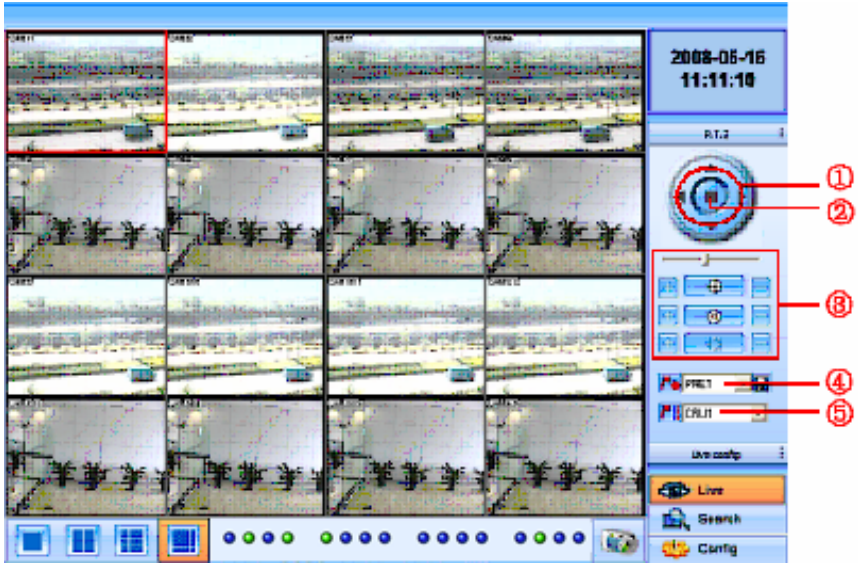


Fig 6.4 Remote PTZ control

① Move the speed dome.

② Stop adjustment.

③ Adjust zoom, focus, Iris, Speed.

④ Go to the preset. Click to rename the preset.

⑤ Select and do auto cruise.

Click right mouse, a pull-down menu will appear as below.

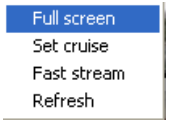


Fig 6.5 Preview Control Menu

Audio: enable remote audio transmission. Users can hear the audio from the DVR.

Full screen: the picture will fill the screen, without tools bar display. Double click or click right mouse to return to the previous interface.

Set cruise: select this function to set, the window below will appear.

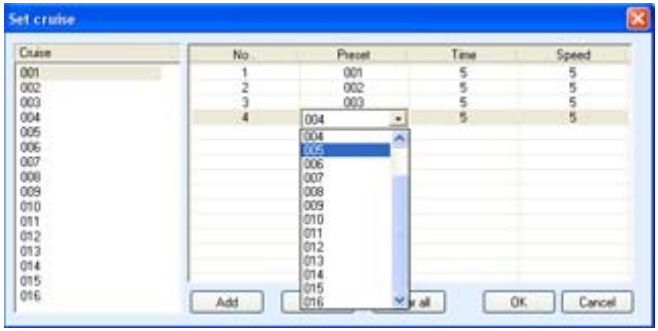


Fig 6.6 Set Cruise

Double click Add to add presets for the selected cruise. Click the preset, a down list menu will pop up. Users can select presets to add. Double click Time to set display time in auto cruise. Click Delete or Clear all to delete the presets. Click OK to save and exit.

Fast stream: enable the master stream. This DVR supports dual stream, sub stream and master stream. Sub stream has low frame rate, max 3fps for every channel, referring to 4.2.7 Network Configuration. It requires low network bandwidth.

Master stream has higher frame rate, max 30fps for every channel. But it needs higher network bandwidth simultaneously. Therefore, users can select the stream according to their bandwidth.

Refresh: update the picture on the channel. Sometime the picture on one channel will freeze due to network block. At this time, users can refresh the pictures.

6.3 Remote Playback &Backup

6.3.1 Remote Playback

Click Search to enter the playback and backup block as below, where users can make remote playback, remote backup and remote video file management.

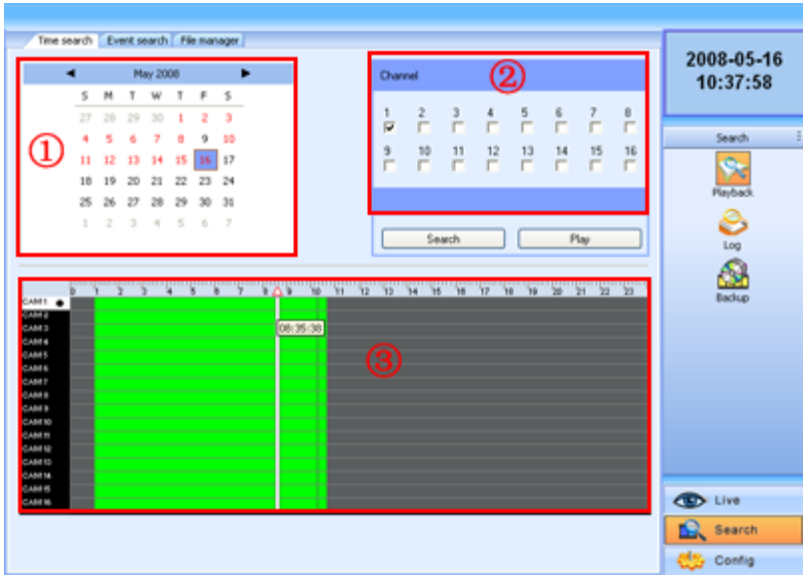


Fig 6.7Remote Playback &Backup Interface

This DVR supports remote time search, event search and one channel playback. The above is the default interface after entering Playback &Backup block.

By time search:

STEP1 Select the date in calendar area①, select the channel in channel area②.

STEP2 Click Search button to update the search result. All the recorded found will display in video data area③.

STEP3 In area③, the top bar refers to hours and minutes in a day. The left column refers to cameras. Drag the slide bar to a time point.

Click right mouse on △ of the slide bar. It will zoom in 10 times, which is helpful for users to point the start time of playback accurately.

STEP4 Click Play button to do remote playback, referring to Fig 6.8 Remote Playback.

Fig 6.8 Remote Playback

STEP5 Users can make fast forward/backward, pause, stop playback and snap pictures. About snap feature, it is the same as that in remote preview, referring to Fig 6.3 Preview Snap.

STEP6 Click to return to search interface.

By event search:

STEP1 Click Event search, the window will display as below.

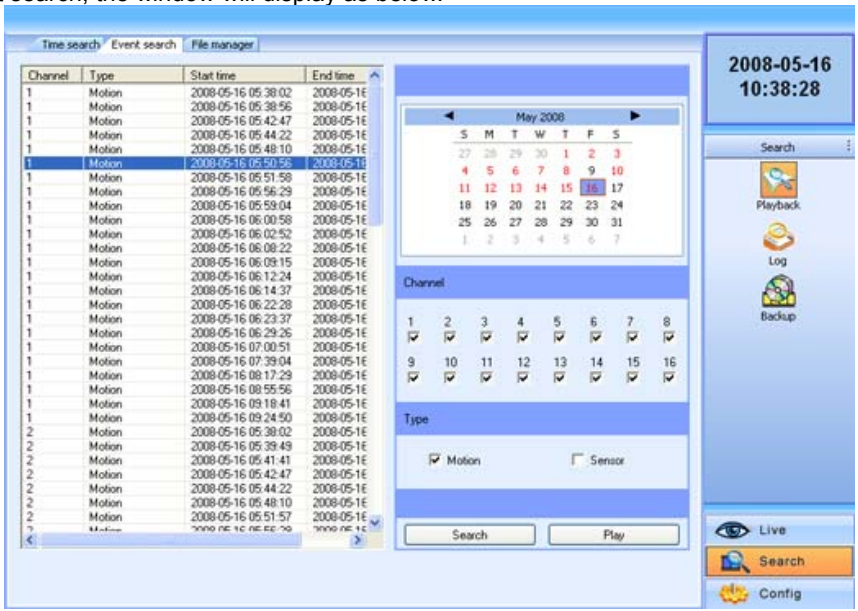


Fig 6.9 Remote Event Search

STEP2 Select the date, channel and event type. Then click Search. All the files found will be listed in left area.

STEP3 Select a file, and click Play button to do remote playback. The following steps are the same as SETP5-6 of time search above.

6.3.2 Remote Backup

Users can download the recorded files from the DVR through network. Click Backup to enter the interface as below.

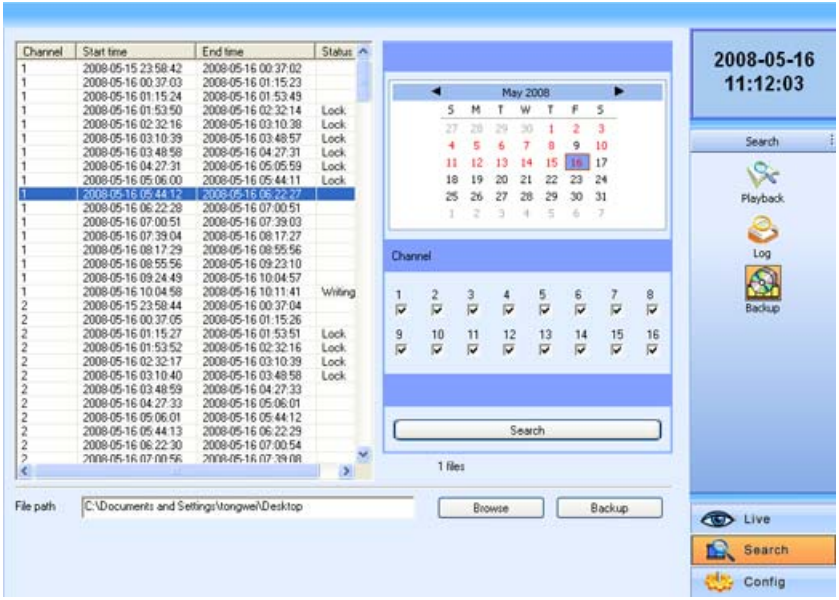


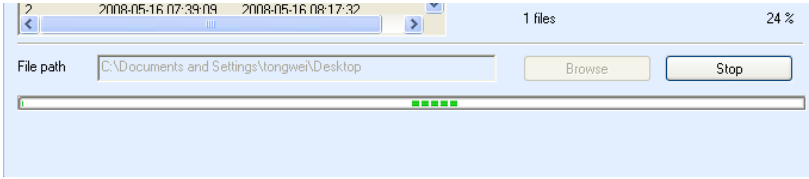
Fig 6.10 Remote Backup Interface

STEP1 Select the date, channel. Then click Search button. It will list all the files recorded in the day in left area.

STEP2 Click Browse button. Set the saving path.

STEP3 Select files in left file area. Holding shift button, you can select multi files with mouse simultaneously.

STEP4 Click Backup to do remote backup. It will show the process on the bottom of the screen as below.



***Notice**: the backup file is AVI format. Users can play with the third player directly.*

6.4 Remote Menu Configuration

Except network parameters, users can set all the parameters like resolution, schedule remotely through network, not going to the DVR. Click Setup to enter the interface as below.

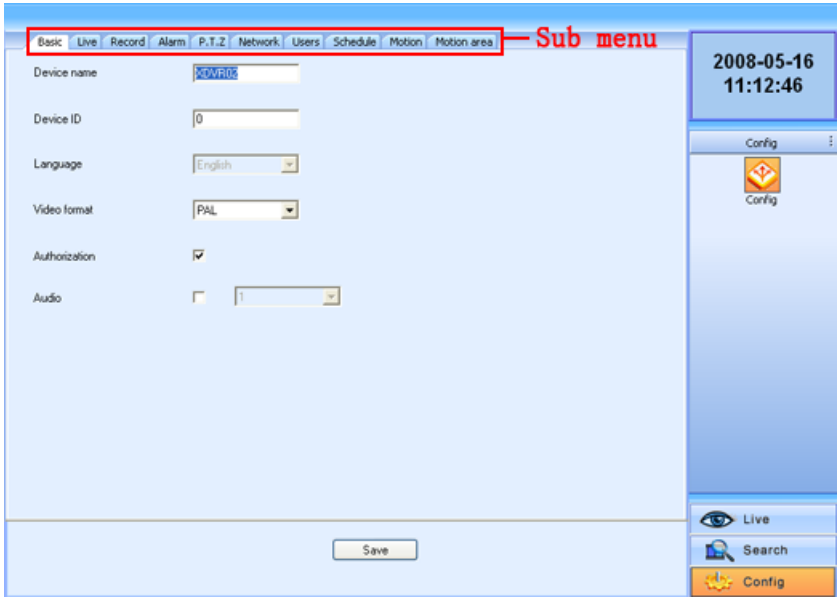


Fig 6.11 Remote Menu Setup

The sub menu lists and the options in every sub menu are similar with those on the DVR. Please refer to 4.2 Main Menu Setup to do setup.

Click Save to save the change. Some changes may pop up a dialog box as below and need restart.

6.5 Remote DVR Management

6.5.1 Check System Log Remotely

Users can check system log remotely. About the details of system log, please refer to Tab 5.1 Details of System Log.

STEP1 Click Search---->Log, the window below will appear. Event log search is the default interface.

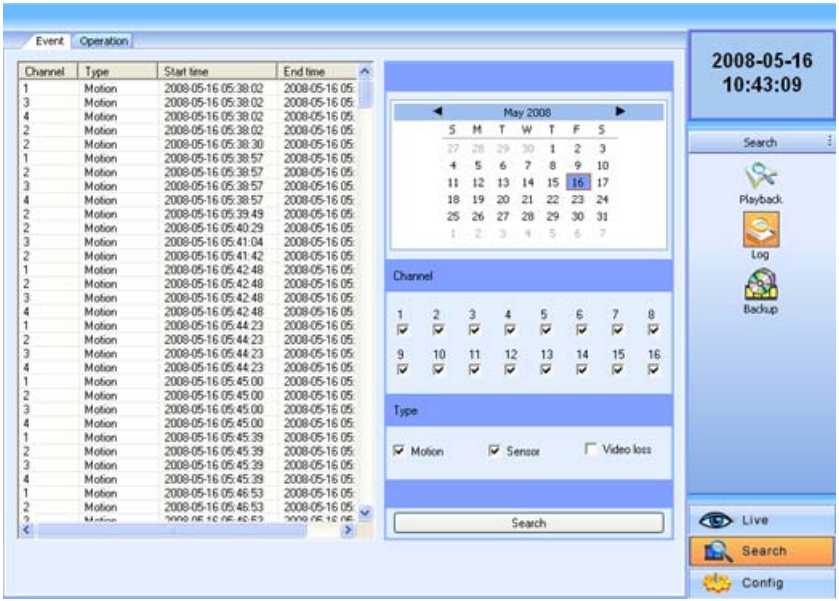


Fig 6.12 Remote System LOG Search

STEP2 Select the date, channel and event type. Then click Search.
STEP3 The entire log found will be listed in left area.
STEP4 Click Operation to enter operation Log search interface

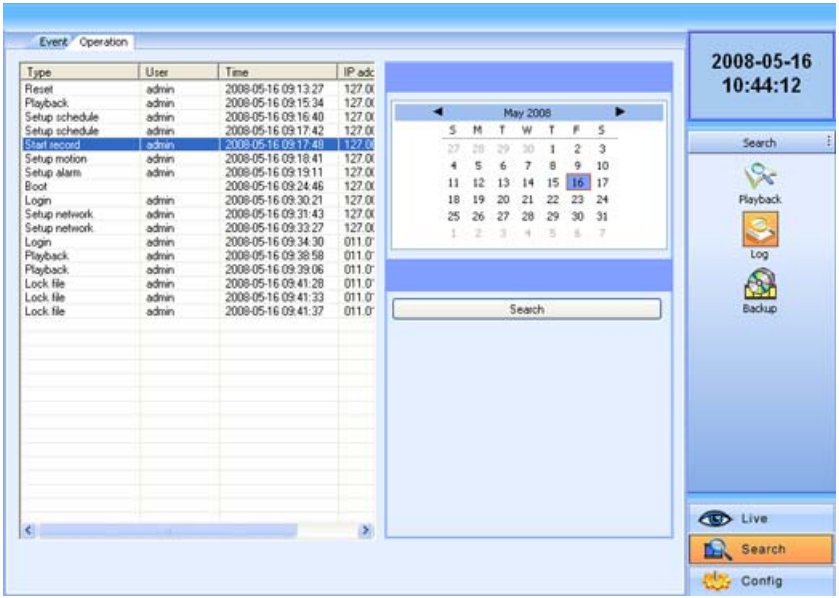


Fig 6.13 Remote Operation Log Search

STEP5 Select the date and click Search. It will list all the log files in the day in left area.

6.5.2 Lock &Delete Files Remotely

Users can lock and delete video files through network. About the details of this feature please refer to 5.7 Lock &Delete Files.

STEP1 Click Search---->Playback---->File manager, the window below will appear.

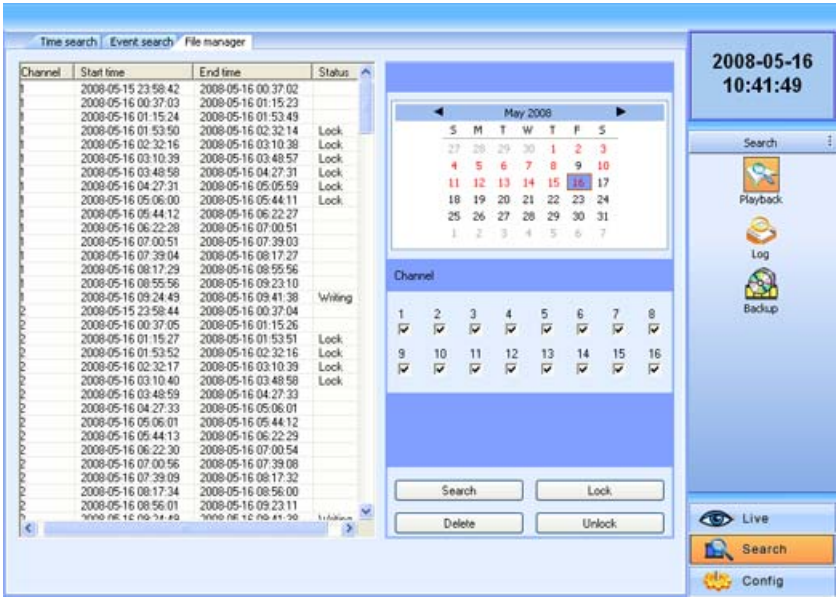


Fig 6.14 Remote File manager

STEP2 Select dates and channels, then click Search. All the files found will be listed in the day in left area.

STEP3 The relative status will show “Lock” if the file is locked. “Writing” means the file is still in being written.

STEP4 Select the files which is unlocked, click Delete. A security window will display to remind users. Click Ok to delete them.

Notice: *In all calendar search areas above, the date will be highlighted if there is data recorded.*

CHAPTER 7 Mobile Surveillance

This DVR supports mobile surveillance by PDA or smart phones with WinCE 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.

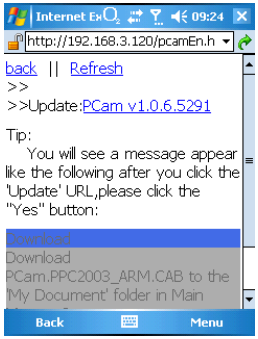
It wants to make mobile surveillance, need first enable network service on the DVR, referring to 4.2.7 Network Configuration. The below is the use instructions on mobile client end for two OS.

***Notice**: It supports only live view by mobile devices and on channel at a time.*

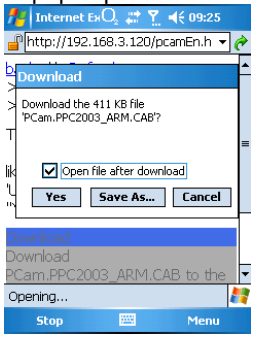
7.1 By Phones with WinCE

Please use the PDA or smart phones with WinCE version supported by this unit.

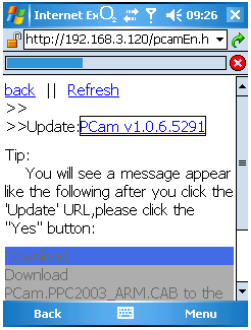
STEP1 Firstly, activate the network access on mobile phone. And then run “Internet Explorer”.
STEP2 Input the DVR server’s address and the connection is built up shown as below.



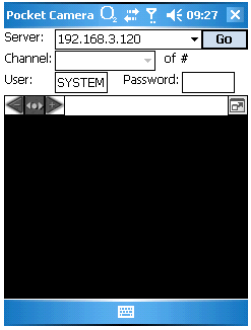
STEP3 Click on the software name. A dialog box pops up.



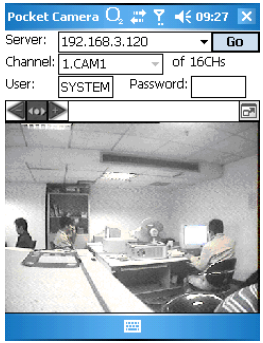
STEP4 Click “Yes” to download and install.



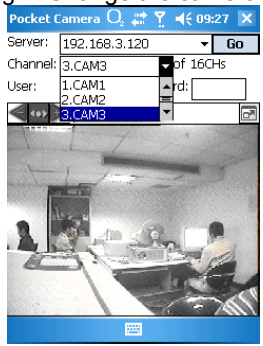
STEP5 PCam will be opened after installed.



STEP6 Input the server's address, ID and password respectively in the columns of "Server", "User" and "Password". And click "Go" to login the DVR. It will show the picture if access successfully.



STEP7 Camera1 is the default display after login. Change the camera in rolling-down menu of “Channel”.



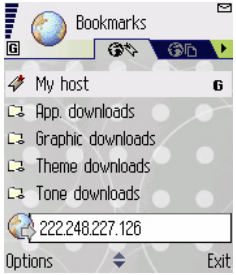
***Notice**: User name and password here are the same with that used on the DVR. The default are admin and 123456.*

7.2 By Phones with Symbian

Please use the smart phones with symbian version supported by this unit.

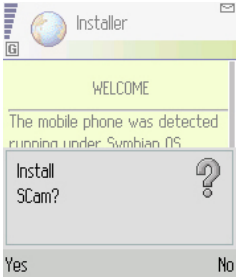
STEP1 Firstly, enable the network access on mobile phone. Then run Web browser.

STEP2 Input the DVR server's IP address in a new-built bookmark. Click this bookmark to connect to the DVR.

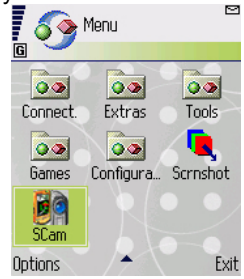


STEP3 A welcome window will pop up and requires a package. Click "**install package**" to download.

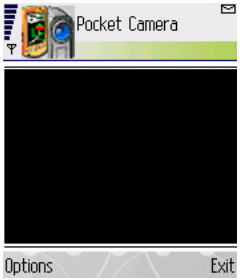
STEP4 The security windows will pop up after downloading and ask if install the package. Click YES to install.



STEP5 A Scam shortcut icon appears on the system menu after finish.

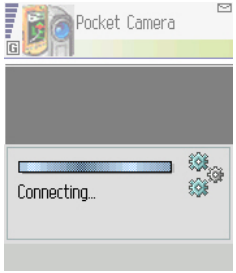


STEP6 Run Scam program.

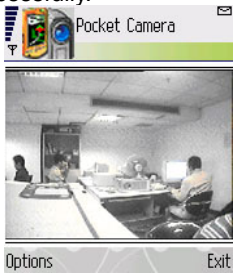


STEP7 Click Options--->Settings to enter login interface.

STEP8 Input the server's address, ID and password respectively. And click OK to login the DVR.



STEP9 It will show the camera after access successfully.



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

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. 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.

Q3. 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.

Q4. 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.

Q5. Cannot record

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

b. Don't enable record function or incorrect setup. Please refer to 3.3 Recording.

c. HDD is full and not enables recycle function. Please refer to 4.2.3 Record Configuration. Chang a new HDD or enable recycle.

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

Q6. Cannot use mouse.

a. wait 5 minutes after mouse connected.

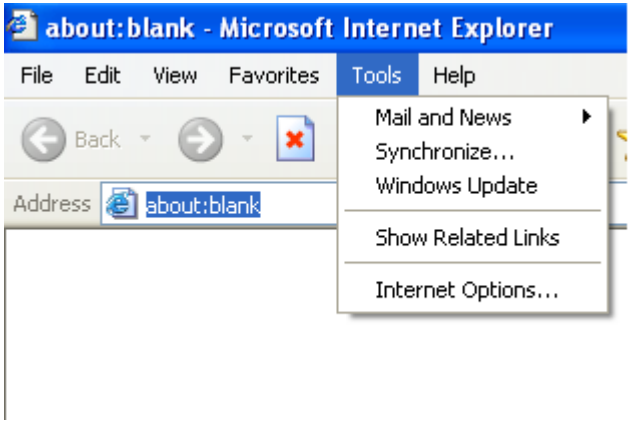
b. Not detected. Plug/unplug several times.

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

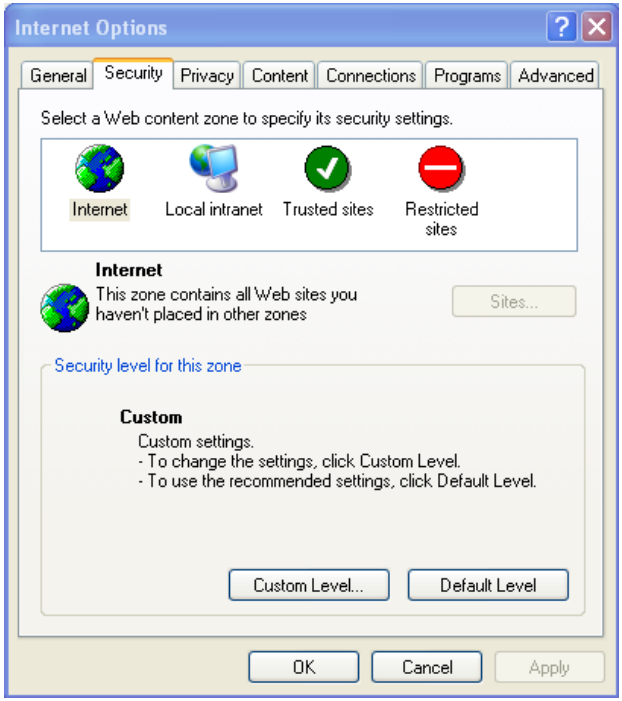
Q7. Cannot download ActiveX control.

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

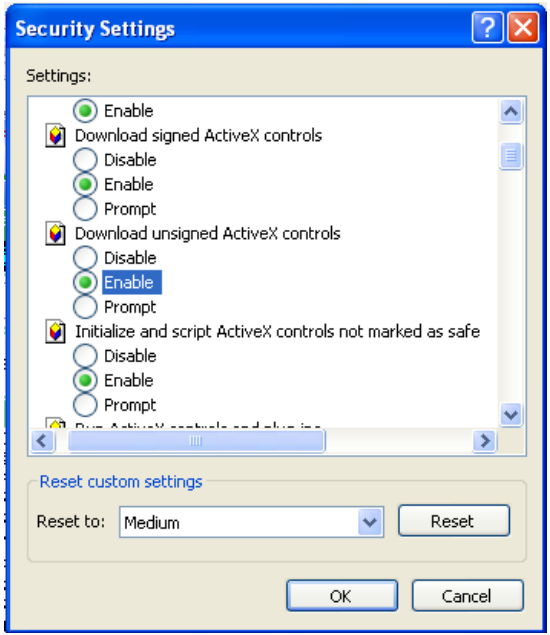
① Open IE browser. Click Tools-----Internet Options….



② select Security------Custom Level….



③ Enable all the sub options under “ActiveX controls and plug-ins”



④ Then click ok to finish setup.

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

Q8: 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

Q9: The mouse inserting into the front USB jack does not work

Hereby the front USB jack is only for backup of U disk, USB DVD writer etc., and not support USB mouse. Please use the USB jack in the rear panel if using mouse to operate.

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: How to upgrade when added new functions or revised software

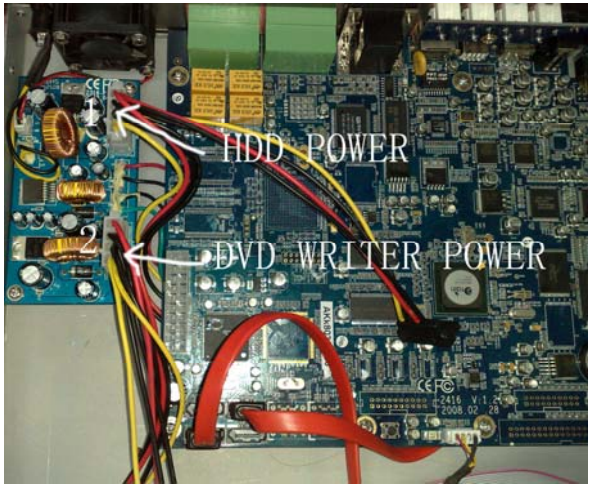
After getting the upgraded software from manufacturer, please copy it into U disk, and then select "*upgrade*" in the menu. If upgrading the kernel procedure, please refer to the following method: firstly insert U disk into DVR, and then input "adwsws" in the password of system login and the system will upgrade kernel procedure automatically. After finished, please restart DVR to achieve.

Notice: Do not power off in the system upgrading process! Otherwise, it may cause that DVR cannot start.

Q12: 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 DVRs, 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 DVRs into another one in case the data lose.

Q13: When users need to add a hard disk or DVD writer, please follow the connecting method shown below:



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.

Video Format	Resolution	Frame Rate Totally(FPS)	Video Quality	Bit Rate (kbps)	Used Space(MB/h)
PAL	CIF	25	Highest	640	281
			Higher	512	225
			Medium	384	168.7
			Lower	256	112.5
			Lowest	128	56
NTSC	CIF	15	Highest	314.9	141.7
			Higher	251.5	112.5
			Medium	188.3	84.7
			Lower	125.4	56.4
			Lowest	93.4	42

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 NTSC cameras, set resolution to CIF, video quality to Lower, frame rate to 240 fps for

enabling total 8 channels. He wants the unit to record continuously in a month. Below is the calculation:

Total Recoding capacity =56.4 (mb/h) X 24(hours/day) X30(days) X16(channels)

= 649728(MB)

≈650(GB)

Therefore, customers just install two SATA HDDs with 320GB, it can almost record for one month.

For 8-channel DVR, its recording capacity is half of the 16-channel.

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
Scandisk	4GB

Tab C.1 Compatible USB drive

2. Compatible SATA CD/DVD writers after test

Brand	Model
SAMSUNG	TS-H653B
LITEN-ON	DH-20A6S01C

Tab C.1 Compatible CD/DVD writers

Appendix D DVR Specifications(16-channel)

Compression format	Standard H.264 Baseline
Video output	Composite：1.0V p-p/75Ω，BNC×2 S-VIDEOX1, VGAX1
Video input	Composite：1.0V p-p/75Ω，BNC×16
Display Resolution	720*576 (PAL), 720*480 (NTSC)
Record Resolution	352*288 , 704*576 (PAL), 352*240 , 704*480 (NTSC)
Display Frame Rate	400FPS (PAL), 480FPS (NTSC)
Record Frame Rate	200FPS(CIF), 50FPS(D1) (PAL) ; 240FPS, 60FPS (NTSC)
Audio input	-8dB~ 22k, RCA X4
Audio output	-8Db~92dB, 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, USB2.0 x 2(one for backup, another for USB mouse), PS/2 x 1
Disk info	SATA x 2+DVD-RW x 1
Remote controller	YES
Power supply	12V 5A

Appendix E DVR Specifications(8-channel)

Compression format	Standard H.264 Baseline
Video output	Composite：1.0V p-p/75Ω，BNC×2 S-VIDEOX1, VGAX1
Video input	Composite：1.0V p-p/75Ω，BNC×8
Display Resolution	720*576 (PAL), 720*480 (NTSC)
Record Resolution	352*288 , 704*576 (PAL), 352*240 , 704*480 (NTSC)
Display Frame Rate	200FPS (PAL), 240FPS (NTSC)
Record Frame Rate	100FPS, 250FPS (PAL) ; 120FPS, 30FPS (NTSC)
Audio input	-8dB~ 22k, RCA X4
Audio output	-8Db~92dB, RCA X1
Alarm input	NO or NC 8CH
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, USB2.0 x 2(one for backup, another for USB mouse), PS/2 x 1,
Hard disk info	SATA x 2+DVD-RW x 1
Remote controller	YES
Power supply	12V 5A