The new DVR365 Digital Video Recorder

H264 Compression

Operations Manual

Version 4.1

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DVR365 H264

This Operations Manual is designed to be a reference tool for the installation and operation of your system. Here you can find information about this series DVR features and functions, as well as detailed menus.

Before installation and operation please read the following safeguards and warnings carefully!

Important Safeguards and Warnings

1. Electrical safety
Please ensure that the installation and operation of this equipment conforms to electrical safety standards.

2. Transportation security
Do not subject this equipment to vibration, water or damp conditions during transportation, storage and installation.

3. Installation
Install the unit in the upright position and always handle with care. Do not apply power to the DVR before completing installation. Do not place objects on the DVR or against the DVR that may restrict air circulation to the unit or cause overheating. We strongly recommend the use of a surge protection device as damage cause by electrical surges or lightning strikes are not covered under the warranty of this product.

4. Qualified engineers
All examination and repair work undertaken on this unit must be undertaken by qualified service engineers. We are not liable for any problems caused by unauthorised modifications.

5. Environment
The DVR must be installed in a cool, dry place away from direct sunlight, inflammable, explosive substances and not subjected to a dusty environment.

1 FEATURES AND SPECIFICATIONS

1.1 Features

This series DVR has the following features:
- H.264 compression algorithm
- Realtime live display up to 4, 8 or 16 cameras
  400 fps recording for CIF, 2CIF
  200 fps recording for 4CIF
- Pentaplex function: simultaneous live monitoring, recording, playback, backup & remote access
- Dual encoding streams support, providing flexible networking management
- Intelligent search and playback support, including a facility to play back motion detection video of only a selected area
- Maximum of 8 HDDs supported or 6 with a CD or DVD writer.
  Both CD-RW and DVD-RW formats are supported
- Multiple control methods: front panel, IR remote controller, USB mouse and via a network keyboard. Note that RS232 is available but is not supported.
- Smart video detection: motion detection, camera blank, video loss.
- Smart camera settings: privacy masking, camera lock, colour setting and title display.
- Pan Tilt Zoom and Speed Dome Control: more than 60 protocols supported, presets, scan, auto pan, tours, pattern and auxiliary function supported.
- Audio inputs on all channels
- Easy backup methods: USB devices, CD-RW/DVD-RW & network download
- Alarm triggering screen tips, buzzer, PTZ preset, e-mail, FTP upload.
- Smart Hard Drive Management: non-working HDDs in sleep mode, HDD faulty alarm function, Raid function.
- Powerful network software: built-in web server, DVR client & networking access for remote live viewing, recording, playback, settings, system status, event log, e-mail & ftp function.

1.2 Specifications

Model

DVR365 H264   4/8/16 channel audio/video basic model

System

Main Processor	High performance embedded microprocessor
Operating System	Embedded LINUX
System Resources	Pentaplex function: live, recording, playback, backup & remote access
User Interface	GUI, on-screen menu tips.
Control Device	Front panel, USB mouse, IR remote control, network keyboard.
Input Method	Numeral/Character/Denotation
System Status	HDD status, data stream statistics, log record, bios version, on-line user etc.

Video

Video Input	4/8/16 Channel, BNC, 1.0Vp-p, 75 Ω
Video Output	2 channel TV output BNC, 1.0Vp- p, 75Ω,1 VGA output
Video Standards	PAL（625Line, 50f/s）NTSC（525Line, 60f/s）
Video Compression	H.264

Video Resolution

Format	NTSC	PAL
D1(4CIF)	704 * 480	704 * 576
2CIF	704 * 240	704 * 288
CIF	352 * 240	352 * 288
QCIF	176 * 120	176 * 144

Video Recording	D1/2CIF/CIF/QCIF: PAL 1f/s-25f/s NTSC 1f/s-30f/s ;
Video Display Split	Full and multiple screen display, 1 / 4 / 8 / 9 / 16
Tour Display	Support
Image Quality	1~6 level(level 6 is the best quality)
Privacy Masking	Self-defined 4 sided zone for privacy masking for each camera
Camera Lock	Camera locked for users
Camera Adjustment	Adjust colour according to different time period
Video Information	Camera title, time, video loss, camera lock, motion detection recording
TV Output Adjustment	Adjust TV output colour & display zone

Audio

Audio Input	4/8/16 channel, BNC, 200-2800mV, 30KΩ
Bidirectional Audio Input	1 channel, BNC, 200-2800mV, 30KΩ
Audio Output	1 channel, BNC, 200-3000mv, 5KΩ
Audio Compression	ADPCM

Video Detection & Alarm

Motion Detection	Zones: 192 (16*12) detection zones
	Sensitivity: 1~6 (level 6 is highest)
	Trigger recording, PTZ movement, tour, alarm, e-mail & FTP
Video Loss	Trigger recording, PTZ movement, tour, alarm, e-mail & FTP

Camera masking	Trigger recording, PTZ movement, tour, alarm, e-mail & FTP
Alarm Input	4/8/16 channel, programmable, ground, manual open/closed
	Trigger recording, PTZ movement, tour, alarm, e-mail & FTP
Relay output	6 channel, 30VDC, 1A, NO/NC, form-C,

Hard Disk

Hard Disk	4 IDE ports, 8 HDDs supported.
Space Occupation	Audio : 14.4MB/H Video : 56～400MB/H
HDD Management	Hard disk hibernation technology, HDD faulty alarm & Raid (Redundancy)

Record, Playback & Backup

Recording Mode	Manual, continuous, video detection (including motion detection, camera masking, video loss), Alarm
Recording Priority	Manual >Alarm >Video Detection >Continuous.
Recording Interval	1 to 120 minutes (default: 60 minutes)
Overwrite Mode	Support
Raid Function	Support
Search Mode	Time/Date, Alarm, Motion Detection & exact search (accurate to one second)
Playback	1 channel playback simultaneously, Play, pause, stop, rewind, fast play, slow play, next file, previous file, next camera, previous camera, full screen, repeat, shuffle, backup selection.
Digital Zoom	Selected zone can zoom into full screen during playback
Backup Mode	Flash stick/ USB HDD/ USB CD-RW/DVD-RW/ built-in IDE Burner/ network download

Network

Interface	RJ-45 Port (10/100M)
Network Functions	TCP/IP, DHCP, DDNS, PPPOE, E-mail, FTP
Remote operation	Monitor, PTZ control, playback, system setting, file download, log information

Auxiliary Interface

USB Interface	2 ports, 1 for mouse control, 1 for backup.
RS232	PC communication – not supported
RS485	PTZ control

Environmental

Power Supply	220V 50Hz / 110V 60Hz
Power Consumption	25W/30W/40W
Working Temperature	0℃~＋55℃
Power Consumption	25W/30W/40W
Working Humidity	10%~90%
Atmosphere Pressure	86kpa~106kpa
Dimension	2U, 440mmx460mmx89mm (W*D*H)
Weight	7.0KG
Mounting	Desktop or rack

2 Overview and Controls

This section provides information about the front and rear panels. When you install this series DVR for the first time, please refer to this part first.

2.1 Front Panel

This series DVR has two different front panels. You can refer to Figure 2-1 and Figure 2-2.
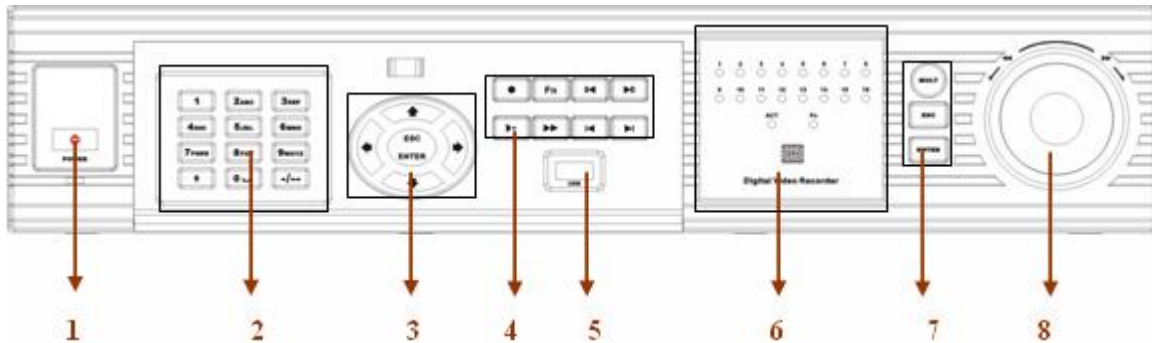

Figure 2-1

S/N	Name	Icon	Function
1	Power button	POWER	Power button, press this button for three seconds to shut down DVR.
	Power indication light		Power indication light
2	Shift	↑	In monitoring mode, press this button for three seconds, you can switch between TV/VGA output (HD1 series DVR has three modes LTV/VGA/60Hz LCD)
			In textbox, click this button to switch between numeric, alpha (lower case Or upper case).
			Open/close tour
	numeral keys 0-9	0-9	Input password, switch channel and input numerics.
	Input numeral more than10	-/--	When you need to input numeral more than 9. You can follow the steps below, click the first key number and then the next. For example, input 123, click numeral 1 and then click 2 and 3 simultaneously.
3	Up/down	▲、▼	Activate current control, modify setup, increase/decrease numerals, assistant function such as PTZ menu.
	Left/right	◄、►	shift current activated control, When playback, click these buttons to control playback bar.
	ESC	ESC	Close upper interface or controls.
	Enter	ENTER	confirm operation
			Go to default button

8

			Go to main menu
4	Record	●	Manually stop/start recording, working with direction keys or numeric keys,
	Slow play	�	Multiple slow play speeds or normal playback
	Assistant	Fn	One-window monitor mode, click this button to display assistant function: PTZ control and image colour. In PTZ menu, shift PTZ control menu.
			Backspace function: in numeral control or text control, it can delete the previous character before the cursor.
			In motion detection setup, working with Fn and direction keys to setup detection areas.
			In HDD information menu, switch between HDD record time or other information(Menu prompt)
			Access other special functions
	Fast play	▶▶	Various fast speeds and normal playback.
	Play previous	◀❙	In playback mode, playback the previous video In menu setup, go to upper section of the dropdown list.
	Reverse/Pause	❚❚ ◀	In normal playback or pause mode, click this button to reverse playback In reverse playback, click this button to pause playback.
	Play Next	▶❙	In playback mode, playback the next video In menu setup, go to bottom of the dropdown list.
	Play/Pause	▶ ❚❚	Reverse playback or pause mode, click this button to revert to normal playback In normal playback click this button to pause playback In pause mode, click this button to resume playback
			In real-time monitor mode, click this button to enter video search menu.
5	USB port		To connect USB storage device, USB mouse or USB CD-ROM
6	Channel indication light		When DVR is recording this lamp turns on.
	Standby indication light		When DVR is in standby, this lamp turns on.
	Remote control signal receiver		To receive signals from remote control
	Function indication light		

|	Window switch	MULT	Switch between one-window and multiple-window display modes.
7	Enter	ENTER	confirm current operation
			go to default button
			Go to main menu
	Cancel	ESC	Close upper interface or controls.
8	Shuttle(outer ring)		In real-time monitor mode it works as left/right direction key. Playback mode, anti-clockwise to go forward and clockwise to go backward.
	Jog(inner dial)		Up/down direction key. Playback mode, turn the inner dial to revert to frame by frame playback. (only applies to some versions.)
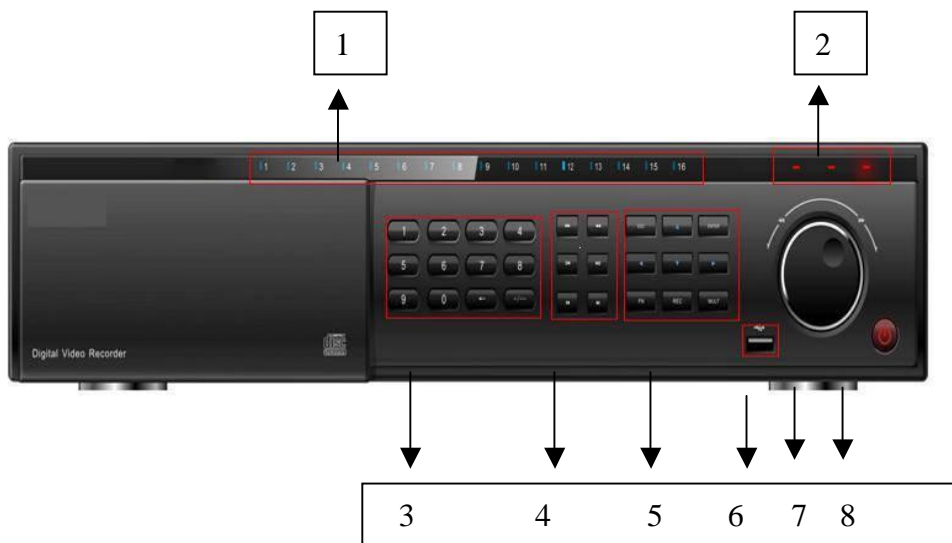
Figure 2-2

S/N	Name	Icon	Function
1	Channel indication light		When DVR is recording this lamp turns on. Power button, press this button for three seconds to shut down DVR.
2	Standby indication light		When DVR is in standby, this lamp turns on.
	Remote control signal receiver		To receive signals from remote control
	Function indication light		
3	Shift	←	In monitoring mode, press this button for three seconds, you can switch between TV/VGA output (HD1 series DVR has three modesLTV/VGA/60Hz LCD)

			In textbox, click this button to switch between numerics, alpha upper case and alpha lower case.
			Open/close tour
	numeric keys 0-9	0-9	Input password, switch channel and input numeral.
	Input numeral more than10	-/--	When you need to input numeral more than 9. You can follow the steps below, click the first key number and then the next. For example, input 123, click numeral 1 and then click 2 and 3 simultaneously.
4	Slow play	▐►	Multiple slow play speeds or normal playback
	Fast play	▸▸	Various fast speeds and normal playback.
	Play previous	◂▐	In playback mode, playback the previous video file In menu setup, go to top of the dropdown list.
	Reverse/Pause	▐▐ ◂	In normal playback or pause mode, click this button to reverse playback In reverse playback, click this button to pause playback.
	Play Next	▸▐	In playback mode, playback the next video file In menu setup, go to bottom of the dropdown list.
	Play/Pause	▸ ▐▐	Reverse playback or paused mode, click this button to revert to normal playback In normal playback click this button to pause playback In pause mode, click this button to resume playback
			In real-time monitor mode, click this button to enter video search menu
5	Up/down	▲、▼	Activate current control, modify setup, increase/decrease numeral, assistant function such as PTZ menu.
	Left/right	◂、▶	shift current activated control, When playback, click these buttons to control playback bar.
	Cancel	ESC	Close upper interface or controls.
	Enter	ENTER	confirm operation
			Go to default button
			Go to main menu
	Record	●	Manually stop/start recording, working with direction keys or numeral keys.
	Window switch	MULT	Switch between one-window and multiple-window display modes.
	Assistant	Fn	One-window monitor mode, click this button to display assistant function: PTZ control and image colour. In PTZ menu, shift PTZ control menu.

			Backspace function: in numeral control or text control, it can delete the previous character before the cursor.
			In motion detection setup, working with Fn and direction keys to setup detection areas.
			In HDD information menu, switch between HDD record time or other information(Menu prompt)
			Select other special functions
6	USB port		. To connect USB storage device, USB mouse or USB CD-ROM
7	Shuttle(outer ring)		In real-time monitor mode it works as left/right direction key. Playback mode, anti-clockwise to go forwards and clockwise to go backwards
	Jog(inner dial)		Up/down direction key. Playback mode, turn the inner dial to revert to frame by frame playback. (only applies to some versions.)
8	Power button	POWER	Power button, press this button for three seconds to shut down DVR.
	Power indication light		Power indication light

Note:

Turn shuttle (outer ring) clockwise for right and anti-clockwise for left.

Turn jog (Inner dial) clockwise for down and anti-clockwise for up.

2.2Rear Panel

2.2.1 Overview
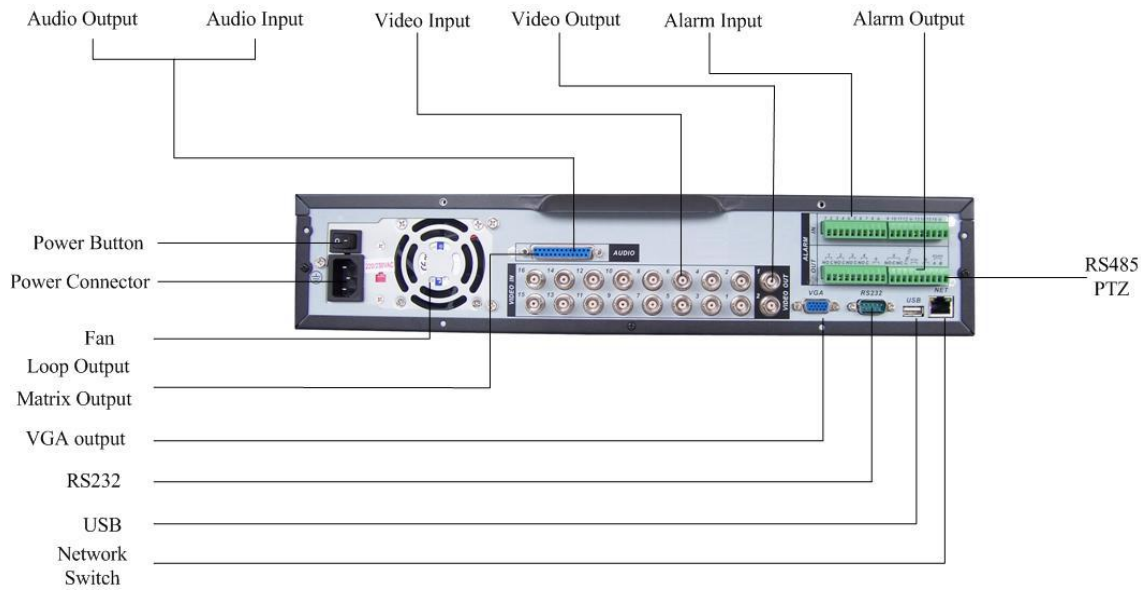Please refer to Figure 2-3 for real panel information.
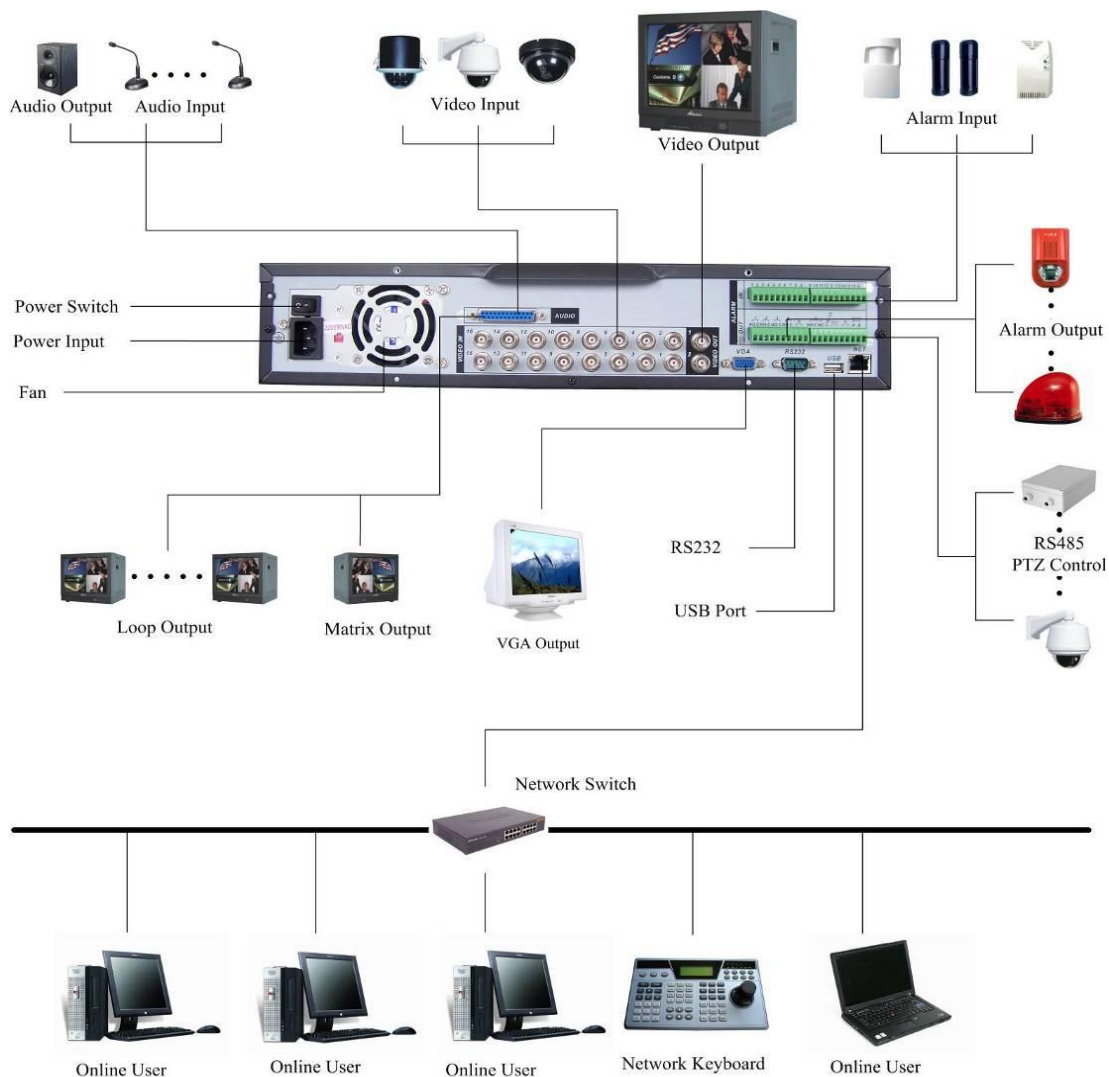

Figure 2-3

2.2.2　Connection Sample

Figure 2-4

2.3 Remote Control
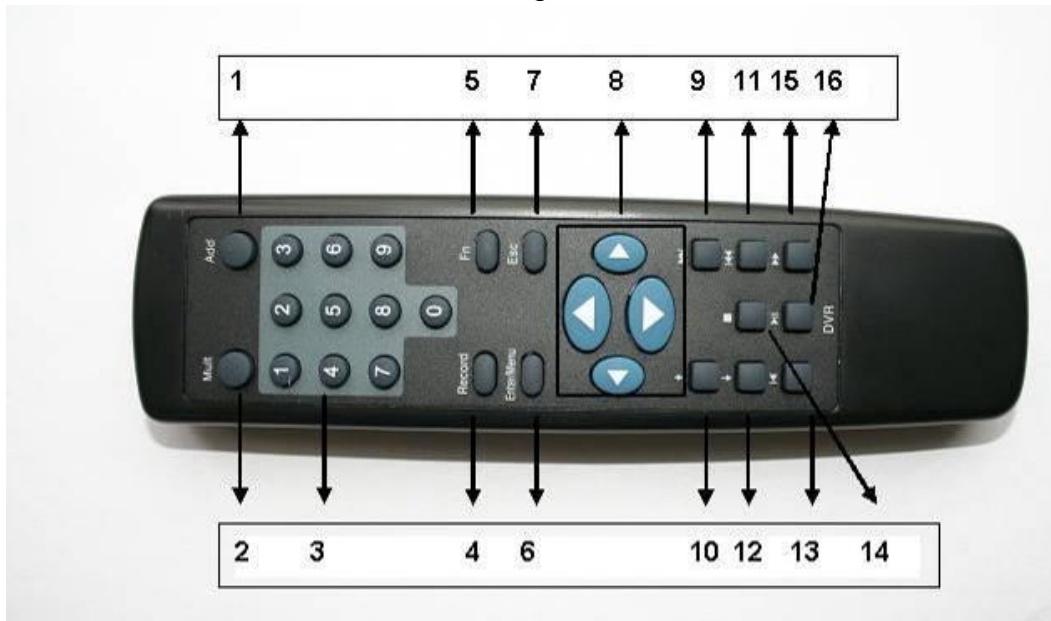
The remote control interface is shown as in Figure 2-5.

Figure 2-5

Serial Number	Function
1	Add button
2	Multiple-window switch
3	0-9 number key
4	Record
5	Auxiliary key
6	Confirm /menu key
7	Cancel
8	Direction key
9	Forward
10	Previous
11	Back
12	Next
13	Slow play
14	Stop
15	Fast play
16	Play/Pause

2.4 Mouse Control

Left click mouse	When not logged in	Pop up password input screen
	Real-time surveillance mode	Enter the main menu
	In menu selection mode	Enter the select item
	In combo box	Pop up pull down list
	Click number box or pass word box	Select number keyboard or character keyboard

\> : From lower case to upper case
< : From upper case to lower case
X: Delete all
√: Confirm the current value and close current panel

Double left click mouse	Implement current selection	Such as double click one file name to playback the video
	Monitoring mode:	In single mode: change to multiple window monitoring mode
		In multiple window mode: double click one video channel to change to full-screen display mode
Right click mouse	Minitoring mode	Pop up short cut menu
	In menu setting	Exit current menu without saving the settings
Press middle button	In number box	Increase or decrease number
	In combo box	Change selection
	In menu screen	Move cursor
	In list box	Move up and down
Move mouse	Select current controls	
Drag mouse	Select area	
	In PTZ menu	Click item to move menu

2.5 Virtual Keyboard & Front Panel

2.5.1 Virtual Keyboard

The system supports two input methods: numerics and alpha in lower and upper case.

Move the cursor to the text column; the text is shown as blue, input button pops up on the right.

Click that button to switch between numeric input and alpha lower or upper case or use > or < to shift between lower and upper case characters.

2.5.2 Front Panel

Move the cursor to the text column. Click Fn key and use direction keys to select number you require. Please click enter button to input.

3 Installation and Connections

3.1 Check DVR

Please check that you have the required cables and connectors to install the unit..

3.2 HDD Installation

3.2.1 Choose HDDs

We recommend Samsung or Hitatchi HDDs of 7200rpm or higher.

3.2.2 Calculate HDD Size

This series has no limit to HDD capacity. You can use 80Gb -750Gb HDDs.

The formula to calculate HDD size is:

Total Capacity (MB) = No. of Channels * Recording Hours * HDD Usage Per Hour (M/h)

H.264 compression is ideal for standalone DVRs. It can save more than 30% HDD capacity compared with MPEG4. When you calculate the total HD capacity, you should estimate the average HDD capacity per hour for each channel.

For example, for a 4-ch DVR, the average capacity of HDD usage per hour per channel is 200M/h. So if you wanted the DVR to record video 12 hours each day for 30 days, the total capacity of HDDs needed is: 4 channels * 30 days * 12 hours * 200 M/h = 288Gb. So you need to install one 300Gb HDD or 2 x 160Gb HDDs.

3.2.3 HDD Installation

Data ribbons, fastening screws and fittings are provided in the accessories.

Note: please pay attention to HDD jumper setting:

- If you just need to install one HDD, you can set the HDD to MASTER.
- If you install two HDDs to one IDE port, you need to set the farther one as MASTER and the other as SLAVE. Please don't set HDD as CS Enable or Cap Limit.

Please follow the instructions below to install hard disk.

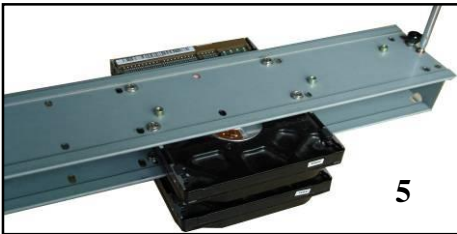1. Remove the upper cover of the DVR

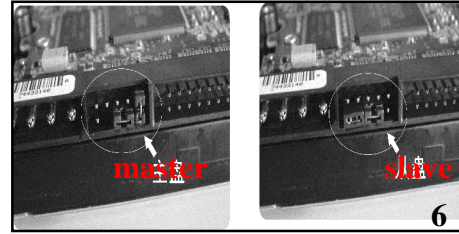2. Remove the HDD bracket from internal unit

3

3. Dismantle the upper HDD bracket

4

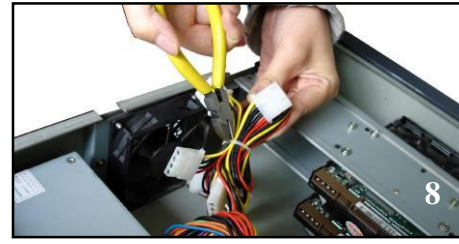4. Install the HDD. Note the HDD is placed   upside down. Please make sure bracket is in correct position.

5

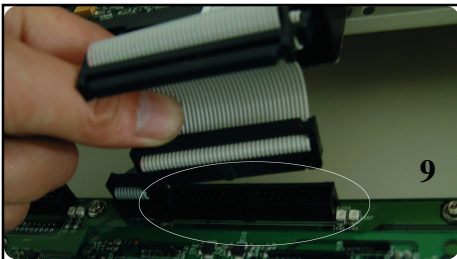5. Screw the two bracket parts together

master   slave

6

6. Set master/slave on the HDD

7

7. Fix the HDD bracket into the internal unit

8

8. Loosen the power cords for the HDD

9

9. Connect the HDD with IDE port through data communication cable

1 10
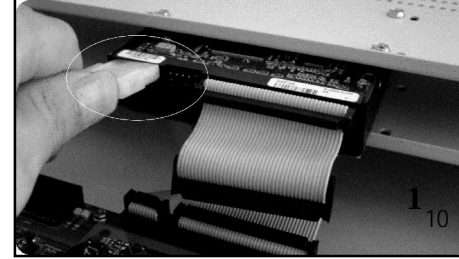
10. Connect power cord to the   HDD.

11

11. Place the upper cover back   and screw firmly

12

12. Connect USB devices (USB mouse, USB portable hard drive, USB CD-RW) to the USB port directly

After HDD installation, please check connection of data ribbon and power cord.

3.3 CD/DVD Burner Installation

For built-in burner, you need to dismantle front plate to install CD burner. This built-in burner should be set as MASTER.

For USB burners, you need to install USB series burner.

This series DVR is compatible with various popular brands of burners but due to the wide variety available on the market, there are some that are not compatible. Consult your local supplier for advice. in today's market.

3.4 Desktop and Rack Mounting

3.4.1 Desktop Mounting

To prevent surface damage, please make sure that the rubber feet are securely installed on the four corners of the bottom of the unit. Position the unit to allow for cable and power cord clearance at the rear of the unit. Be sure that the airflow around the unit is not obstructed.

3.4.2 Rack Mounting

The DVR occupies two rack units of vertical rack space.

The hardware necessary to mount the DVR into a rack is supplied with the unit.

Rear doors may be used only on rack columns that are more than 26 inches (66.0 cm) deep.

Install the cabinet in a ventilated place. Avoid extreme heat, humid or dusty conditions. You should regularly clean opening outlet and cooling fan with a soft dry brush.

3.5 Connecting Power Supply

Please check input voltage and device power requirements match before connecting to supply.

We recommend you use UPS to guarantee stable operation, DVR life span, and other peripheral equipment such as cameras.

3.6 Connecting Video Input and Output Devices

3.6.1 Connecting Video Input

The DVR automatically detects the video standard (PAL or NTSC) whenever you connect a video input. It accepts both colour and black-and-white and analog video.

NOTE:

● Enabling line lock on cameras may cause video distortion. There may be noise in the camera's power source. If video from one or more cameras is distorted, we recommend you disable line lock on the camera as your first troubleshooting step.

● If a video distribution amplifier is installed between the video source and the DVR, do not set the output video level above 1 Vp-p.

To connect each video input:

1. Connect a coaxial cable to the camera or other analog video source.

2. Connect the coaxial cable to the video in connector on the rear panel.

Please refer to Figure 3-1 for more information.

Figure 3-1

3.6.2 Connecting Video Output

This section provides information about physically connecting video display devices to the DVR. See Figure 3-2.

If you connect the DVR with a TV monitor or VGA monitor, the DVR can automatically detect the monitor type. Without any output device, by default, the DVR is configured to use a TV monitor. In this case, if your application requires a VGA monitor, you have to press the button "FN" or Shift on the front panel.

NOTE:

Video output 1 and VGA can't display at the same time. But Video output 2 can display properly with Video Output 1 or VGA.
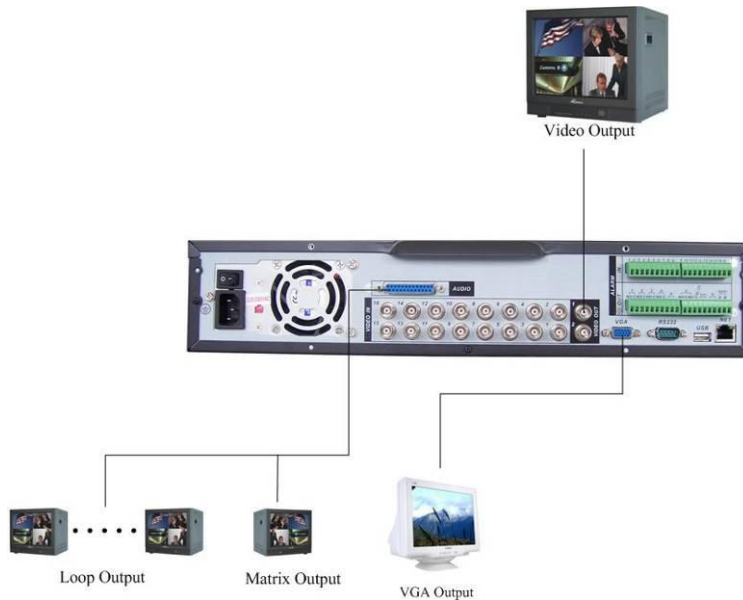

Figure 3-2

3.7 Connecting Audio Input & Output

The DVR365 4/8/16 way machines use a 25-pin D-plug interface and come with a universal 16 way audio and 1 audio output connector lead. The 4/8 way models only utilise the relevant live channels. .
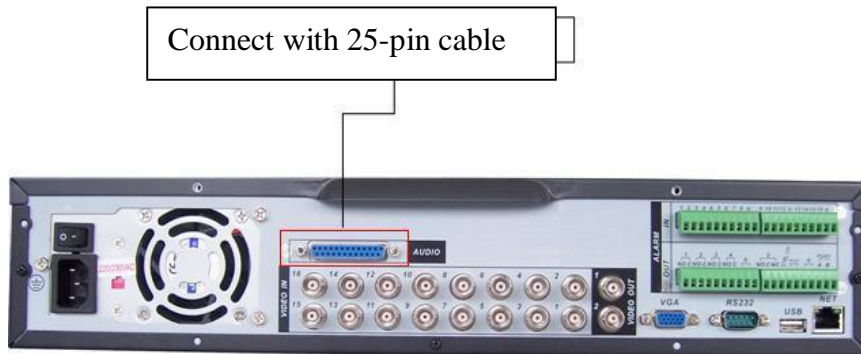

Figure 3-3

3.7.1   Audio Input/One Audio Output

The DVR encodes audio and video signals simultaneously, which lets you control audio at the monitored location.

To set up audio:

1. Make sure your audio input device matches the RCA input level. If the device and RCA input levels do not match, audio distortion problems may occur.

2. Make sure the audio connector is wired as follows:

3. Connect a line input device or pre-amplified microphone to the audio connector for the video channel on the rear panel.

Please refer to Figure 3-4.

Figure 3-4

3.7.2 Alarm Input and Relay Output

The DVR offers 16 alarm inputs for external signaling devices, such as door contacts or motion detectors. Each alarm input can be either normally open or normally closed. Once configured, an alarm input can invoke many different activities, including triggering a relay device, sending an alert to a security office or storing pre-alarm video to the DVR.

3.7.3 Alarm Input

You should check your alarm input mode is grounding alarm input or not.

For this series DVR, grounding signal is needed for alarm input.

If you need to connect two units or one DVR and other device, please use relay to separate them.

Please refer to Figure 3-5 for more information.

Figure 3-5

3.7.4 Alarm Output

Do not connect alarm output port directly with high power load (no more than 1 A) in case of heavy current.
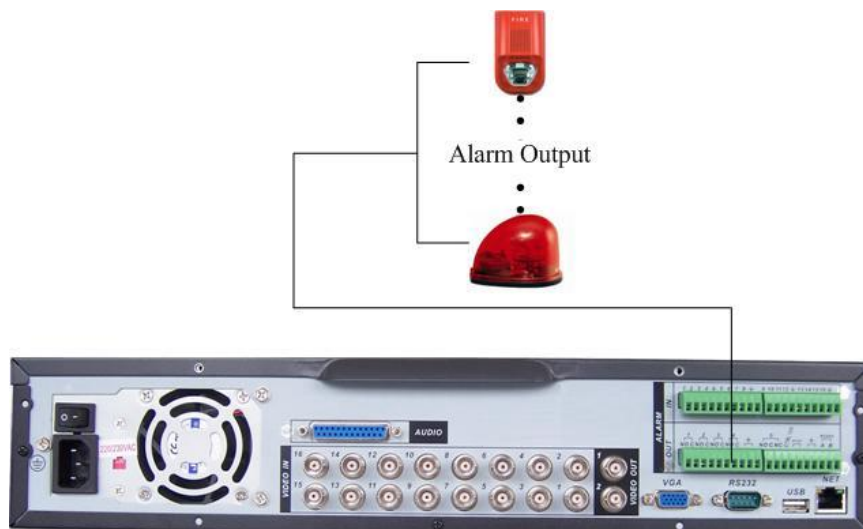

Figure 3-6

3.7.5   Alarm Input and Output Details

You can refer to the following sheet and Figure 3-7 for alarm input and output information.

Parameter	Grounding Alarm
Ground	Ground line
Alarm Input	1, 2, …, 16
Relay Output	1,2,3,4: NO and C(Normally Open and Com) 5: NO,C and NC(Normally Open, Com, Normally Closed) 6: Ctrl 12V(This is used for resetting the sensor)
485 A、B	485 communication port. They are used to control devices such as PTZ.
+12（C）	This should input an external power input.

● 4/8/16-ch grounding alarm inputs. (Normal open or Normal close type)

● Please parallel connect COM end and GND end of the alarm detector (Provide external power to the alarm detector).

● Please parallel connect the Ground of the DVR and the ground of the alarm detector.

● Please connect the NC port of the alarm sensor to the DVR alarm input(ALARM)

● If you need to reset the alarm remotely, you can use DVR to supply controllable 12 V power to the alarm detector such as a smoke detector.

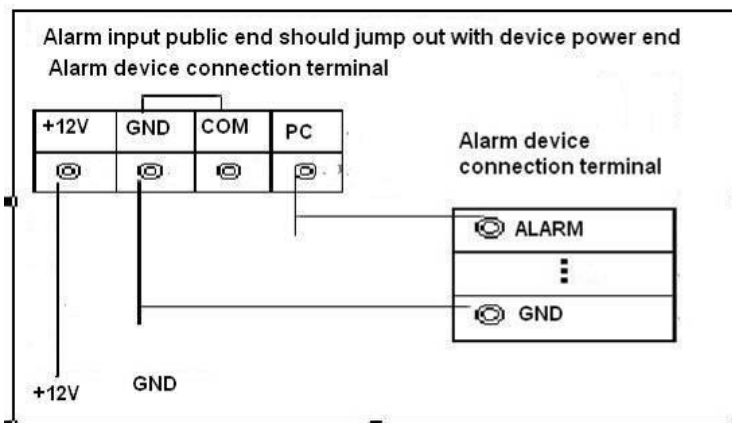● Use the same ground with that of DVR if you use external power to the alarm device.

Figure 3-7

3.7.6   Relay Output Description

● 6 way relay alarm output. Provide external power to external alarm device.

● To avoid over loading, please read the following relay parameters sheet carefully. (See table below)

● The controllable +12v can be used to reset the smoke detector.

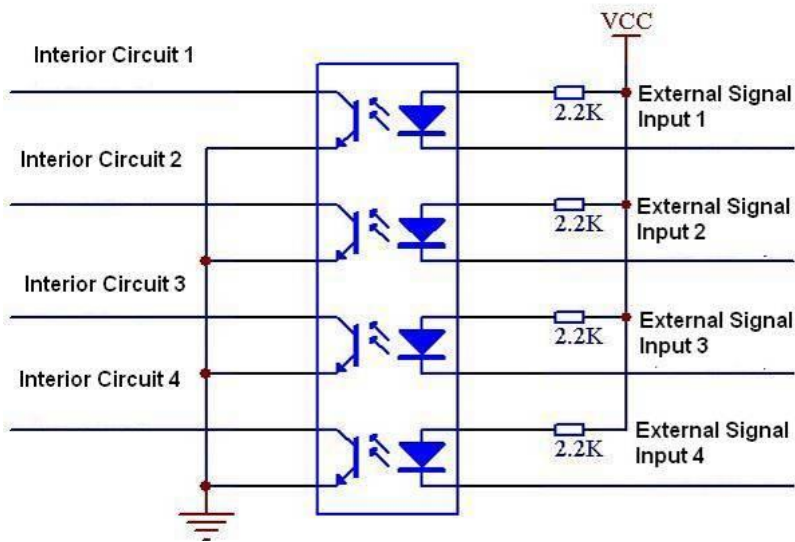Please refer to Figure 3-9 for alarm input module information.

Figure 3-9

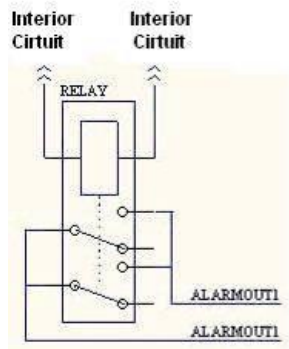Please refer to Figure 3-10 for alarm output module information.

Figure 3-10

3.8 RS232

This unit can use an RS232 interface but is not supported.

3.9 RS485

When the DVR receives a camera control command, it transmits that command up the coaxial cable to the PTZ device. RS485 is a single-direction protocol; the PTZ
device can't return any data to the unit. To enable the operation, connect the PTZ device to the RS485(A,B) input on the DVR. Since RS485 is disabled by default for each camera, you must enable the PTZ settings first. This series DVR supports multiple protocols such as Pelco-D, Pelco-P.
To connect PTZ devices to the DVR:
1. Connect RS485 A,B on the DVR rear panel.
2. Connect the other end of the cable to the relevant pins in the connector on the camera.
3. Follow the instructions for configuring a camera to enable each PTZ device on the DVR.

3.10 Other Interfaces

There are still other interfaces on the DVR, such as USB ports. You can refer to Figure 3-11 for more information.
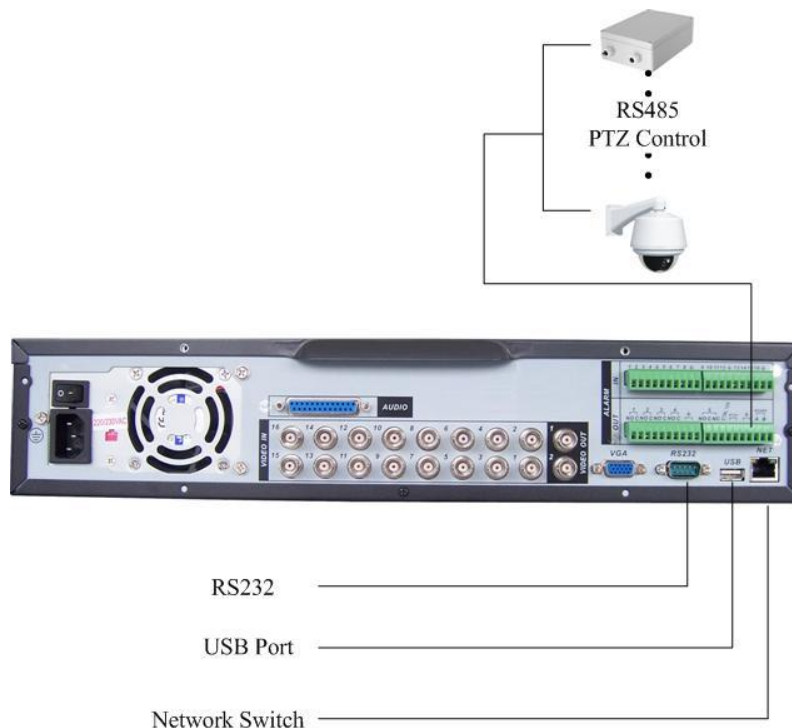

Figure 3-11

4 Overview of Navigation and Controls

Before operation, please make sure you have properly installed HDDs and all the cable connections.

4.1 Login, Logout & Main Menu

4.1.1   Login

When the system boots up, default video displays in multiple-window mode.
Click Enter or left click mouse to see the login interface. See Figure 4-1.
System consists of four accounts:

- Username: admin. Password: admin. (administrator, local and network)
- Username: 888888. Password: 888888. (administrator, local only)
- Username: 666666. Passwords: 666666(Lower authority user who can only monitor, playback, backup and etc.)
- Username: default. Password: default(hidden user)

For your system security, please modify you password after first login.
You can use USB mouse, front panel, remote controller or keyboard to input. About input

method: Click 123 to switch between numerals, alpha lower case and alpha upper case.

Note: Entering incorrect password three times within 30 minutes will result in a DVR lock.

Figure 4-1

4.1.2   Main Menu

When you login, the system main menu is shown below. See Figure 4-2.
There are total six icons: search, information, setting, backup, advanced and shutdown. Move the cursor to highlight the icon, then double click mouse to enter the sub-menu.
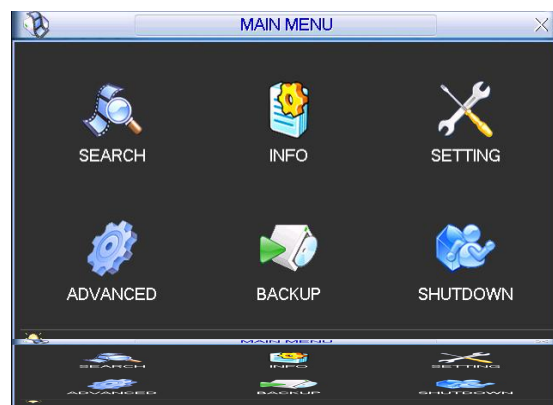

Figure 4-2

4.1.3　Logout

There are two ways for you to log out.

One is from menu option:

In the main menu, click shutdown button, you can see menu shown below. See Figure 4-3.
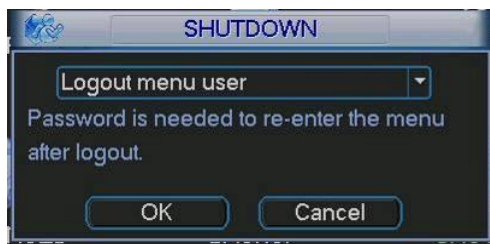

Figure 4-3

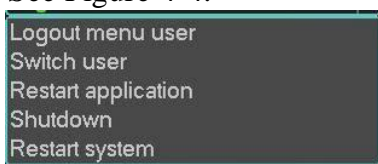There are several options for you. See Figure 4-4.

Figure 4-4

The other way is to press power button on the front panel for at least 3 seconds, system will stop all operations. Then you can click the power button in the rear panel to turn off the DVR.

4.1.4　Auto Resume after Power Failure

The system can automatically backup video and resume previous working status after a power failure.

4.1.5　Replace Button Battery

Please make sure to use the same battery model if possible.

We recommend replacing battery regularly (such as each year) to guarantee system time accuracy.

4.2 Recording Operation

4.2.1　Live Viewing

When you login, the system is in live monitoring mode. You can see system date, time and channel name. If you want to change system date and time, you can refer to general settings (Main Menu->Setting->General). If you want to change the channel name, please refer to the display settings (Main Menu->Setting->Display)

1		Recording status	3		Video loss	**Note: Please refer to the followi**
2		Motion detection	4		Camera lock	

ng for channel status. stands for open switch function and stands for closed switch function.

4.2.2   Manual record

Note:

You need to have proper rights to implement the following operations. Please make sure the HDDs have been properly installed.

4.2.2.1 Manual record menu

There are two ways for you to go to manual record menu.
- Right click mouse or in the main menu, Advanced->Manual Record.
- In live viewing mode, click record button on the front panel or record button on the remote control.

Manual record menu is shown as in Figure 4-5.

4.2.2.2 Basic operation

There are three statuses: schedule/manual/stop. Highlight icon "○" to select corresponding channel.
- Manual: the highest priority. After manual setup, all selected channels will begin ordinary recording.
- Schedule: channel records as you have set in recording setup (Main Menu->Setting->Schedule)
- Stop: all channels stop recording.

Figure 4-5

4.2.2.3 Enable/disable record

Please check current channel status: "○" means it is not in recording status, "●" filled in circle means it is in recording mode.

You can use mouse or direction key to highlight channel number. See Figure 4-6.

Figure 4-6

4.2.2.4 Enable all channel recording

Highlight ○ below All, you can enable all channel recording.
- All channel schedule record

Please highlight "ALL" after "Schedule". See Figure 4-7.

When system is in schedule recording, all channels will record and will set schedule menu (Main menu->Setting->Schedule).

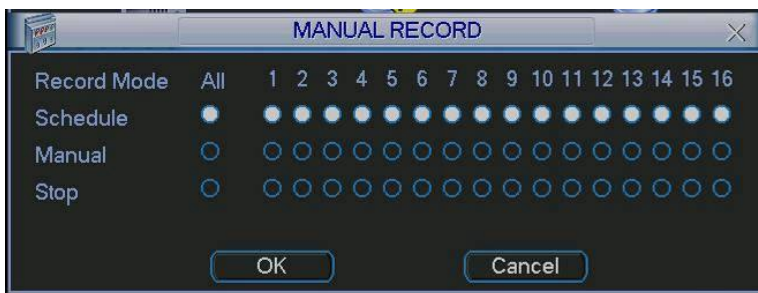The corresponding indicator lights on front panel will turn on.

Figure 4-7

● All channel manual record

Please highlight "ALL" after "Manual." See Figure 4-8.

When system is in manual recording, all schedule settings will be cleared in schedule menu.(Main menu->Setting->Schedule).

You will see indicator light on front panel turn on and system starts in manual record mode.
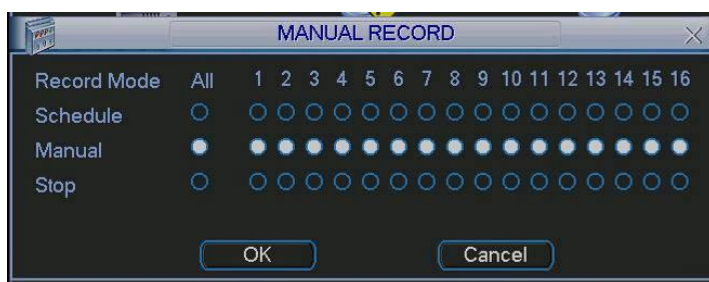

Figure 4-8

4.2.2.5 Stop all channel recording

Please highlight "ALL" after "Stop". See Figure 4-9.

System stops all channel recording no matter what mode you have set in the menu (Main menu->Setting->Schedule)
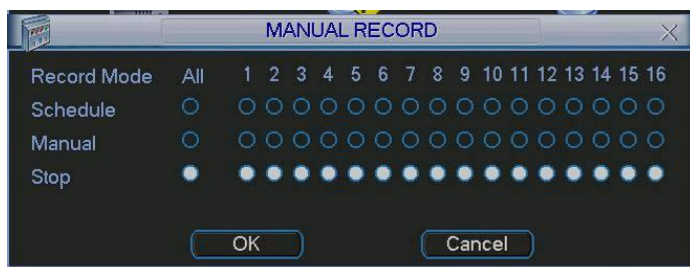

Figure 4-9

4.3 Search & Playback

4.3.1 Search Menu

There are two ways for you to enter the Search Menu.
- Click Pause/Play button in the remote control.
- Click search in the main menu.

Search display is shown as below. See Figure 4-10.

Usually there are three file types:
- R: regular recording file.
- A: external alarm recording file.
- M: motion detection recording file
- C: card and pos test overlay recording file(For special series only)

There are several playback windows. System supports 1/2/4/16-ch playback.
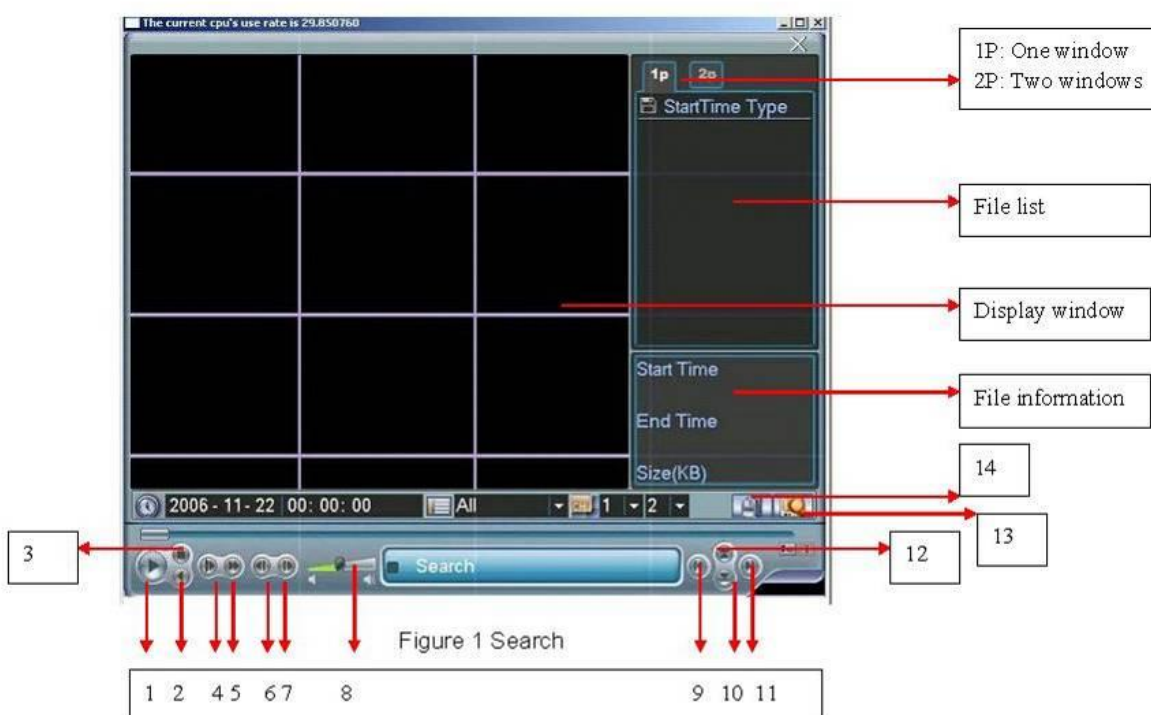
Figure 4-10

1.	PLAY	2.	BACKWARD	3.	STOP
4.	SLOW PLAY	5.	FAST PLAY	6.	PREVIOUS FRAME
7.	NEXT FRAME	8.	VOLUME	9.	PREVIOUS FILE
10.	NEXT CHANNEL	11.	NEXT FILE	12.	PREVIOUS CHANNEL
13.	SEARCH	14.	BACKUP		

4.3.2   Basic Operation
4.3.2.1 Playback

There are various search modes: video type, channel number or time. The system can display a maximum of 32 files on one screen. You can use up/down button to turn page.
Select the file name and double click mouse (or click enter button). You can then view file content.

4.3.2.2 Timed playback

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

4.3.2.3 Synchronized playback function across streams during playback

During playback process, click a stream number and system will switch to the corresponding channel video of the same time.

4.3.2.4 Digital zoom

When the system is in full-screen playback mode, drag your mouse across the screen to select a section and then left click mouse to select digital zoom. You can right click mouse to exit.

4.3.2.5 File backup

System supports a backup operation during search. If you enter a √ before file name (multiple choices) and then click backup button (Button 14 in Figure 4-10).

4.3.2.6 Slow playback and fast playback

Please refer to the following details about for slow and fast playback functions.

Button	Illustration	Remarks
Fast play button ▶▶	In playback mode, click this button to switch between various fast play modes such as fast play 1,fast play 2 and more.(Fast play 1 means fast play level 1 and does not reflect speed)	Frame rate may vary due to different versions.
Slow play button ► (Or you can turn the outer ring counter clockwise.)	In playback mode, click this button to switch between various slow play modes such as slow play 1 or slow play 2.	
3、Play/Pause▶Ⅱ	In slow playback mode, click this button to switch between play/pause modes.	
4、Previous/next	In playback mode, you can click ◀ and ▶Ⅱ to view previous or next video in current channel.	

4.3.2.7 Fast forward/fast backward and frame by frame playback

Special Functions of Shuttle and Jog	Illustration	Remarks
Fast forward(outer ring clockwise)	When playback, turn the shuttle (outer ring) clockwise one turn: you can view in fast level 1 Turn it twice and you get fast level 2. You can continue turning to get different speeds.	In forward or backward mode, double click Pause/Play button to get normal playback. Frame rate may vary due to different version.
Fast backward(outer ring anti- clockwise)	In playback, turn the shuttle (outer ring) anti-clockwise one turn and you can view in backward level 1. Turn it twice and you get backward level 2. You can continue turning to get different speeds.	
Manual playback frame by frame	In playback mode, click play/pause button, then slowly turn the jog (inner dial) clockwise to view frame by frame, anti- clockwise to view single frame playback.	

4.3.2.8 Backward playback and frame by frame playback

Button	Illustration	Remarks
Backward play ▌◀ in playback mode.	In normal playback mode, left click backward play button, system begins backward playback. Double click backward play button again, system goes to pause mode.	When system is in backward play or frame by frame playback mode, you can click play button to go to normal playback.
Manual playback frame by frame.	Click pause button in normal playback mode, slowly turn the jog (inner dial) clock-wise to view frame by frame or anti clockwise to view single frame playback.	

Note:

All the operations here (such as playback speed, channel, time and options etc.) are dependent on version of hardware installed. Some series DVRs do not support some functions or playback speeds.

4.3.3 Calendar

Click calendar icon and calendar menu pops up.

Highlighted dates means that there are record files in that day. You can click blue date to view file list. In Figure 4-11, there are video files for March 13th and 14th. Double click date to view file list.
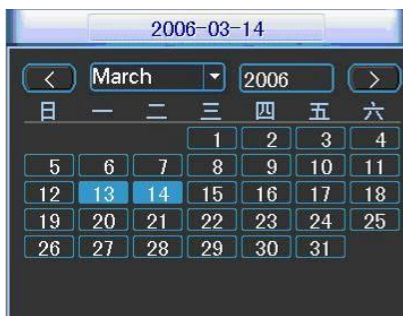

Figure 4-11

4.4 Record Setup (Schedule)
When the system boots up, it is in default 24-hour regular mode. You can set record type and time in schedule menu.

4.4.1 Schedule Menu
In the Main Menu, select Setting then Schedule. See Figure 4-12.
There are three record types: R-Regular, MD-Motion detection, A- Alarm. In some series, system also supports C-Card)

Figure 4-12

4.4.2 Basic Operation
There are a total of six periods available in any one 24 hour period. See Figure 4-12.
● Channel: Please select the channel number first. You can select "all" if you want to set for all channels.
● Week day: There are eight options: ranging from Saturday to Sunday and All.
● Redundancy: System supports redundancy backup function. You can highlight Redundancy button to activate this function. Please note, before enabling this function, set at least one HDD as redundant. Refer to the manual for detailed information.
● Prerecord: System supports prerecord function. The previous one to three seconds of video before alarm occurs can be included in recorded video.
● Record types: There are three types: Regular, Motion Detection (MD) and Alarm.

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Please highlight icon to select the required recording function. After setup click save button and system will return to the previous menu.

At the bottom of the menu, there is a colour bar for your reference. Green stands for regular recording, yellow stands for motion detection and red stands for alarm recording.

4.4.1.1 Quick Setup

This function allows you to copy one channel setup to another. After setting up channel 1, you can click paste button and turn to channel 2 and then click copy button. You can finish setting for one channel and then click save button or you can finish all setup and then click save button to memorise all the settings.

4.4.1.2 Redundancy

The Redundancy function allows you to create recorded files on separate disks. These files are created, packaged and closed simultaneously. When there is file damage occurring on one disk, there is a spare copy on another disk. You can use this function to maintain data reliability and safety.

In the Main Menu go to Setting then Schedule and highlight Redundancy button to enable this function. See Figure 4-12.

In the Main Menu go to Advanced then to HDD Management where you can set one or more disk(s) as redundancy disks. You can select from the dropdown list. See Figure 4-13. System auto overwrites old files once hard disk is full.

Please note only read/write disk or read-only disk can support backup files and support file search function, so you need to set at least one read-write disk otherwise you cannot record video.

Note:

About redundancy setup please note:
- If current channel is not recording, redundancy setup gets activated when the channel begins recording.
- If current channel is already recording when redundancy gets activated, the current file will be closed and new files opened for current channel and redundancy copy. After setup please click save button and system will return to the previous menu.
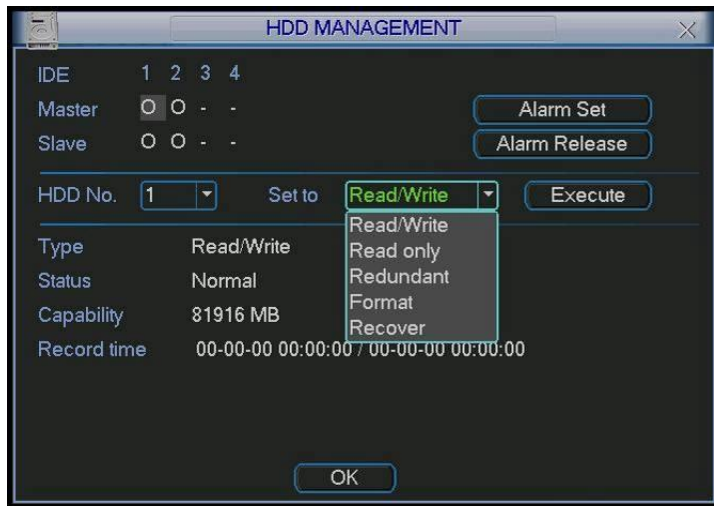
Figure 4-13

Playback or Search using the redundant disk.

There are two ways for you to playback or search using the redundant disk.

- Set redundant disk(s) as read-only disk or read-write disk (Main menu->Advanced->HDD management). See Figure 4-13. System needs to reboot to get setup activated. Now you can search or playback file in redundant disk.
- Remove the disk and play it in another PC.

4.5 Motion Detect
4.5.1 Go to Motion Detect Menu
In the Main Menu go to Setting and then to Detect to enter motion detect functions. See Figure 4-14.

4.5.2 Motion Detect
Detection menu is shown as below. See Figure 4-14.
- Channel: select the channel you want to implement motion detection.
- Type: in the dropdown list, select motion detection item.
- Record channel: select the channel to activate recording function once alarm occurred. Please make sure you have set MD record in encode interface(Main Menu->Setting->Schedule) and schedule record in manual record interface(Main Menu->Advanced->Manual Record)
- Enable tour: This allows switching between different cameras that detect motion.
- Latch: when motion detection complete, system auto delays detecting for a specified time. The value ranges from 10-300 seconds.
- PTZ preset: Click set button, the interface is shown as in Figure 4-15. Here you can set preset for one or more channels.
- Region: click "select" button to set motion detection region. See Figure 4-16.
- Sensitivity: there are six levels. The sixth level has the highest sensitivity.
- Alarm output: when motion detected, peripheral alarm devices can be activated.
- Show message: System pops up message in the screen to alert you once alarm occurred.

Please highlight icon to select the corresponding function. After setup click save button and system returns to the previous menu.

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Note:

In motion detection mode, you cannot use copy/paste to set channel setup since the video in each channel may not be the same.

In Figure 4-15, you can left click mouse and then drag it to set a region for motion detection. Click Fn to switch between deployment and withdraw motion detection. After setting, click enter button to exit.
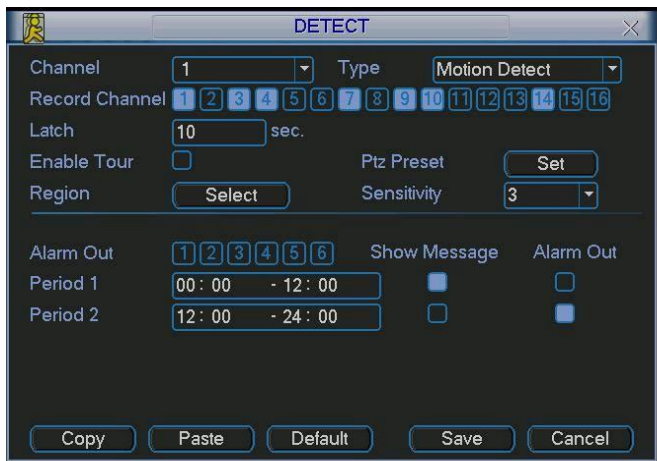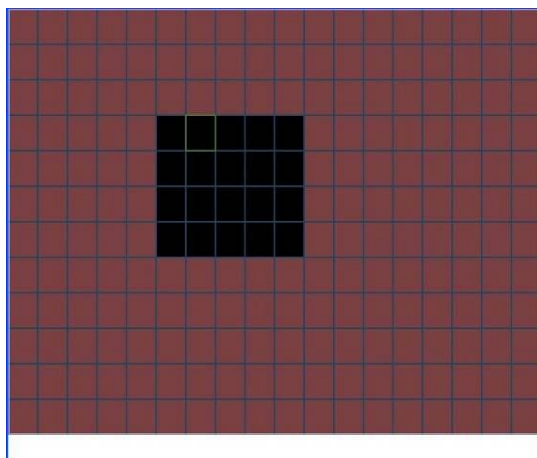

Figure 4-14

Figure 4-15

Figure 4-16

4.5.3 Video Loss

In Figure 4-14, select video loss in the Type item. You can see the interface as shown in Figure 4-17. This function allows you to be informed when video loss occurs. You can enable alarm output channel and then enable show message function.

- Channel: select the channel you want to enable for video loss alarm.
- Type: please select video loss.
- Record channel: select the channel to record when video loss occurs.
- Alarm output: activate peripheral alarm device when video loss occurs.
- Enable tour: Enables tour between different cameras.
- Latch: when motion detection completes, system auto delays detecting for a specified time. The value ranges from 10-300 seconds.
- PTZ preset: Click set button to set preset for one or all channels. See Figure 4-16.
- Period 1/2: It is for you to set up to two periods within a 24 hour period (00.00-24.00).
- Alarm output: when video loss occurs system enables peripheral alarm devices. Please highlight icon to enable this function
- Show message: System displays message on the screen to alert you when alarm triggered. Please highlight icon to enable this function.

Figure 4-17

4.5.4 Camera Mask Detect

If someone purposely masks the camera lens, the system can alert you to guarantee video integrity. Camera mask detection interface is shown as in Figure 4-18.

- Channel: select the channel you want to enable camera mask detection function.
- Type: please select camera mask detect from the dropdown list.
- Record channel: select the channel to record when camera mask occurs.
- Alarm output: activate peripheral alarm device when camera mask occurs.
- Enable tour: Enables tour between different cameras.
- Latch: when motion detection completes, system auto delays detecting for a specified time. The value ranges from 10-300 seconds.
- PTZ preset: Click set button to set preset for one or all channels. See Figure 4-16.
- Period 1/2: It is for you to set up to two periods within a 24 hour period (00.00-24.00).
- Alarm output: when camera masking occurs, system enables peripheral alarm devices. Please highlight icon to enable this function
- Show message: System displays message on the screen to alert you once alarm occurs. Please highlight icon to enable this function

Note:

In this interface, copy/paste function is only valid for the same type, which means you can not copy a channel setup in video loss mode to camera mask detect mode.
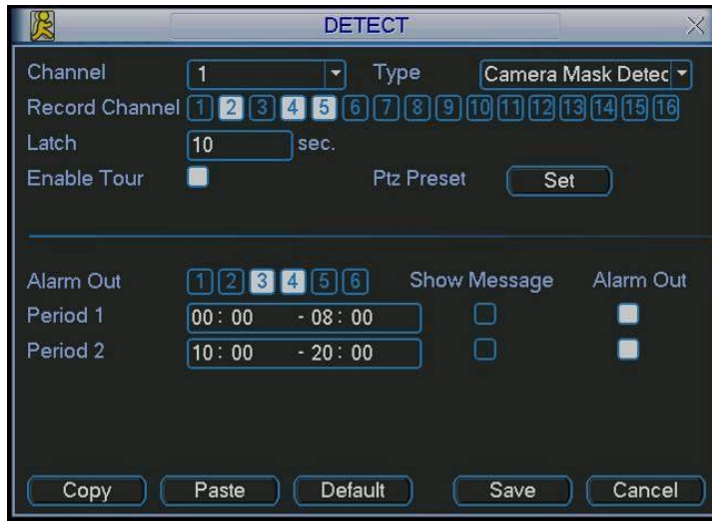

Figure 4-18

4.6 Alarm Setup and Alarm Activation

Before operation, please make sure you have properly connected alarm devices such as buzzer.

4.6.1 Go to alarm setup interface

In the Main Menu go to Setting then Alarm and you will see alarm setup interface. See Figure 4-19.

4.6.2 Alarm setup

Alarm interface is shown as below. See Figure 4-19.

- Alarm in: set channel number.
- Source of alarm: there are two alarm sources: local input or network input.
- Type: normally open or normally closed.
- Record channel: you can select channels to record when alarm triggered (Multiple choices). At the same time you need to set alarm record in schedule interface (Main Menu->Setting->Schedule) and select schedule record in manual record interface (Main Menu->Advance->Manual Record).
- Latch: This sets delay duration. Value ranges from 10 to 300 seconds. System automatically delays by specified seconds in turning off alarm and activating output after external alarm cancelled.
- PTZ preset: activates PTZ control.
- Relay out: selects alarm output channel (multiple choices).
- Show message: System displays message on the screen to alert you once alarm occurs.
- Period 1 and period 2: allows two slots in a 24 hour period for setting alarm function and display messages.

Please highlight icon ▣ to select the corresponding function. After setup click save button and system will return to the previous menu.

Figure 4-19

4.7 Backup

Click backup icon in the Main Menu, there are two function items: Detect Device and Backup Files.

4.7.1 Detect Device
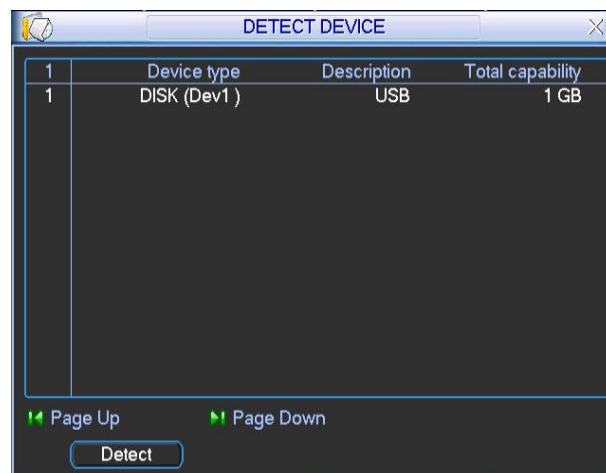This menu shows device information. See Figure 4-20.

Figure 4-20

4.7.1   Backup
Select backup device and then channel, file start time and end time.
Click add button, system begins search. All matched files are listed below. System automatically calculates the capacity needed and remaining. See Figure 4-21.
System only backs up files with a √ before channel name. You can use Fn or cancel button to delete √ after file serial number.
Click backup button, you can backup selected files. There is a process bar for your reference.
 When the system completes the backup, you can see a dialogue box prompting successful backup.
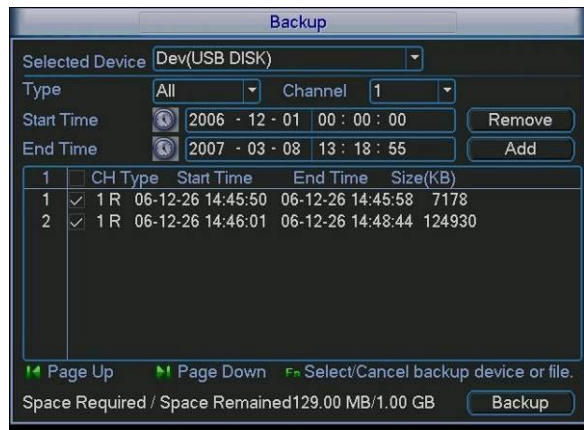
Figure 4-21

Click backup button, system begins burning. At the same time, the backup button becomes stop button. You can view the remaining time and process bar at the left bottom. See Figure 4-22.
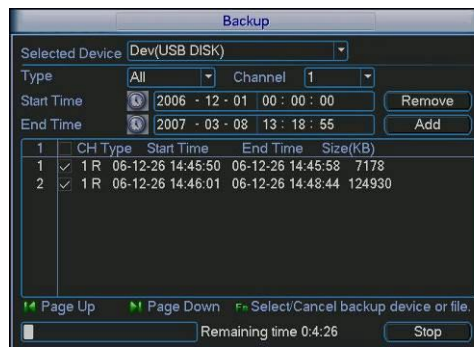

Figure 4-22

Tips:

During backup process, you can click ESC to exit current interface; but the system will not terminate backup process.

Note:

When you click stop button during the burning process, there are two conditions for different devices:

- For CD/DVD burner device, the stop function becomes activated immediately and if the burner buffer is not filled then no data can be captured.
- For USB devices, the system will start to backup the data immediately. If you click the stop button during the burning process say for example 5 minutes into a 10 minute backup, the device will save the first 5 minutes of backup. The file name format usually is: SN_CH+channel number+time Y+M+D+H+M+S. In the file name, the YMD format is the same as you set in general interface. (Main Menu ->Setting ->General).

4.8 PTZ Control and Colour Setup

Note: All the operations here are based on the DH-SD protocol. For PELCO protocols, there may be slight differences.

4.8.1 Cable Connections
● Connect the dome RS485 port to DVR 485 port..
● Connect dome video output cable to DVR video input port.
● Connect power adapter to the dome.

4.8.2 PTZ Setup
Note: The camera video should be in the current screen. Before setup, please check the following connections are set:
● PTZ and decoder connection is correct. Decoder address is setup correctly.
● Decoder A (B) line connects with DVR A (B) line.
Boot up the DVR, input user name and password.
In the Main Menu, click Setting and then click Pan/Tilt Control button. The interface is shown in Figure 4-23. Here you can set the following items:
● Channel: select the current camera channel.
● Protocol: select corresponding PTZ protocol (such as DH-SD1)
● Address: default address is 1.
● Baud rate: select corresponding baud rate. Default value is 9600.
● Data bits: select corresponding data bits. Default value is 8.
● Stop bits: select corresponding stop bits. Default value is 1.
● Parity: there are three options: odd/even/none. Default setup is none.

Figure 4-23

After setting PTZ parameters please click save button.
In one window display mode, right click mouse (click "Fn" Button on the front panel or click "Fn" key on the remote control). The interface is shown as in Figure 4-24.

Figure 4-24

Click Pan/Tilt/Zoom, the menu is shown below. See Figure 4-25.
Here you can set the following items:
● Step: value ranges from 1 to 8.
● Zoom
● Focus
● Iris
Click icon and to adjust zoom, focus and iris.

Figure 4-25

In Figure 4-25, please click direction arrows (See Figure 4-26) to adjust PTZ position. There are a total of 8 direction arrows.

Figure 4-26

4.8.3 3D Intelligent Positioning Key
In the middle of the eight direction arrows, there is a 3D intelligent positioning key. See Figure 4-27. Click this key and system goes back to single screen mode. Drag the mouse in the screen to adjust section size. It can initiate PTZ automatically.

Figure 4-27

Name	Function key	function	Shortcut key	Function key	function	Shortcut Key
Zoom	⊖	Near	►	⊕	Far	⏩
Focus	⊖	Near	◄	⊕	Far	►
Iris	⊖	close	⏸◄	⊕	Open	►⏸

4.9 Preset/ Patrol/Pattern/Scan

In Figure 4-25, click the "set" button. The interface below is shown. See Figure 4-28.
Here you can set the following items:
● Preset
● Patrol(Tour)
● Pattern
● Border

Figure 4-28

In Figure 4-25, click page switch button, the interface is shown as in Figure 4-29.
Here you can activate the following functions:
● Preset
● Patrol(Tour)
● Pattern
● Aux on
● Aux off
● Auto scan
● Auto pan
● Light on

Figure 4-29

Note: The following setups are usually operated by reference to Figure 4-25, Figure 4-28 and Figure 4-29 .

4.9.1 Preset Setup

In Figure 4-25, use eight direction arrows to adjust camera to the required position.

In Figure 4-28, click preset button and input preset number. The interface is shown as in Figure 4-30. Now you can add this preset to one patrol (tour).

Figure 4-30

4.9.2 Activate Preset

In Figure 4-29, please input preset number in the No. blank, and click preset button.

4.9.3 Patrol Setup (Tour setup)

In Figure 4-28, click patrol button. The interface is shown as in Figure 4-31. Input preset number and add this preset to a patrol (tour). For each patrol (tour), you can input max 80 presets.

Figure 4-31

4.9.4 Activate Patrol (tour)

In Figure 4-28, input patrol (tour) number in the No. blank and click patrol button

4.9.5 Pattern Setup

In Figure 4-28, click pattern button and then click "begin" button. The interface is shown as in Figure 4-32. Then you can go to Figure 4-25 to modify zoom, focus, and iris.

Go back to Figure 4-32 and click "end" button. You can memorise all these operations as pattern 1.

Figure 4-32

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4.9.6 Activate Pattern Function

In Figure 4-29, input mode value in the No. blank, and click pattern button.

4.9.7 Auto Scan Setup

In Figure 4-28, click border button. The interface is shown as in Figure 4-23.
Please go to Figure 4-25, use direction arrows to select camera left limit
Then please go to Figure 4-33 and click left limit button
Repeat the above procedures to set right limit.

Figure 4-33

4.9.8 Activate Auto Scan

In Figure 4-29, click "Auto Scan" button, the system begins auto scan. Correspondingly, the auto scan button changes to stop button. Click stop button to terminate scan operation.

4.10 Dome Menu Control

In Figure 4-29, click page switch button, the interface is shown as below. See Figure 4-34.
Click menu to enter dome menu. The direction arrows here are to control dome menu. Click page switch button, system goes back to Figure 4-25
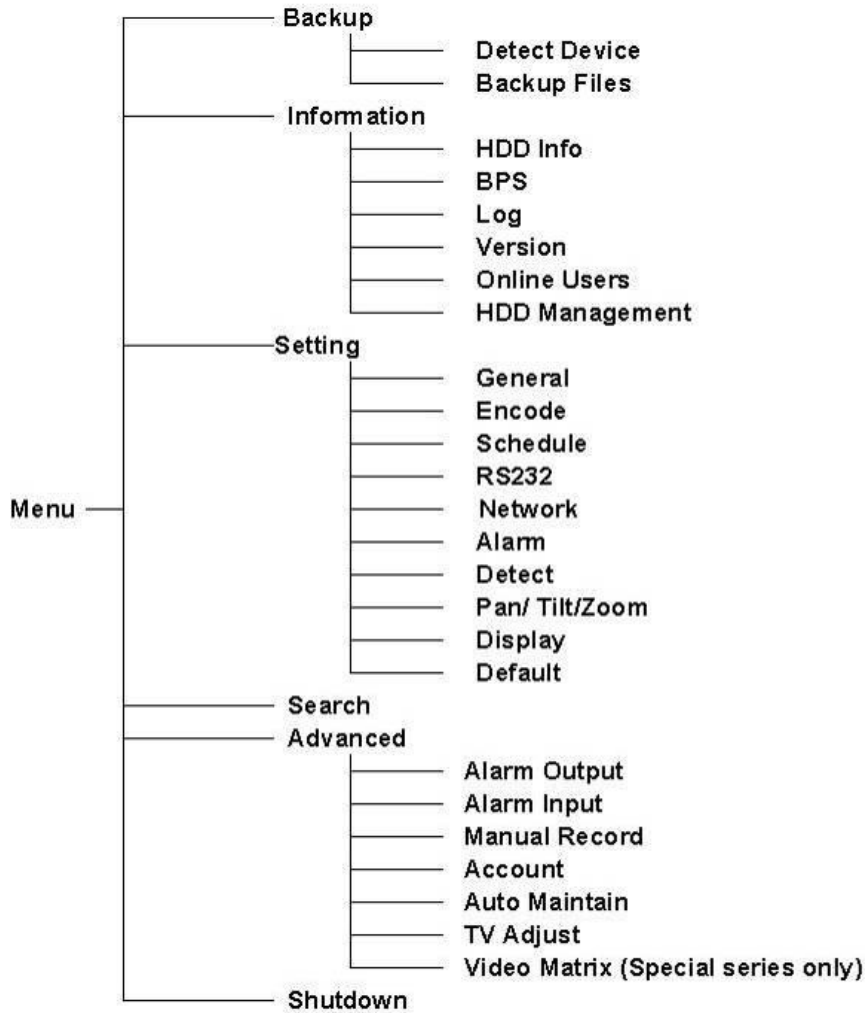

Figure 4-34

5 Understanding Menu Operations and Controls

5.1 Menu Tree

This series DVR menu tree is shown as below.

```
                           Backup
                                    ─── Detect Device
                                    ─── Backup Files
                           Information
                                    ─── HDD Info
                                    ─── BPS
                                    ─── Log
                                    ─── Version
                                    ─── Online Users
                                    ─── HDD Management
                           Setting
                                    ─── General
                                    ─── Encode
                                    ─── Schedule
                                    ─── RS232
       Menu ───                     ─── Network
                                    ─── Alarm
                                    ─── Detect
                                    ─── Pan/ Tilt/Zoom
                                    ─── Display
                                    ─── Default
                           Search
                           Advanced
                                    ─── Alarm Output
                                    ─── Alarm Input
                                    ─── Manual Record
                                    ─── Account
                                    ─── Auto Maintain
                                    ─── TV Adjust
                                    ─── Video Matrix (Special series only)
                           Shutdown
```

5.2 Main Menu

When you login, the system Main Menu shows as below. See Figure 5-1 . There are a total of six icons: Search, Information, Setting, Backup, Advanced and Shutdown. Move the cursor to highlight the icon, and then double click mouse to enter the sub-menu.
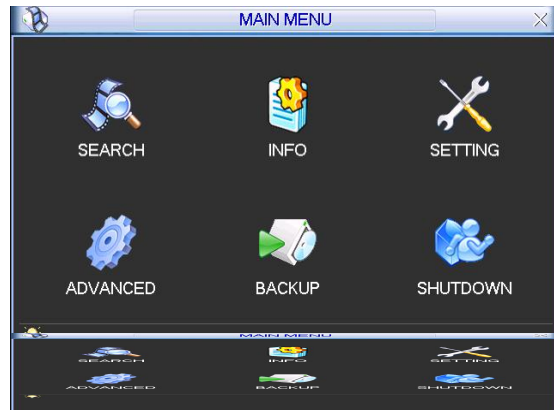
Figure 5-1

5.3 Setting

In Main Menu, highlight Setting icon and double click mouse. System Setting interface is shown as below. See Figure 5-2.
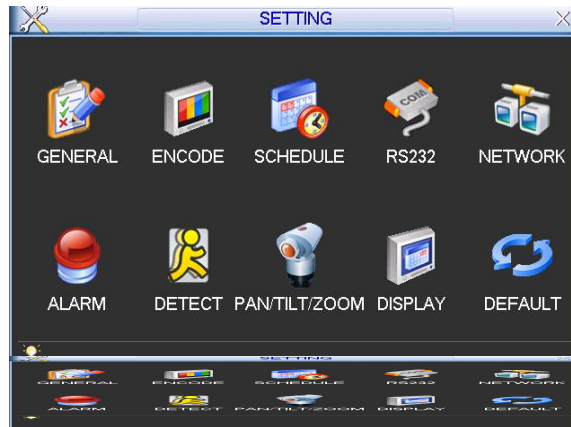

Figure 5-2

5.3.1   General

General setting includes the following items. See Figure 5-3.

- System time: This option sets system time
- Date format: there are three types: YYYYY-MM-DD: MM-DD-YYYYY or DD-MM-YYYY.
- Date separator: there are three denotations to separate date: dot, beeline and solidus.
- Time format: there are two types: 24-hour mode or 12-hour mode.
- Language: system supports various languages: Chinese (simplified), Chinese (Traditional), English, Italian, Japanese, French, Spanish (All languages listed here are optional. Slight differences maybe found in various models of the product.)
- HDD full: This is to select working mode when hard disk is full. There are two options: STOP recording or OVERWRITE.
- Pack duration: This specifies file record duration. Default value is 60 minutes.
- DVR No: when you are using one remote control to control several DVRs, you can give each DVR a remote control address.
- Video standard: There are two formats: NTSC and PAL.

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● Auto logout: This is used to set auto logout interval once login user remains inactive for a specified time. Value ranges from 0 to 60 minutes.

Note: since system time is very important, and date and time is used to identify files created, do not modify the date and/or time so as to cause the DVR to create files with times already produced. This will cause machine conflicts and will require the formatting of the hard drives.

After setup click save button and system will return to the previous menu.
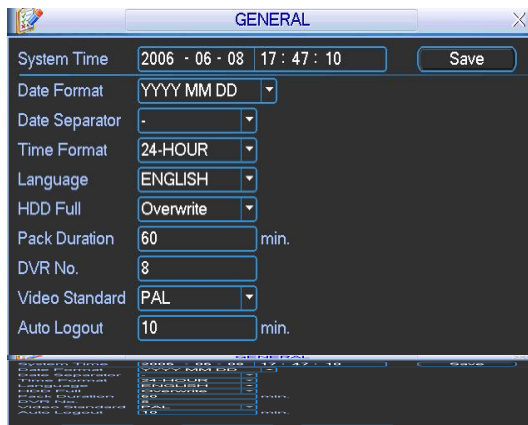
Figure 5-3

5.3.2 Encode

Encode setting includes the following items. See Figure 5-4.
● Channel: Select the channel you want.
● Compression: system supports H.264 or you can select from the dropdown list.
● Resolution: System supports various resolutions, you can select from the dropdown list. This model supports D1/Half-D1/CIF/QCIF.
● Bit rate: system supports two types: CBR and VBR. (Use VBR when networking unit)
● Quality: There are six levels ranging from 1 to 6. Level six is the highest image quality.
● Frame rate: there are six levels: 1 f/s,2f/s,3f/s, 6f/s,12f/s,25f/s. (Some series DVRs only support PAL 25f/s)
● Enable audio: you can turn on or off the audio.
● Cover area (Privacy mask): This allows setting of the window blanking section. You can drag the mouse to set mask section size.
● Time display: You can select system display time or not.
● Channel display: You can select system display channel number or not.

Please highlight icon ▣ to select the corresponding function.
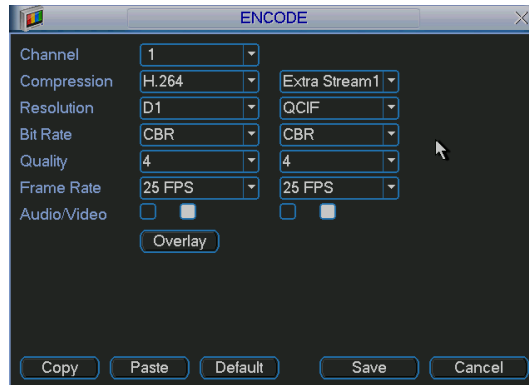
Figure 5-4

This DVR supports various settings for channel, resolution and frame:
Resolution：pixel
PAL：QCIF=176×144; CIF＝352×288; HD1＝352×576; 2CIF=704×288;
D1＝704×576;

If we take the 16-channel DVR as an example, there are four groups：1~4, 5~8, 9~12, 13~16.
Please refer to the formula：resolution× frame rate

The resources for each group are: PAL: D1×50 frames per sec across 4 channels total.
Note that D1 × 50F/s = Half-D1 (HD1) ×100F/s ＝ CIF × 200F/s
You can arrange channel parameters within the specified limit.
Please refer to the following list of examples：

Channel resources				Max frames	Comments
1	2	3	4	In PAL mode	
D1 25F/s	D1 12F/s	D1 6F/s	D1 6F/s	Total 50F/s	1 D1 real-time, 3 D1 non-real time
D1 12F/s	D1 12F/s	D1 12F/s	D1 12F/s	Total 50F/s	4 D1 non-real time
D1 25F/s	HD1 25F/s (12)	CIF 25F/s (6)	CIF 25F/s (6)	Total 50F/s	1 D1, 1 HD1, 2 CIF real-time
HD1 25F/s	HD1 25F/s	HD1 25F/s	HD1 25F/s	Total 100F/s	4 HD1 real-time
CIF 25F/s	CIF 25F/s	CIF 25F/s	CIF 25F/s	Total 200F/s	4 CIF real-time
…	…	…	…	…	Other variations

Note：
● 1, 2, 3, 4 are the four channels in one group. Duplicate for 8 and 16 way units.
● The total resource is limited. If you increase a frame rate on one channel you may need to reduce it for another channel.
● The system will display "Setup Failure Interface" if the frame rate is set beyond the limit.
In the above list, when mixing resolution types e.g D1, HD1 and CIF, figures in brackets relate to the equivalent frame rate in D1 resolution. You can highlight "video" button to activate video function.

Dual encoding streams: this DVR supports dual encoding streams. Main stream is for local recording, and the extra stream can be used for network transmission. And they don't affect each other. So for local recording you can use main stream. And for network transmission, you can select main stream or extra stream. The benefit of this option is that for local recording you will want to record best quality but for networking you may wish to restrict network traffic by using lower set resources.

5.3.3 Schedule
Please refer to chapter 4.4 schedule.

5.3.4 RS232
RS232 interface is shown below. See Fig 5.5. **Note that RS232 is not supported.**
- Function: There are various devices for you to select.
- Baud rate: Select baud rate.
- Data bit: Select data bit.
- Stop bit: There are three settings: 1, 1.5, 2
- Parity: There are three settings: none, odd, even.

After setup click save button and system returns to the previous menu
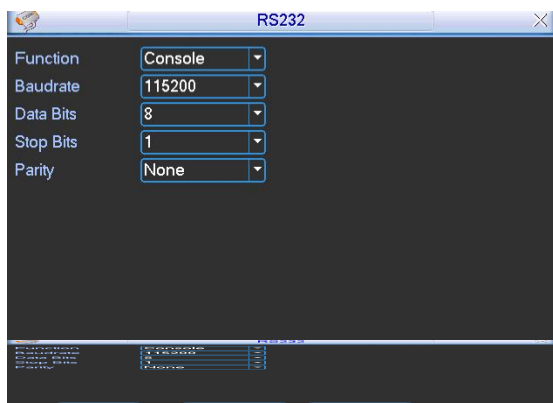
Figure 5-5

5.3.5 Network
This menu is used to input network information. See Figure 5-6.
- IP address
- Subnet mask
- Gateway
- Service port: Default value is 37777. (System server port 37778 is reserved for network UDP use.)
- HTTP port: Default value is 80
- Protocol: You can select protocol from the dropdown list.
- Max connection: support maximal 10 users.
- Properties: There are three options for you: FTP/NTP/Alarm center. You can select required option and then click properties button to go to setup interface.

- Authorization: Click Authorisation button then highlight icon ■ Turn on or not? to enable IP authentication function. When you enable this function, only the IPs in the list can login to this DVR. See Figure 5-7.

After setup click save button and system goes back to the previous menu.
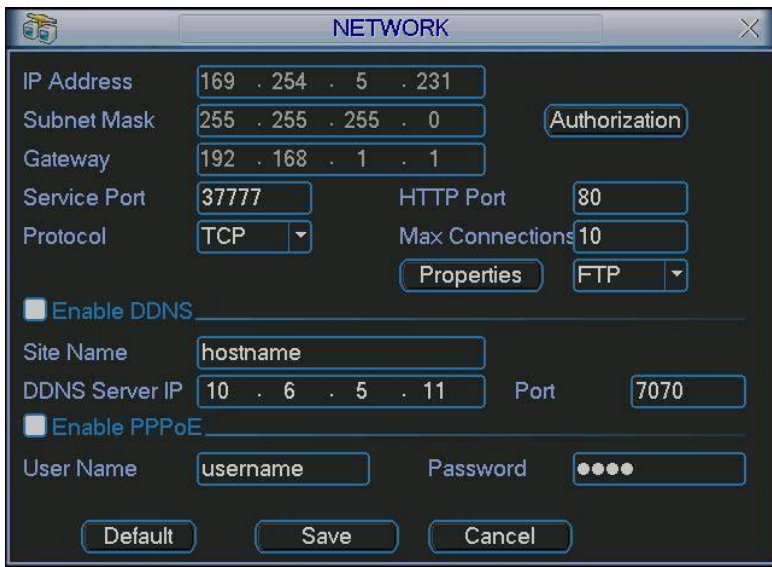
Figure 5-6
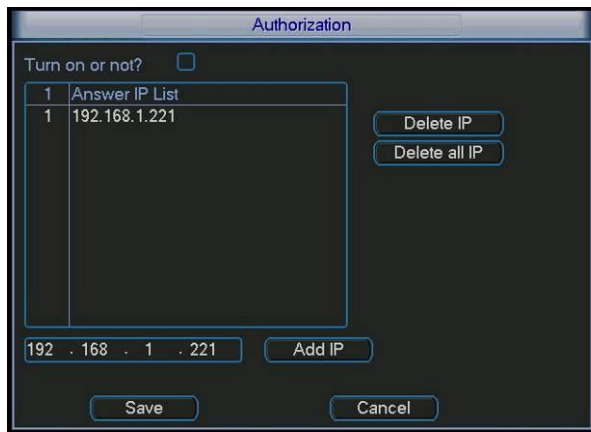
Figure 5-7

5.3.5.1 PPPoE Connection
PPPoE is primarily used in the USA and not used in the UK. It allows IP cameras to automatically connect to the Internet. Please ignore this option in the UK.

5.3.5.2 FTP

FTP can be used to upload video files from alarm or motion detect channels. Windows XP and Vista have FTP facilities. Please refer to the Windows reference documents on FTP or one of the FTP service programs generally available.

The example below illustrates one of these products called Serv-U FTP Server. Note this is an example only and will differ by product type. Due to the large range of FTP products available, FTP is not a supported function. Please refer to product manufacturer or supplier details.

Please install Ser-U FTP SERVER first. From "start" -> "program" -> Serv-U FTP Server -> Serv-U Administator. Now you can set user password and FTP folder. Please note you need to grant write right to FTP upload user. See Figure 5-8.
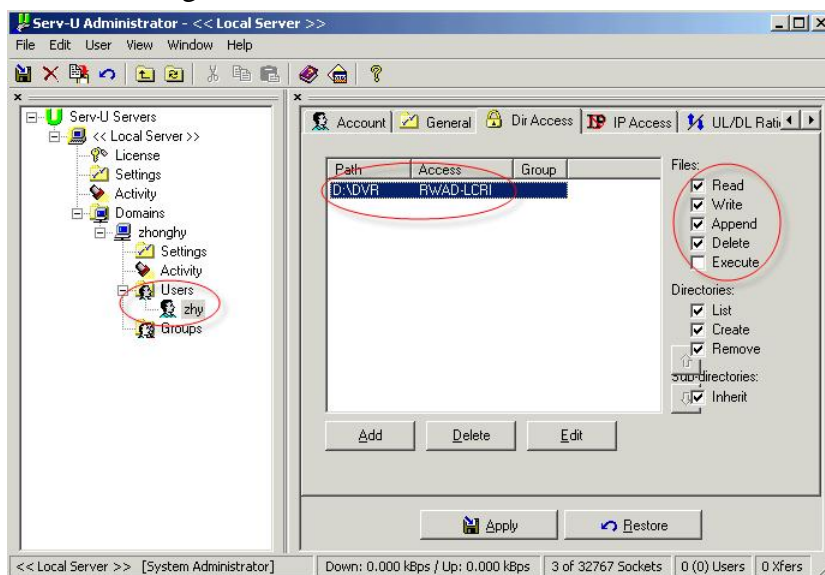
Figure 5-8

You can use a PC or FTP login tool to test setup is right or not.
For example, you can login user ZHY to FTP://10.10.7.7 and then test it can modify or delete folder or not. See Figure 5-9.
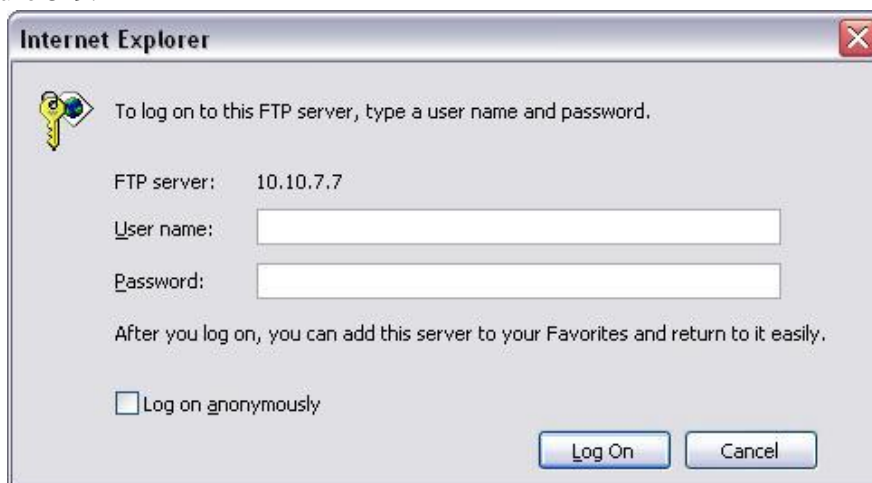
Figure 5-9

System also supports upload multiple DVRs to one FTP server. You can create multiple folders under this FTP.

In Figure 5-6, select FTP and then click properties button. You can see the following interface. See Figure 5-10.
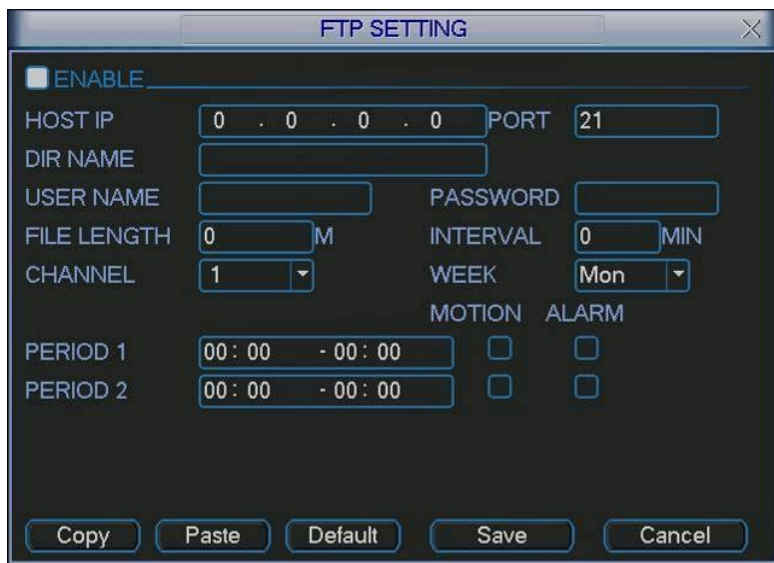
Figure 5-10

Please highlight the icon ▣ in front of Enable to activate FTP function.

Now FTP can upload alarm video and motion detection video. Please note, when you are using this function, please make sure current upload channel is in motion detection or alarm record status and there is video available.

Here you can input FTP server address, port and etc.
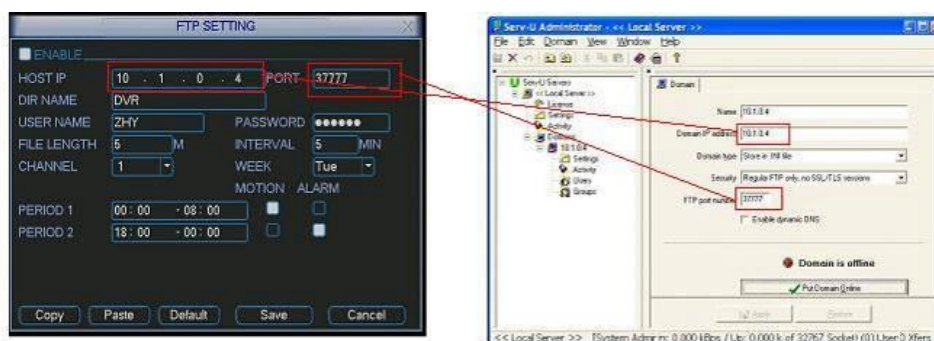
Figure 5-11

● File length: upload file length. When setup is larger than the actual file length, system will upload the whole file. When setup here is smaller than the actual file length, system only uploads the set length and auto ignore the left section.

● Interval: in each channel, system only uploads the first video file in accordance with video type (alarm/motion detection) during the same period. For example, when interval value is 5 minutes, system only uploads the first motion detection or alarm file in each 5-minute period.

- When interval value is 0, system uploads all corresponding files.
- Period 1 and period 2: you can set two periods for each channel.

System file name is shown as in Fig. 5-12.

Figure 5-12

5.3.5.3 NTP

NTP (Network Timed Protocol) allows the DVR to automatically connect to an NTP server to extract the current date and time and update the DVR automatically.

You need to install SNTP server (Such as Absolute Time Server) in your PC first. In the Windows XP operating System you can use a command "net start w32time" to boot up NTP service.

In Figure 5-6, select NTP and then click properties button. You can see the following interface. See Figure 5-13.

- Host IP: Input your PC IP address.
- Port: This series DVR supports TCP transmission only. Port default value is 123.
- Update interval: minimum value is 15 minutes
- Time zone: select your corresponding time zone here.

Here is a sheet for your time zone setup.

City /Region Name	Time Zone
London	GMT+0
Berlin	GMT+1
Cairo	GMT+2
Moscow	GMT+3
New Deli	GMT+5
Bangkok	GMT+7
Beijing (Hong Kong)	GMT+8
Tokyo	GMT+9
Sydney	GMT+10
Hawaii	GMT-10
Alaska	GMT-9
Pacific Time(P.T)	GMT-8
American Mountain Time(M.T)	GMT-7
American Central Time(C.T)	GMT-6
American Eastern Time(E.T)	GMT-5
Atlantic Time	GMT-4
Brazil	GMT-3
Middle Atlantic Time	GMT-2
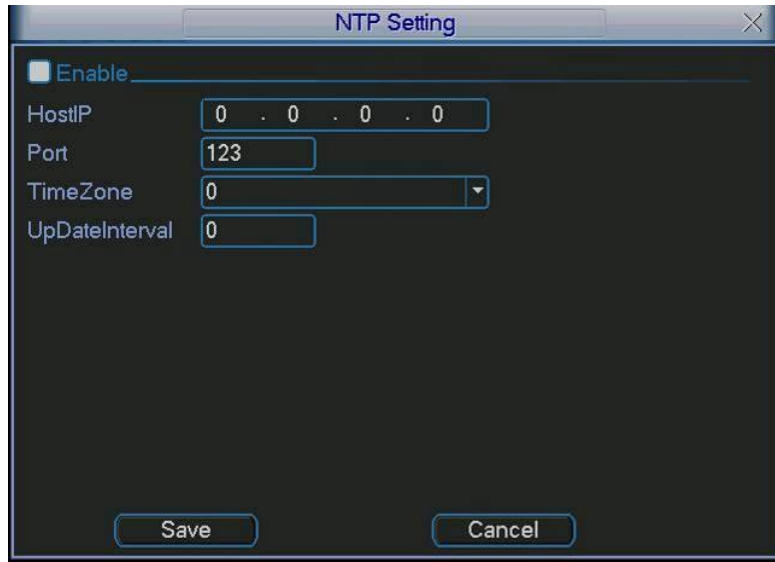
Figure 5-13

5.3.6 Alarm

Please refer to chapter 4.6 Alarm Setup and Activation.

5.3.7 Detect

Please refer to chapter 4.5 Detect.

5.3.8 Pan/Tilt/Zoom

The pan/tilt/zoom setup includes the following items. Please select channel first. See Figure 5-14.
- Protocol: select corresponding PTZ protocol such as DH-SD1.
- Address: input corresponding PTZ address.
- Baud rate: select baud rate.
- Data bit: select data bit.
- Stop bit: select stop bit.
- Parity: there are three choices: none, odd, even.

After setup click save button and system will return to the previous menu.
For detailed setup, please refer to chapter 4.9 preset/patrol/pattern/scan.
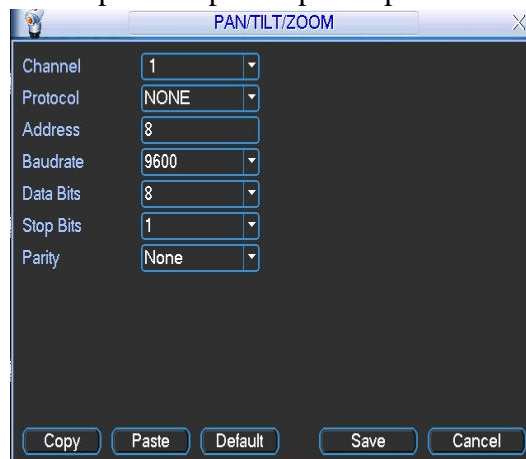
Figure 5-14

5.3.9 Display

Display menu is shown below. See Figure 5-15.

- Transparency: This is used to adjust transparency level. Set value from 128 to 255.
- Channel name: This is used to modify channel name. This will modify DVR at local end. If your DVR is networked you will need to open web or client end to refresh channel name.
- Time display: You can set display time or not.
- Channel display: You can set channel name or not.
- Overlay information: System displays information on the screen for your reference.
- Enable tour: activate tour function.
- Interval: Input interval value here. The value ranges from 5-200 seconds.

In tour process, you can use mouse or click Shift to turn on window switch function.

[icon] Stands for opening switch function, [icon] stands for closing switch function.

- View1/4/9/16: System support 1/4/9/16 window tour.

Please highlight icon [icon] to select the corresponding function.
After setup click save button and system goes back to the previous menu.
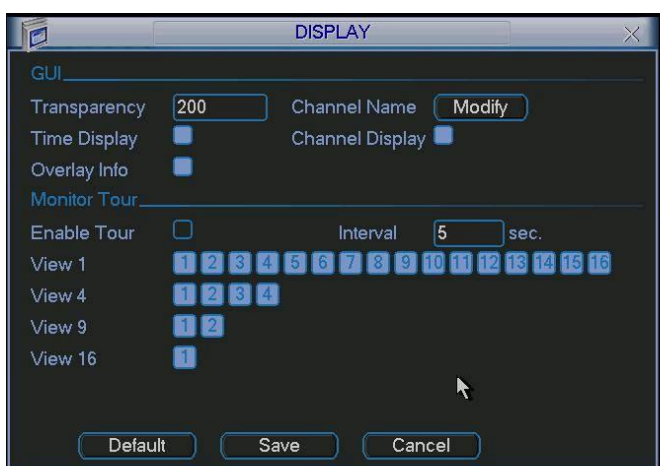
Figure 5-15

5.3.10 Default

Click Default Menu and system displays a dialogue box. You can highlight ▣ to restore default factory setup. See Figure 5-16.
● Select all
● General
● Encode
● Schedule
● RS232
● Network
● Alarm
● Detect
● Pan/tilt/zoom
● Display
● Channel name

Please highlight icon ▣ to select the corresponding function.

After setup click save button and system returns to the previous menu.

Warning!

System menu colour, language, time display mode, video format, IP address, user account will not maintain previous setup after default operation!
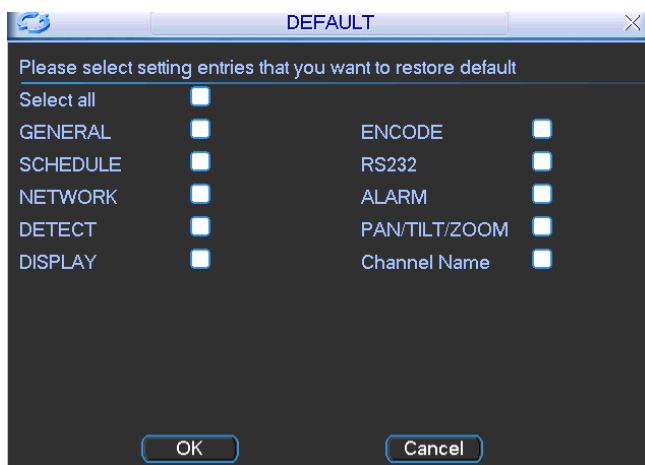
Figure 5-16

5.4 Search

Please refer to chapter 4.3 Search.

5.5 Advanced

Double click Advanced Menu icon on the main window, the interface is shown below. See Figure 5-17. There are seven function keys: Hard Disk Management, Alarm Output, Alarm Input, Manual Record, Account, Auto Maintain, and TV Adjust.

Figure 5-17

5.5.1 Hard Disk Management

This menu is used for Hard Disk Management. See Figure 5-18.

You can set mode for each hard drive from the dropdown list.

When you use Redundant backup function, you can set one or more redundant HDD(s).

Please note you need to set at least one read-write disk, otherwise system will not record video. For detailed information you can refer to chapter 4.4 Schedule.

After setup click save button and system needs to reboot to get all the modifications activated.

Figure 5-18

Click alarm set button, the interface is shown as below. See Figure 5-19.

Please highlight icon ▣ to select the corresponding function.

You can enable one or more alarm setups. The lower limit ranges from 1% to 99%. Alarm channel number ranges from 1 to 6. Delay value is from 0 to 240 seconds.

Please note when HDD capacity is not full system only alarms once!

After setup click OK button and system returns to the previous menu

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Figure 5-19

5.5.2 Alarm Output

This menu sets the alarm output.

Please highlight icon ▣ to select the corresponding alarm output.

After setup click OK button and system goes back to the previous menu. See Figure 5-20.
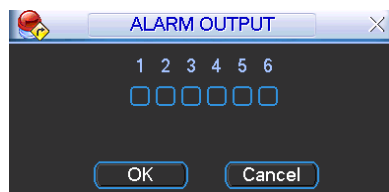

Figure 5-20

5.5.3 Alarm Input

This menu sets the alarm input.

Please highlight icon ▣ to select the corresponding input channel.

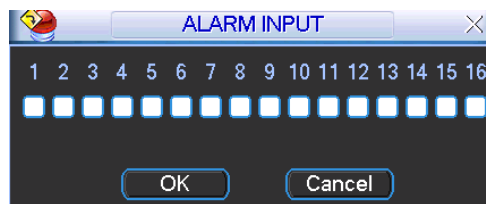After setup click save button and system returns to the previous menu. See Figure 5-21.

Figure 5-21

5.5.4 Manual Record

Please refer to chapter 4.2.2 manual record.

5.5.5 Account

This is the Account Management menu. See Figure 5-22. You can:

● Add new user
● Modify user
● Add group
● Modify group
● Modify password.

For account management please note:

● System account adopts two-level management: group and user. No limit to group or users.
● For group or user management, there are two levels: admin and user.
● The user name and group name can consist of eight bytes. A name can only be used once. There are four default users: admin/888888/666666 and hidden user "default". Except user 666666, all other users have administrator rights.
● Hidden user "default" is for system use only and cannot be deleted. When there is no login user, hidden user "default" automatically logs in. You can set some rights such as monitor for this user so that you can view some channel views without logging in.
● One user should belong to one group. User rights cannot exceed group rights.
● About reusable function: this function allows multiple users using the same account to login.

After setup click save button and system returns to the previous menu.

Reminder: The default passwords for the admin, 666666 and 888888 user are identical to user names… i.e User = admin   password = admin, User = 888888 password = 888888
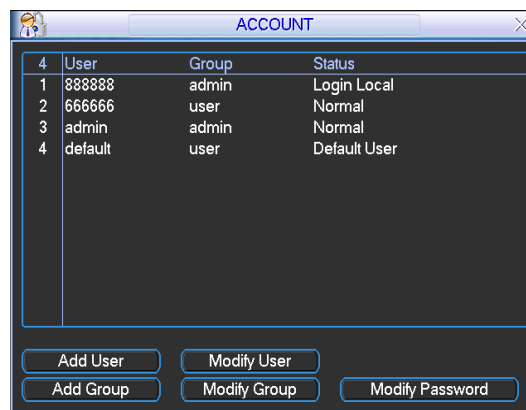   User = 666666 password = 666666

Figure 5-22

5.5.6   Auto Maintain

This menu allows you to auto-reboot and auto-delete old files. See Figure 5-23.

You can select from dropdown list.

After setup click save button and system will return to the previous menu.
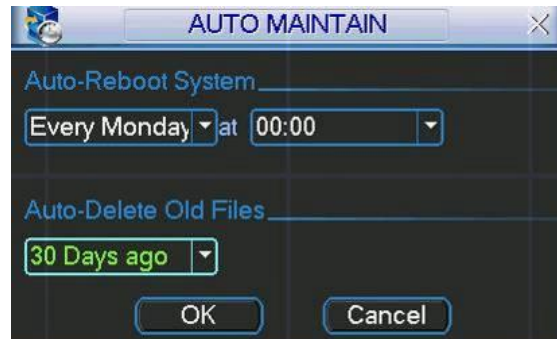

Figure 5-23

5.5.7   TV Adjust

This menu is used to adjust TV output setup. See Figure 5-24.

Please drag slide bar to adjust each item.

After all the setups please click OK button, system goes back to the previous menu.

Figure 5-24

5.5.7.1 Rear Panel Connection

The rear panel is shown as below. See Figure 5-25.
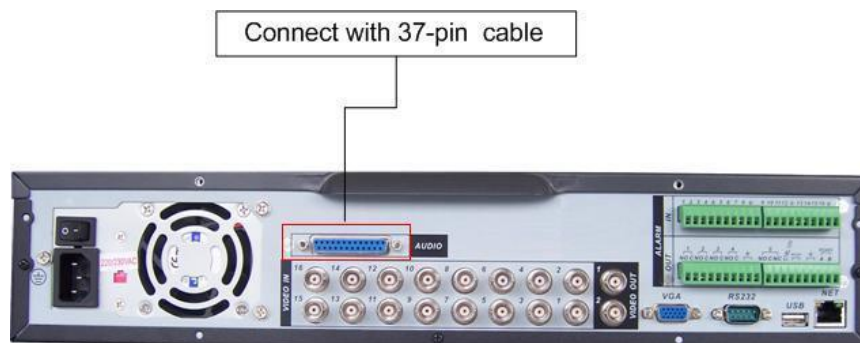
Figure 5-25

5.6 Information

The Info Menu provides system information. There are a total of five options:
HDD INFO (hard disk information), BPS (Bits Per Second - data stream statistics), LOG (log information), VERSION (Bios version) and ONLINE USERS.
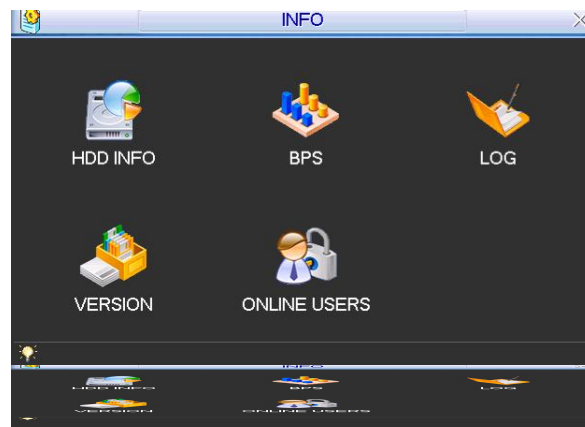
See Figure 5-26.

Figure 5-26

5.6.1 Hard Disk Information

This menu lists Hard Disk type, Total Space, Free Space, Video Start Time and Status.
See Figure 5-27.

Note: Please always remove a defective hard drive before adding a new one.

If there is a hard disk conflict, please check hard disk times and system times match. If not then go to Main Menu, Setting then Schedule and switch off all recordings then go to General to modify system time. Finally reboot the system and reset recording to solve this problem.

In IDE information column, ○ means OK，X means error occurred 、 - means there is no disk. The serial number after the disk information such as ○ means it is the current working disk. If disk is damaged, system shows as "?"

Figure 5-27

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5.6.2 BPS

This menu displays current video data stream in (KB/s) and hard disk storage in (MB/h).
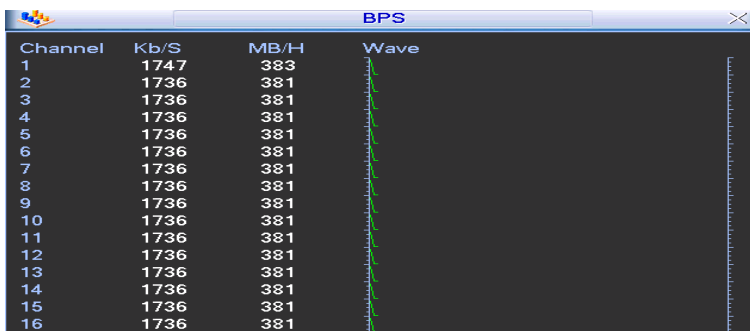See Figure 5-28.

Figure 5-28

5.6.3 Log

This displays the system log file. System lists the following information. See Figure 5-29.
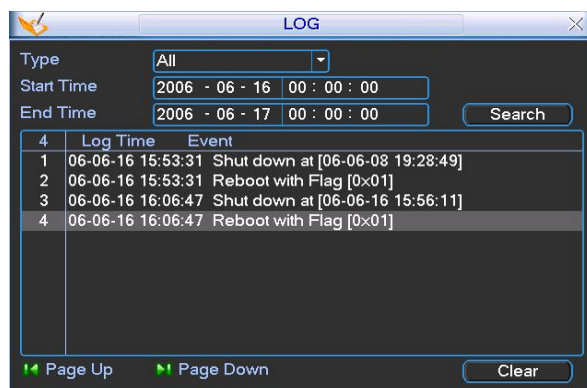

Figure 5-29

5.6.4 Version

This menu displays system and version information. See Figure 5-30.
● Channels
● Alarm in
● Alarm out
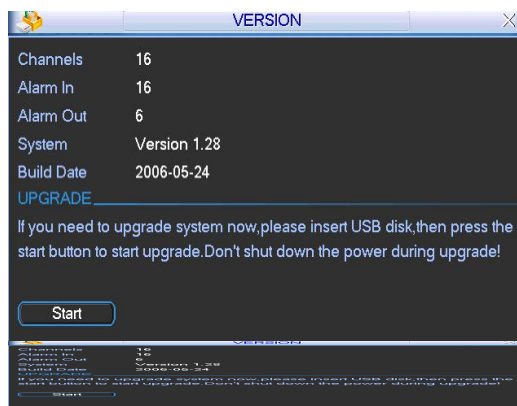● System version:
● Build Date:
● Start upgrade

Figure 5-30

5.6.5 Online Users

This menu is for managing online users. See Figure 5-31.

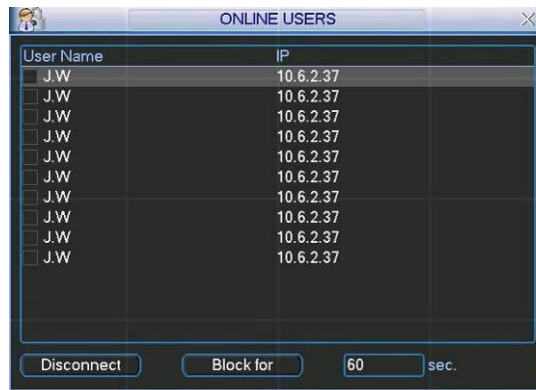You can disconnect one user or block one user if you have proper system rights.

Figure 5-31

5.7 Shutdown

This menu displays a dialogue box for you to select. See Figure 5-32.

- Logout menu user: log out menu. You need to input password when you login the next time.
- Restart application: reboot DVR.
- Shutdown: system shuts down and turns off power.
- Restart system: system begins rebooting.

Figure 5-32

6 About Auxiliary Menu

6.1 Go to Pan/Tilt/Zoom Menu

In single screen monitor mode, right click mouse or (click "Fn" Button in the front panel or click AUX key in the remote control). The menu below is displayed: See Figure 6-1.

Figure 6-1

Click Pan/Tilt/Zoom, the interface is shown as in Figure 6-2.

Here you can set the following items:

- Zoom
- Focus
- Iris

Click icon ⊖ and ⊕ to adjust zoom, focus and Iris.

Figure 6-2

In Figure 6-2, please click direction arrows (See Figure 6-3) to adjust PTZ position. There are a total of eight direction arrows. (Please note there are only four direction arrows in DVR front panel.)

Figure 6-3

6.1.1 3D Intelligent Positioning Key

In the middle of the eight direction arrows, there is a 3D intelligent positioning key. See Figure 6-4 . Click this button and system goes back to the single screen mode. Drag the mouse in the screen to adjust section size.

Figure 6-4

The following is a reference table for PTZ functions:

Name	Function key	function	Shortcut key	Function key	function	Shortcut key
Zoom	⊖	Near	►	⊕	Far	►►
Focus	⊖	Near	◄	⊕	Far	►
Iris	⊖	close	‖ ◄	⊕	Open	► ‖

6.2 Preset / Patrol / Pattern /Border Function

In Figure 6-2 click the set button. The interface is shown as below:
Here you can set the following items:
- Preset
- Patrol
- Pattern
- Border

Figure 6-5

In Figure 6-2, click page switch button, you can see a menu as in Figure 6-6.
Here you can activate the following functions:
- Preset
- Patrol
- Pattern
- Aux on
- Aux off
- Auto scan
- Auto pan
- Light on

Figure 6-6

6.2.1 Preset Setup

Note: The following steps are shown in Figure 6-2, 6-5 and 6-6.

In Figure 6-2, use the eight direction arrows to adjust camera to the required position.

In Figure 6-5, click preset button and input preset number. The menu is shown as in 6-7.

Add this preset to a patrol number

Figure 6-7

6.2.2 Activate Preset

In Figure 6-6 please input preset number in the No. blank field and click preset button.

6.2.3 Patrol Setup

In Figure 6-5, click patrol button. The interface is shown as in Figure 6-8.

Input preset number and then add this preset to one patrol.

Figure 6-8

6.2.4 Activate Patrol

In Figure 6-6, input patrol number in the No. blank and click patrol button

6.2.5 Pattern Setup

In Figure 6-5, click pattern button and then click begin button. The menu below is displayed in Figure 6-9.

Please go to Figure 6-2 to modify zoom, focus, and iris. Go back to Figure 6-9 and click end button.
You can memorise all these setups as pattern 1.

Figure 6-9

6.2.6 Activate Pattern Function
In Figure 6-6 input mode value in the No. blank field and click pattern button.
6.2.7 Border Setup
In Figure 6-5, click border button. The menu is shown as in Figure 6-10.
Please go to Figure 6-2, use direction arrows to select camera left limit, and then please go to Figure 6-10 and click left limit button
Repeat the above procedures to set right limit.

Figure 6-10

6.2.8 Activate Border Function
In Figure 6-6, click auto scan button, the system begins auto scan. Correspondingly, the auto scan button changes to stop button.
Click stop button to terminate scan operation.

6.3 Dome Menu Control

In Figure 6-6, click page switch button, the menu is shown below. See   Figure 6-11
Click menu to enter dome menu. The direction arrows here are to control dome menu.
Click page switch button and system goes back to Figure 6-2.

Figure 6-11

7 WEB CLIENT OPERATION

Please note, that all the operations here in chapter seven are based on the 16-ch DVR as an example. There might be slight differences in the interface with other machines.

7.1 Network connection

Before using web client operation, please check the following items:
- Network connection is made.
- DVR and PC network setup is correct. Please refer to network setup (Main Menu->Setting->Network)
- Try a ping ***.***.***.*** (* DVR IP address) to check connection is OK or not.

7.2 Login and logout

Open Internet Explorer and input DVR address in the address column. For example, if your DVR IP is 10.1.27.200, then please input http:// 10.1.27.200 in IE address column.

System displays warning information to ask you whether to install webrec.cab control or not. Please click yes button.

If you can't download the ActiveX file, please modify your settings as follows. See Figure 7-1.
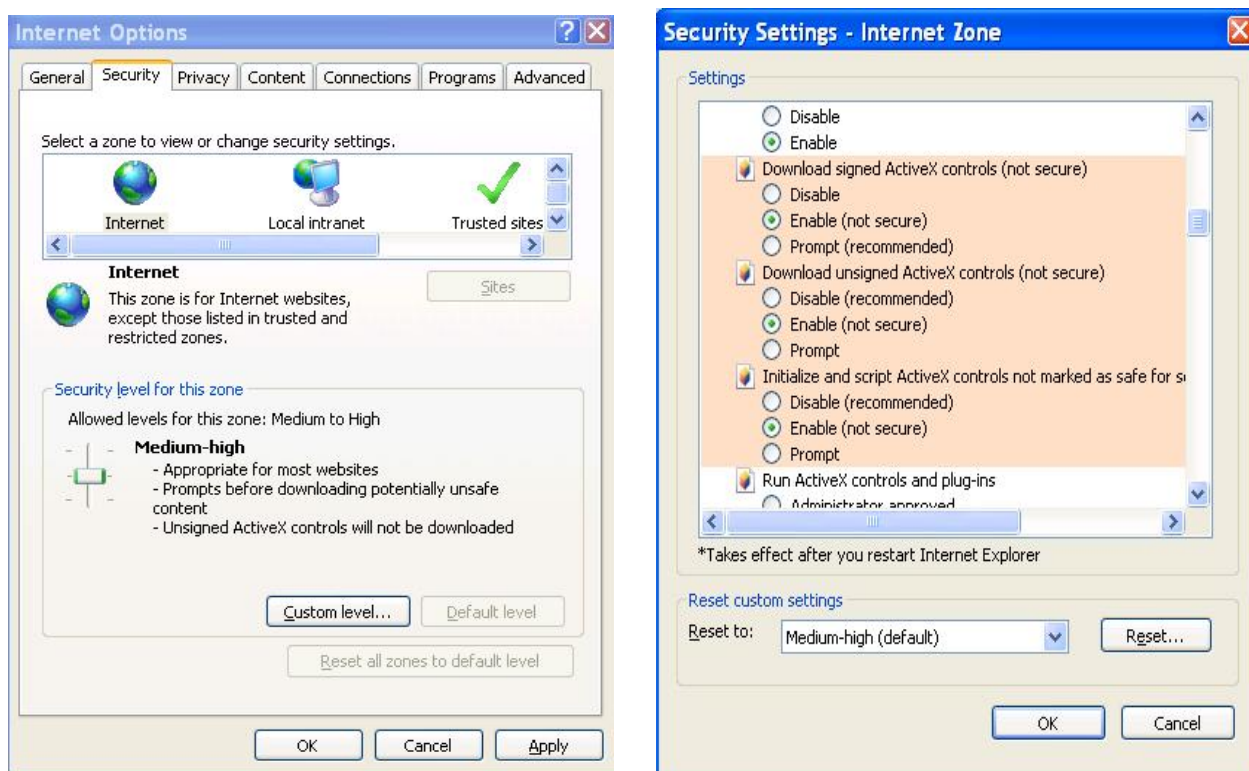

Figure 7-1

After installation, the interface is shown as below. See Figure 7-2.
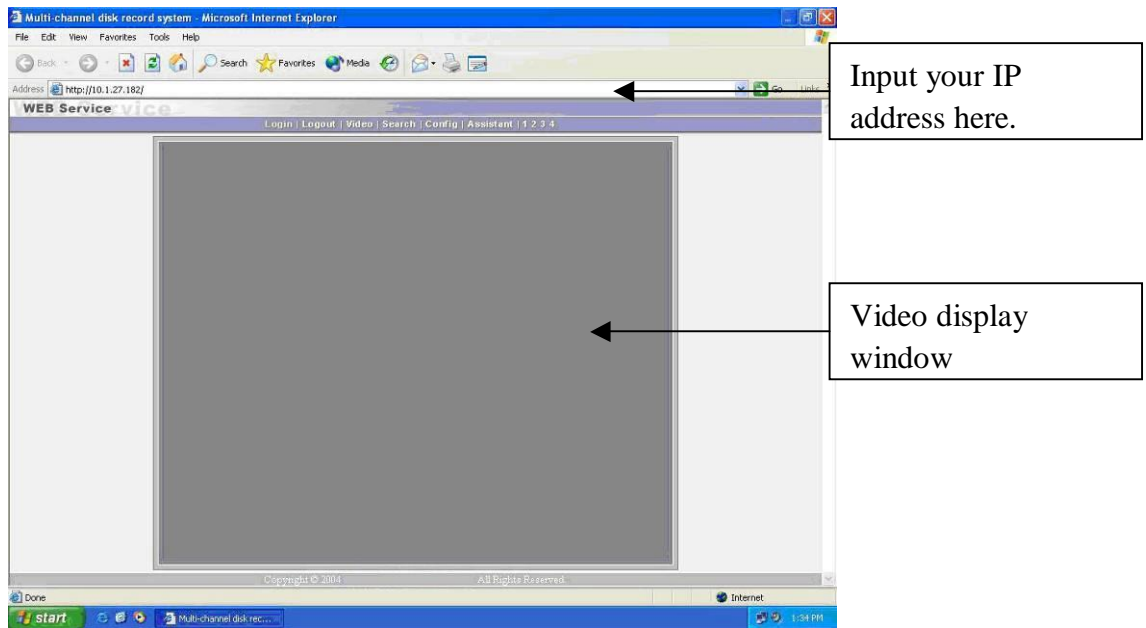
Figure 7-2

There are six function keys: login, logout, video, search, configuration and assistant. See   Figure 7-3.
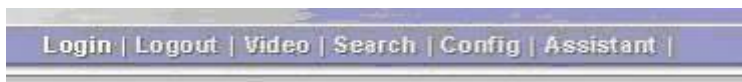

Figure 7-3

Click login and the following interface will be dispalyed. See Figure 7-4. Please input your user name and password. Default factory name is admin and password is admin.
Note: For security reasons, please modify your password after you first login.
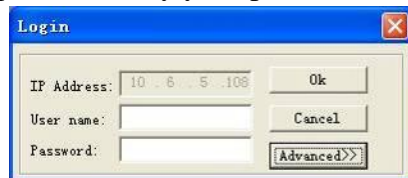

Figure 7-4

7.3 Go to Real-time Monitor Mode

There are three ways for you to go to real-time monitor mode.
● Select the channel number besides function key. See Figure 7-5.

Figure 7-5

● In Figure 7-5, click "video" button then select real-time monitor, click the channel number you want to view.
● In the main window, right click mouse, select the channel you want to view from real-time monitor.

7.4 Video (Right Mouse Menu Operation)

After login, click video button or right click mouse, the menu below is shown. See Figure 7-6.

● Real-time monitor: choose the channel you want to view.
● Start dialogue: click here to begin audio talk.
● Multi-camera preview: System supports various video preview modes.
● Decode quality: there are a total of four levels: general, good, better and best.
● Playback control bar: controls playback.
● PTZ control: controls PTZ movement. Before operation, please make sure you have set PTZ parameters in DVR Main Menu.
● Volume adjustment: adjusts PC audio volume.
● Alarm setting: set alarm input and alarm output.
● Network data flux: view current data flux
● Full screen: enter full screen display mode.
● Video zoom: the following zoom options are available: 20%,40%,60%,80%,100%
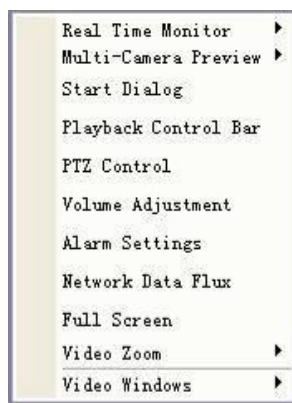● Video windows: Support 1/2/4 window display mode.

Figure 7-6

7.4.1   Real time Monitor
Select the real-time monitor channel.
7.4.2   Multi-camera Preview
Select camera preview modes: 1/2/3/4/9/16.
7.4.3   Start Dialog
Click this button to enable audio talk function.
7.4.4   Decode Quality
Select decode quality. There are a total of four levels: general, good, better and best.
7.4.5   Playback Control Bar
Use the playback bar when you are viewing video files. See Figure 7-7.

Record   Stop   Snapshoot   Full-screen   Close

Figure 7-7

7.4.6 PTZ Control

 Please click the corresponding direction arrow to adjust zoom, focus and iris. See Figure 7-8.
Note: before you operate this function, please make sure you have properly set PTZ protocol (Main menu->Setting->Pan-tilt Zoom).
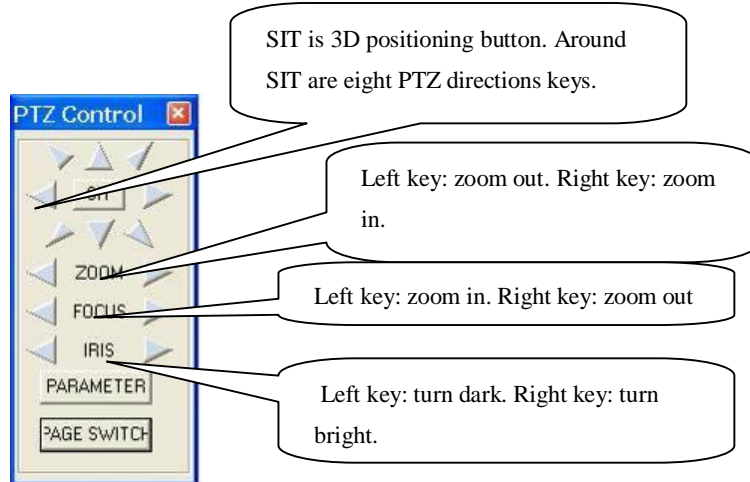

Figure 7-8

Click parameter button in Figure 7-8. The interface is shown below. See   Figure 7-9.
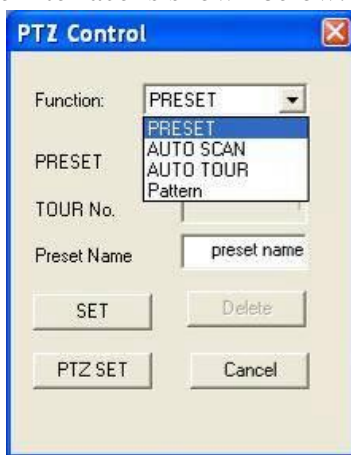

Figure 7-9

In Fig 7-9, click PTZ set button. You can see the following dialogue box.. See Figure 7-10. You can select from the dropdown list.

Figure 7-10

7.4.7 Volume Adjustment

Please drag volume bar to adjust audio level. You can √ Mute to turn off audio.
See Figure 7-11.

Figure 7-11

7.4.8 Alarm Setting

Click alarm setting, you can set alarm input and output. See Figure 7-12.

Figure 7-12

7.4.9 Network Data Flux

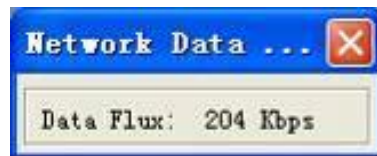This displays the network transmission data flux statistics.   See Figure 7-13.

Figure 7-13

7.4.10 Full Screen

There are two ways to view full screen monitor: One is to double click on the current monitor window directly; the other is to select Full screen in the right click menu items.

During multi-window state, choose one of the windows and double click for full screen display.

7.4.11 Resize Video

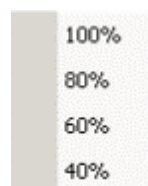There are four display ratios for you to choose: 40%, 60%, 80% and 100%. See Figure 7-14.

Figure 7-14

7.4.12 Video Windows

This is used to select display mode. See Figure 7-15.

Figure 7-15

7.5 Search

Here you can select video type, channel number and time to search the file you want.

Click search button, the interface is shown as below. See Figure 7-16

Please use page up/down key to view the search results.

Double click file name, you can view the file and system will automatically backup the image in your installation directory.
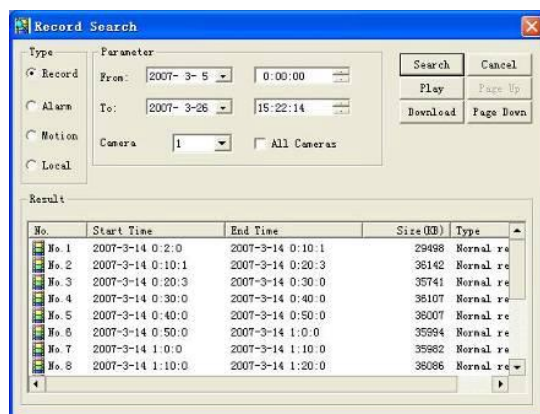

Figure 7-16

In the search result interface, you can select one or more files to download to your local PC.

The playback bar is shown as below. See Figure 7-17.

1: Save

2: Stop

3: Snapshoot

4: Fast Backward

5: Play

6: Pause

7: Fast play

8: Hide

9. Full-screen
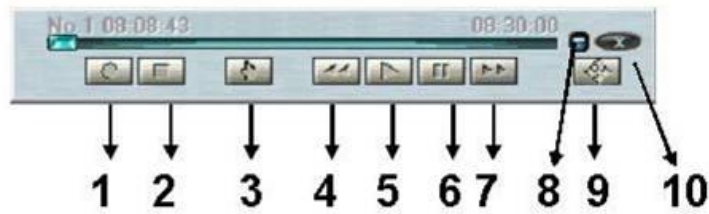
10. Close

Figure 7-17

7.5.1 Download

You can select one or more files you want to download and then click download button. System displays a dialogue box asking you to specify directory. See Figure 7-18.
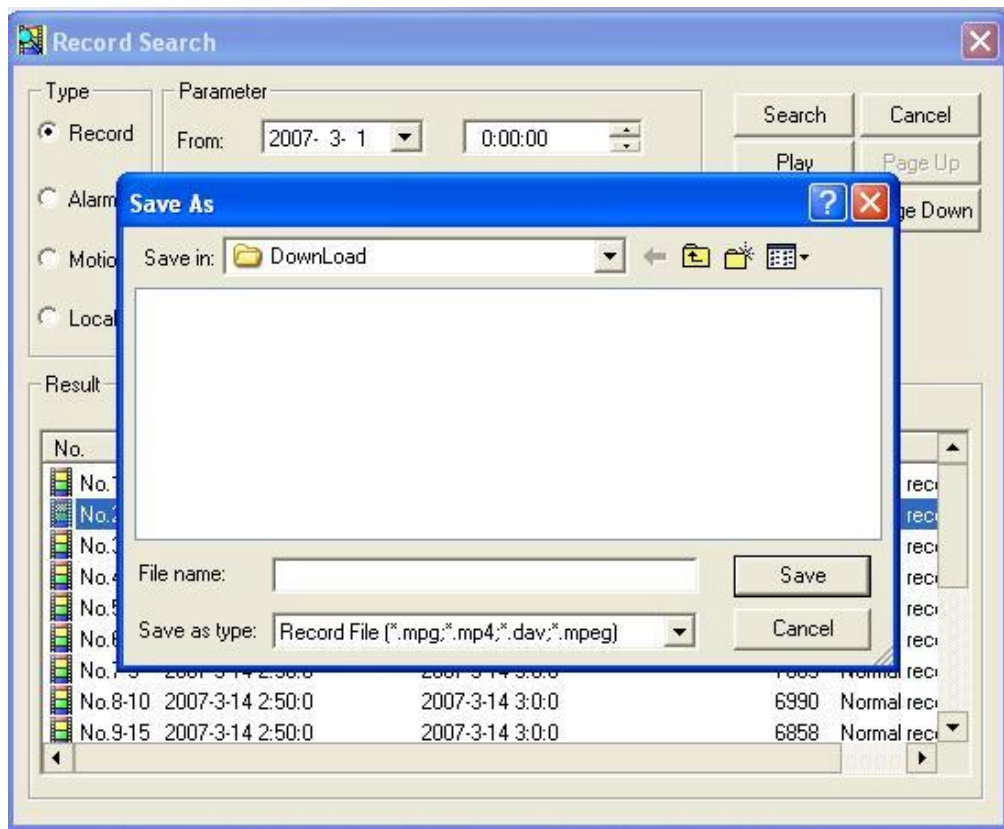
Figure 7-18

Then you can input file name and click save to backup file in your local pc.

During the download process, there is a process bar for you reference. See Figure 7-19.
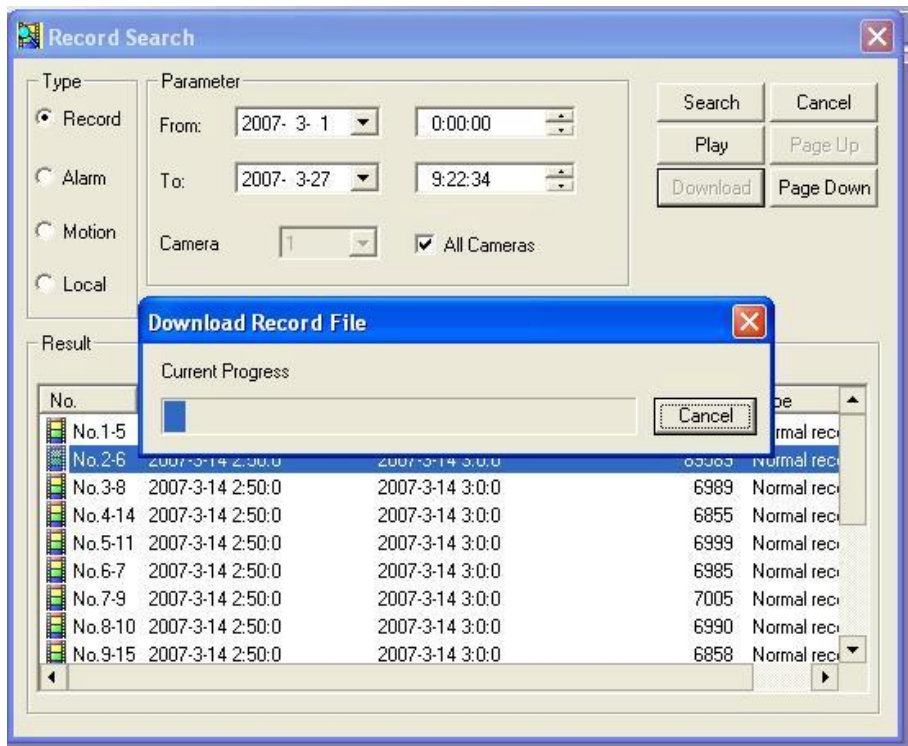
Figure 7-19

Download file name is usually made up of: file name +Channel N +date +time.

File extension name is .dav.

For example: file name a-0120071205071028.mp4 means:

- 01: channel 1
- 20071205: 5th December,2007
- 071028 :7 o'clock 10 minutes 28 seconds.

7.6 Configure

Click configure button, there are in total seven function keys. See Figure 7-20.

- Image
- Alarm
- Motion detection
- Network
- Video parameter
- General
- Schedule
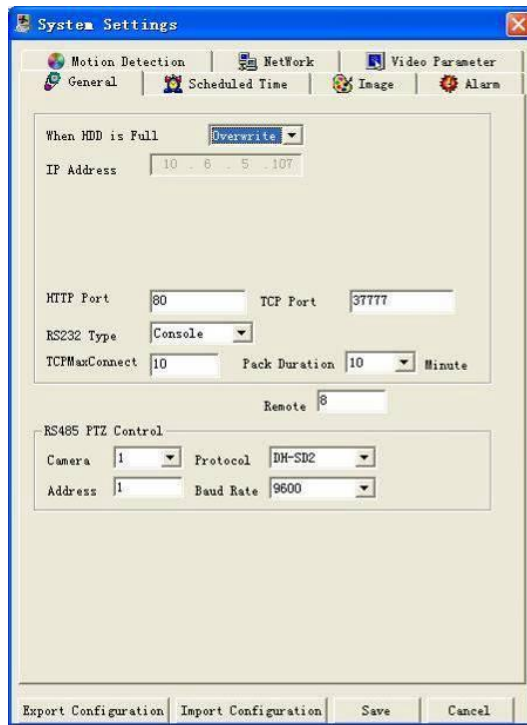
Figure 7-20

7.6.1 Load and Save Configuration

7.6.1.1 Save configuration
Click export configuration button in Figure 7-20.You can save current configuration to a directory. The file extension name is CFG. See Figure 7-21.
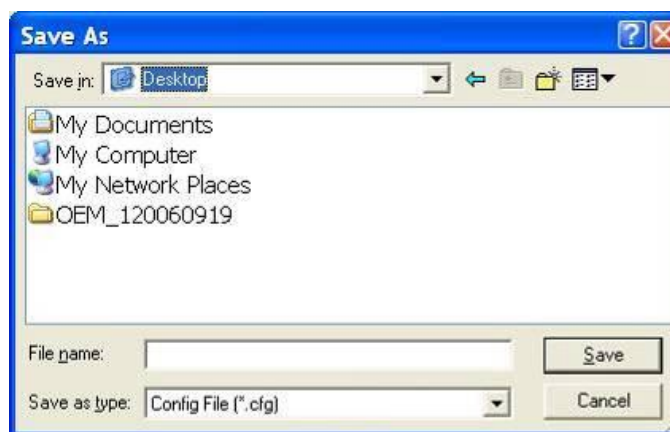
Figure 7-21

7.6.1.2 Load configuration
Click import configuration button in Figure 7-20. You can √ checkbox to load your backup file. See Figure 7-22. Click Ok button and then select file with .CFG extension.
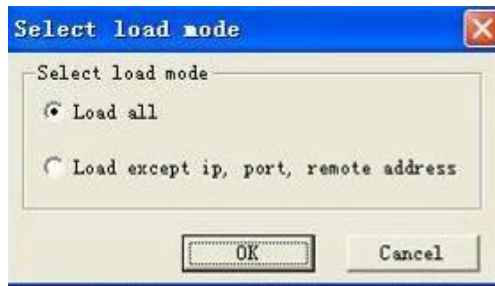
Figure 7-22

7.6.2 General

Click general button, the interface below is shown. See Figure 7-23.

Select file length and choose overwrite the previous file or stop recording when disk is full.

You can select channel number, protocol, address and baud rate to control a PTZ.
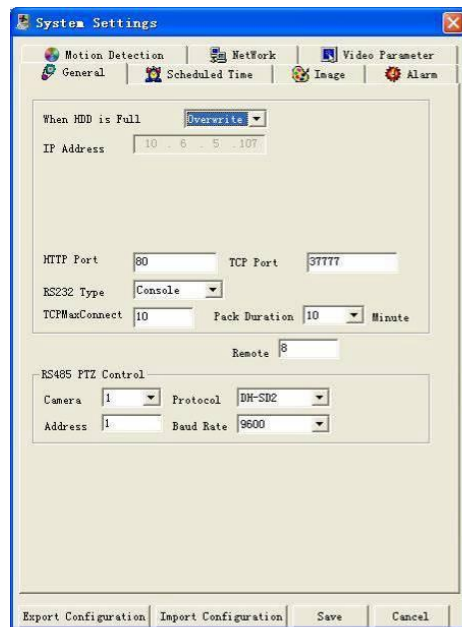
Figure 7-23

7.6.3 Schedule

Click schedule button and the interface is shown as in Figure 7-24.

Here you can √ Sunday to Saturday to set various time periods (from 0 to 24 hrs).

Use √ to enable record type: record/motion/alarm.
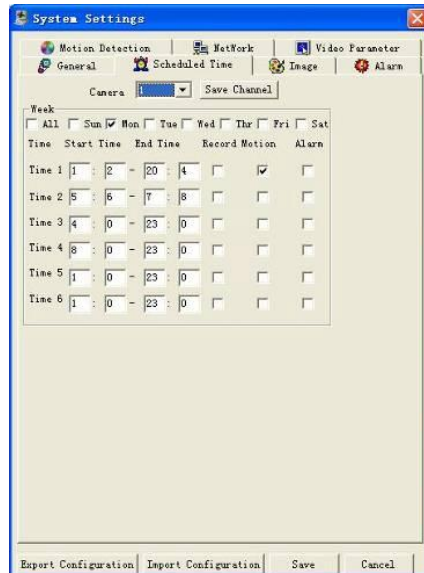
Figure 7-24

7.6.4 Image

Click image button and the interface below is shown. See Figure 7-25.

Here you can set encode mode, quality and protocol for each channel. You can select from a dropdown list.

- FPS (PAL): there are several options: 1/2/3/6/12/25. (Some series DVRs only support 25f/s PAL.)
- Data: there are two data modes: CBR/VBR. Always use VBR for networked systems.
- Quality: There are six levels. The different data flux occupies different bandwidth and the transmission image qualities are also different. Among them, level 6 needs the widest bandwidth and can produce the best image quality. **Please note your setup here only applies for image quality in web or client end.**
- Resolution: there are several resolutions for you. You can select from the dropdown list.
- Alarm when video loss: You can enable or disable alarm function when alarm loss occurs.
- Network transmission protocol: Select protocol for network playback and monitor. You can select from the dropdown list.
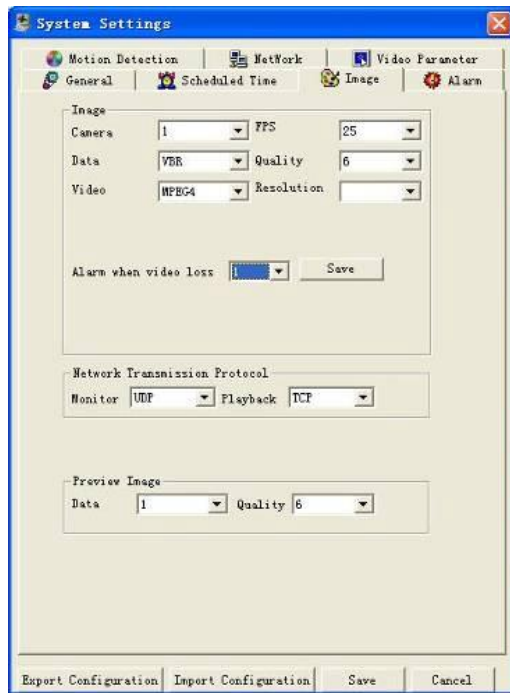
Figure 7-25

7.6.5 Alarm

This is used to choose record channel and output port. See Figure 7-26.

There are two alarm types: normally open or normally closed.

Delay time ranges from 10 to 300 seconds.

You can √ the check box to enable record camera and output port.
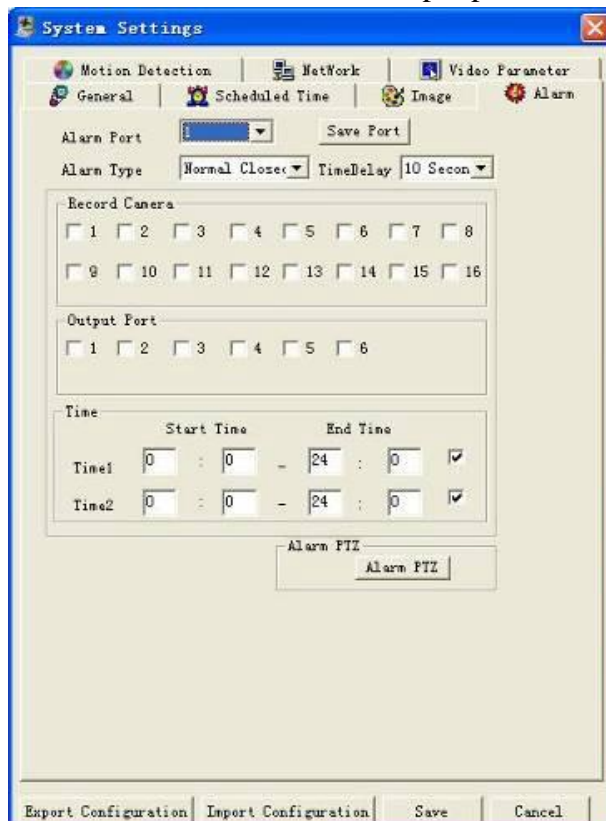
Figure 7-26

In Figure 7-26 click alarm PTZ button, you can see the following interface. See Figure 7-27.

There are three options: preset, auto scan and tour.
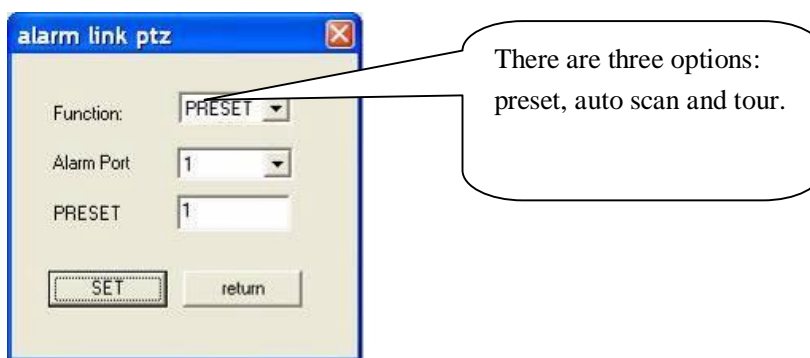
Figure 7-27

7.6.6   Motion Detection

Motion detection will take effect when you exclude the time you have set in the corresponding schedule recording. See Figure 7-28.

The lighter coloured area is the selected motion detection area.

Click **Full screen** or right click mouse to view the motion detection area in full screen.

After setting the area you can **Save channel** or **Clear** the area.

Alarm output：Here you can enable alarm output channel. Please √   the check box.

Please note if you want to set this channel as motion detection recording, you need to turn off the schedule recording setup for this channel (Main Menu->Setting->Schedule).
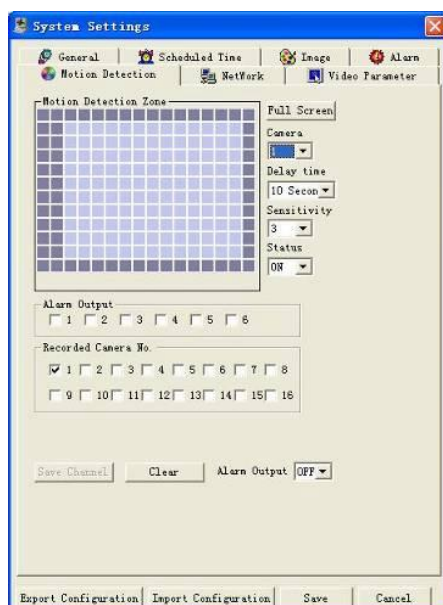
Figure 7-28

7.6.7   Network

Network interface is shown as in Figure 7-29.

7.6.7.1 PPPoE Connection (NOTE: PPPoE is primarily used in the USA and does not apply in the UK)

Set PPPOE as on, and then please input "PPPoE name" and "PPPoE password" you get from your ISP (Internet service provider).

After saving it, you need to restart to active your configuration.

After rebooting, IP camera will connect to internet automatically. The IP in the PPPoE IP is the dynamic value.

7.6.7.2 Web visit via PPPoE

There are two ways.

 a. visit through current IP

After IP camera connected with Internet by PPPoE, please get your device's current IP. Now you can visit this IP camera via this IP.

 b. Visit via DNS

You need a PC of fixed IP in the internet and there is DDNS software running in this PC. In other words, this PC is a DNS (domain name server).

In network DDNS, input your PPPoE name you get from you IPS and server IP (PC with DDNS) .

Click save and then reboot system.

Click save button, system prompts for rebooting to get all setup activated.

After rebooting, open IE and input as below:

http：//(DDNS server IP)/(virtual directory name)/webtest.htm

e.g.: http：//10.6.2.85/DVR _DDNS/webtest.htm.)

Now you can open DDNSServer web search page.
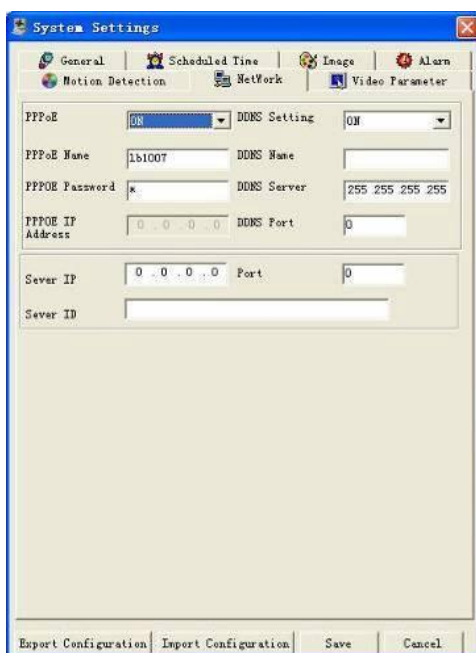
Figure 7-29

7.6.8 Video Parameter

Video parameter setup interface is shown as in Figure 7-30. Before setup please select channel number first

- Audio enable: You can select to close or open audio.
- Auto white balance: You can select to close or open white balance.
- Image: You can adjust colour, contrast, brightness, saturation etc.

After finishing channel setup, you can click "save" to save all configurations.
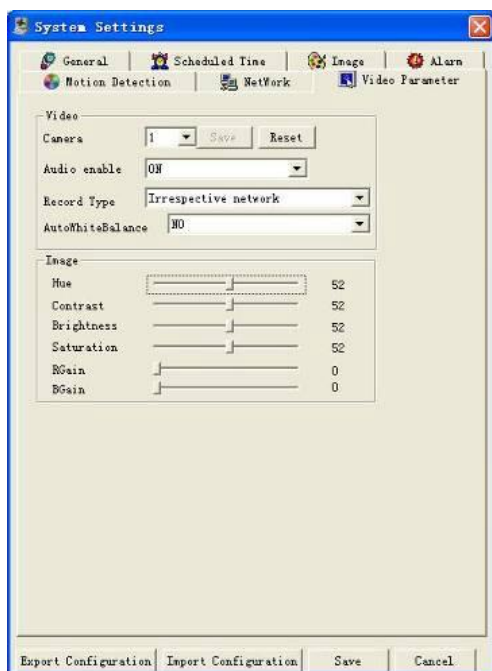
Figure 7-30

7.7 Assistant

Click assistant setting, the interface is shown below. See Figure 7-31. There are nine function keys. Please note Matrix control item only applies for some special series.
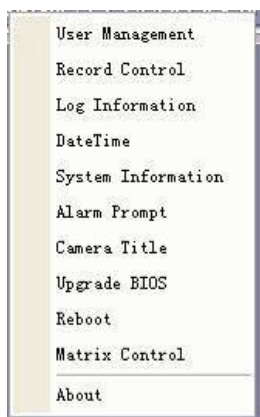
Figure 7-31

7.7.1 User Manage

This interface allows you to manage users and user groups. See Figure 7-32. You can click '+' to see the whole group list.
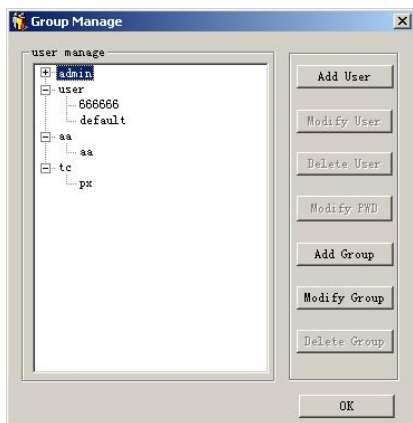
Figure 7-32

7.7.1.1 Add Group
Click "add group" button to input group name. See Figure 7-33.

Figure 7-33

Click "Power" button to set group power.
Click "Save" button to save configuration

7.7.1.2 Delete Group
Click "Delete Group" button, the interface is shown as in Figure 7-34.
Note: You can only delete an empty group (i.e: There are no users in current group).
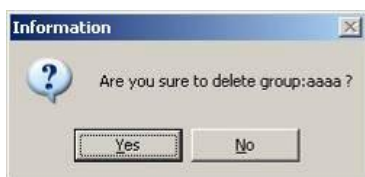
Figure 7-34

7.7.1.3 Modify Group
Click modify group, the interface is shown as in Figure 7-35. You can modify group name and then click "power" button to set rights for the whole group.

Figure 7-35

7.7.1.4 Add User

Click "Add User" button using the interface shown in Figure 7-36.

Input user name, password, and then input password again to confirm.
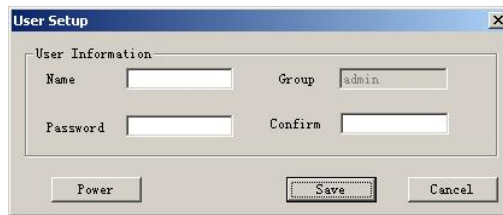
Figure 7-36

7.7.1.5 Power

When you add new user or new group (such as in Figure 7-33,Figure 7-36.), click "power" button, the interface is shown as in Figure 7-37. Here you set user's power.

There are three power groups: main control power/monitor power/playback power.

You can √ the checkbox to enable corresponding function.
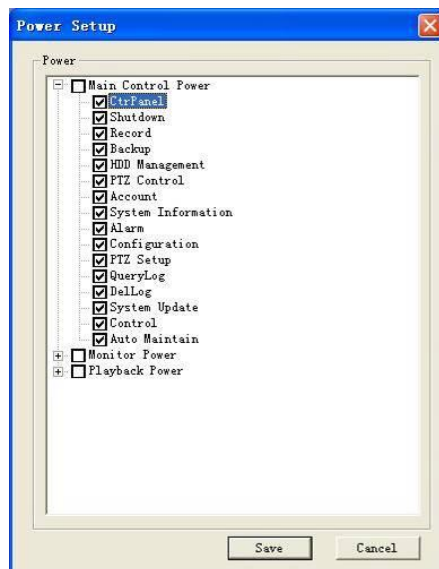
Figure 7-37

7.7.1.6 Modify user

Select one user and then click modify user button, the interface is shown as in Figure 7-38. Here you can modify user name.

Figure 7-38

7.7.1.7 Delete user

Select one user and then click "delete user" button, you can see the following dialogue box. See Figure 7-39. Click "Yes" to delete current user.
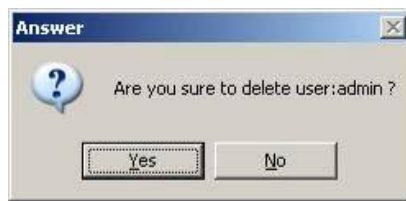
Figure 7-39

7.7.2   Record Control

Click "record control" button the interface is shown as below. See Figure 7-40. You can select mode for each channel.
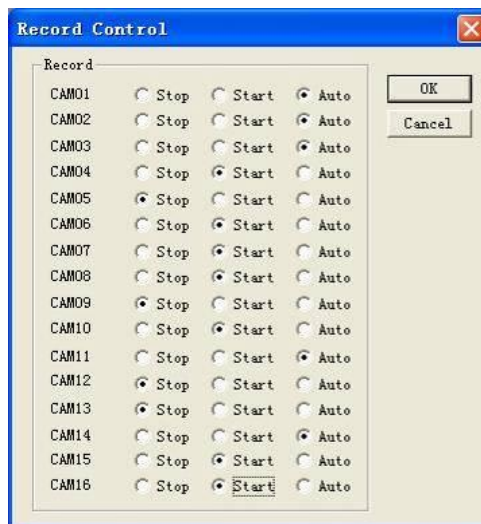
Figure 7-40

7.7.3   Log Information

System can automatically backup log information.

You can click this button to view detailed information. See Figure 7-41.

Once you click save log button, the log files will be automatically saved in the root directory such as "C:\ as a text file (e.g.: C:\ 10.1.27.193-log.txt)

86
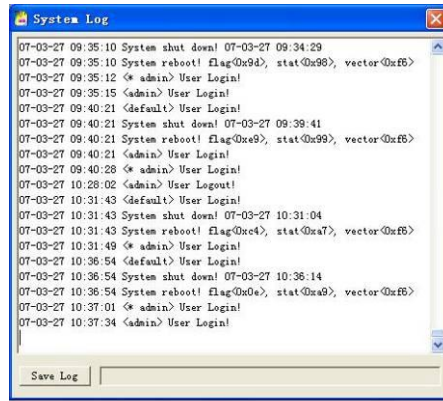
Figure 7-41

7.7.4 Date and Time

Here you can modify system date and time. See Figure 7-42.
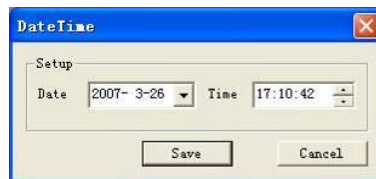
Figure 7-42

7.7.5 System Information

Here you can view basic system information. See Figure 7-43.

Here you can

● Turn on/off audio
● Select video type
● Select preview image
● Preview image
● Close or open auto tour monitoring
● View network data flux
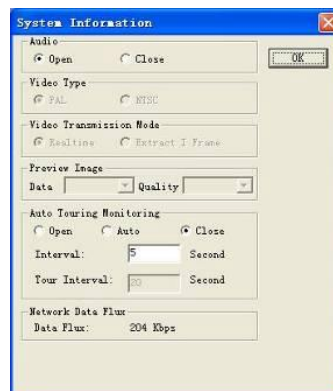
Figure 7-43

7.7.6 Alarm Prompt

This interface allows you to choose different alarm audios. See Figure 7-44.

You can select system AlarmSound.wav file from folder system32 as your audio sound.

Figure 7-44

7.7.7 Channel Name

The interface below allows you to modify channel name.

The revised channel names will be displayed on the screen.

The default setting of the channel name is Channel No.1 to Channel No.16. See Figure 7-45.

Please note when you modify channel name at the DVR end, this modification does not apply to web end. You will need to use this interface to refresh.
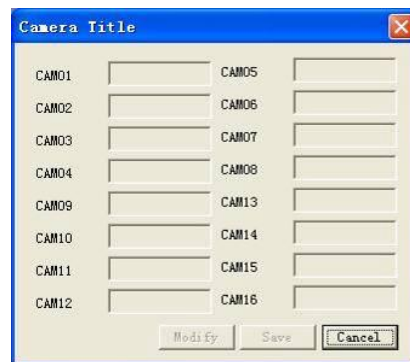
Figure 7-45

7.7.8 Upgrade BIOS

Click upgrade BIOS button, the interface is shown below. See Figure 7-46.

Open the BIOS file and then click send BIOS button.

During the upgrade process, there is a process bar for your reference.

Once the upgrade is in progress do not interrupt process as you could permanently damage DVR.
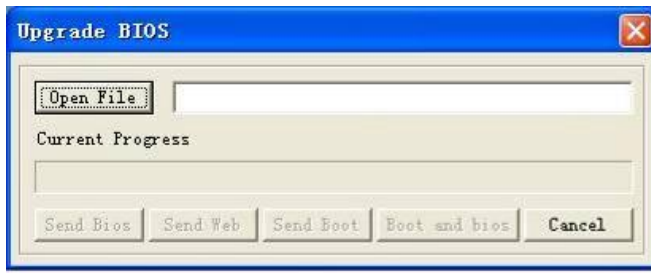
Figure 7-46

7.7.9 Reboot

Click reboot button, system displays a warning dialogue box to alert you. See Figure 7-47.
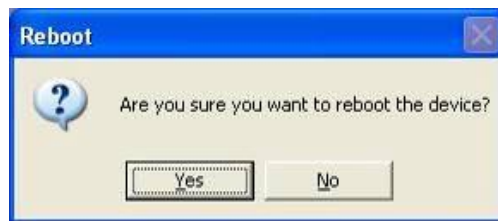
Figure 7-47

7.7.10 About

This interface gives you basic system information. See Figure 7-48.

Figure 7-48

7.7.11 Mail (Applies to 16-ch Only)

In the Assistant Setup, select Email function. You can see the interface is shown in Figure 7-49.
Here you can input server IP, receiver, Email title etc.
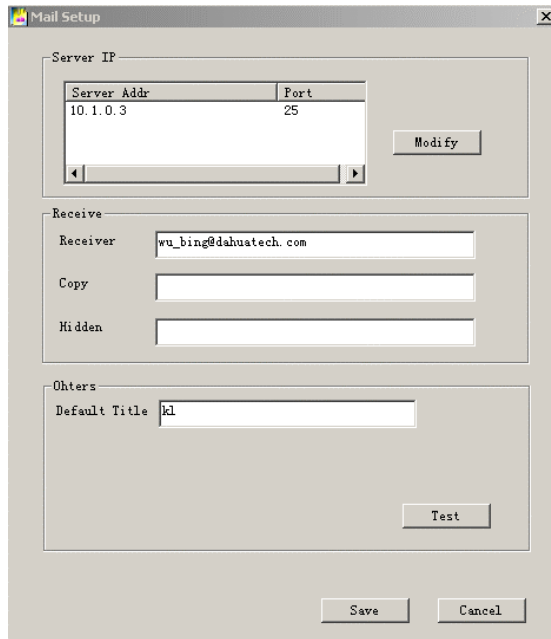
Figure 7-49

Now you can set alarm information for future upload.
For motion detection, you can enable Email function in detection interface.
For external alarm, you can enable Email function in alarm setup interface.
See Figure 7-50.
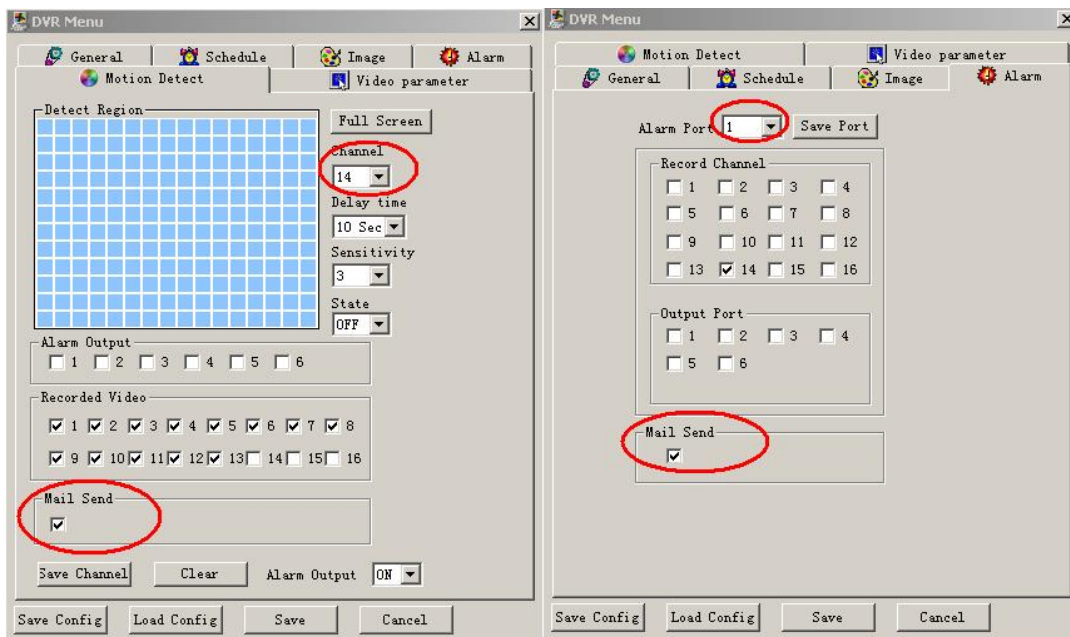
Figure 7-50

After setup, you can receive Email from client end.

The email content is shown below:

Alarm Matter: Email Test...

Alarm In Channel: 255

Alarm Start Date (Day/Month/Year Hour:Minute:Second): 12/12/2006 16:30:20

Alarm Device Name: localhost

Mail_Sender IP : 10.6.3.8

In motion detection mode, you can set Email function (Enable/disable) for each channel.

The email content is shown below.

Alarm Matter: Motion Detect

Alarm In Channel: 2

Alarm Start Date (Day/Month/Year Hour:Minute:Second): 12/12/2006 15:5:36

Alarm Device Name: localhost

Mail_Sender IP : 10.6.3.9

7.8 Un-install Web Control

There are three ways for you to un-install web control.

● From start, click run and then input order regsvr32 -u WebRec.ocx.

● Use web un-install tool "uninstall web.bat" to un-install web control.

8 sightBoss System

The sightBoss system allows you to manage a lot of DVRs remotely.

8.1 Features

The sightBoss system has the following features:
- Manages devices conveniently
- Supports multiple-device connection, real-time surveillance and playback
- Device management, log review and user management
- PTZ control and device alarm, video record
- Supports multiple-device upgrade simultaneously
- E-map and network backup support

8.2 Environment

We recommend the following minimum PC system configuration:
Hardware
- CPU P4 2.0G
- Video card: supports hardware zoom such as ATI, TNT2 PRO. We   recommend ATI9800 or above dual channel. 128M/128bit
- Network card: 100M

Software
- For client end we recommend Windows 2000 or Windows XP.

8.3 Overview

Multiple-client main window is shown in Figure 8-1.
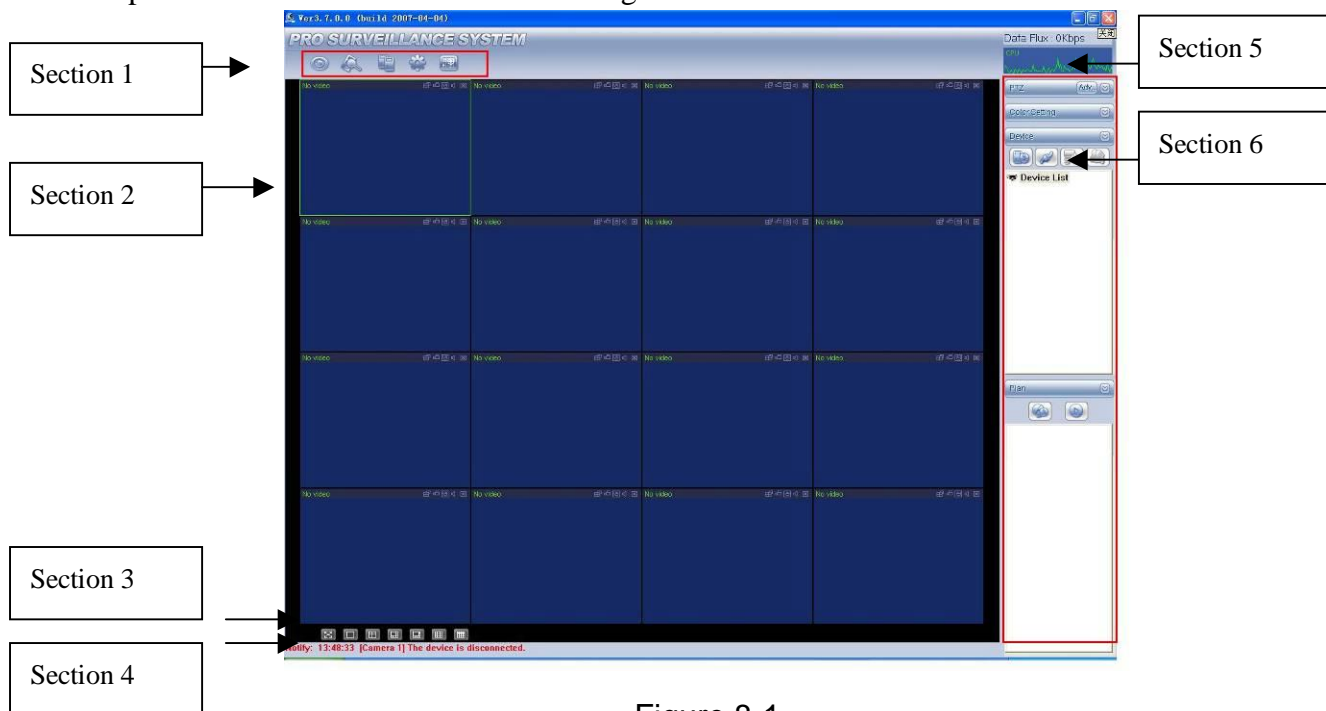
Figure 8-1

There are a total of six sections:
- Section 1: There are five function keys: monitor, record, device, system and e-map. Please refer to chapter four for detailed information.
- Section 2: View channel video.
- Section 3: Select display mode. System supports the following display modes: full-screen /single window/four-window/six-window/eight-window/nine-window/sixteen-window.
- Section 4: View current help information.
- Section 5: Display data flux and CPU status.
- Section 6: There are four function buttons: PTZ/Colour setting/Device/Plan. Please refer to chapter three for detailed information.

8.4 More Details

Please refer to the sightBoss System User's Manual for more information.

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9 FAQ

1. Can this system run in windows 98?
Yes but you will need to install DIRECTX 7.0 or higher. Note that performance on an older type PC may be degraded.

2. System cannot detect hard disk.
First check jumper position on drive and that IDE data cable and power cord are correctly connected. When only one hard drive is connected to an IDE interface, this hard drive has to be set as a Master.

3. I cannot use Schedule record function.
Please note the recording time unit takes one day as a working unit i.e.: from 0000hrs to 2400hrs.

4. Record light is flashing during the whole recording procedure.
Check the external video input signal. This problem usually happens when the inputting signal is not standard. Sometimes the reading speed of the Hard Drive is too slow. In this situation, you will need to change the hard drive.

5. My DVR is very hot, is there any problem?
The DVR365 does generate considerable heat. It is very important that the environment where the unit is installed is dry and free from dust. Always ensure the unit is installed in a well-ventilated position and that air vents are not covered.

6. I cannot see video signal on one channel while the other channels are ok
Check the video cable connection. Connect the camera video cable direct to the monitor to test. If there is still no signal, there may be a problem with the camera or video cable.

7. I cannot use my remote controller.
Check ACT light on the front panel is on or not.
● ATC light is on:
You need to change you remote controller battery.
● Act light is off:
Please move remote controller directly to the DVR, and then press address button. System displays address input dialogue box. Please input you remote address (default value is 008). When ACT light is on, you can use it.

8. I cannot control PTZ or dome
Check RS485 connections are correctly connected.
Check system setup. Please refer to 5.3.7 pan-tilt setup.
Protocol and Baud Rate must agree with physical PTZ setup.

9. I cannot login via web

There are two conditions:

● Network connection failure

Check your DVR and PC connections are correct. Please check DVR IP address, network cable and Gateway address. Use ping facility to check PC can see DVR.

● Invalid password or username. Please check correct username and password have been specified.

10. When I first connect to the server video quality is poor.

If the image returns to normal in five seconds, effect is normal.

11. What peripheral equipment DVR can work with?

This DVR supports equipment such as keyboards, alarm input and output equipment and alarm servers and access control systems.

Slight differences may be found in user interfaces subject to level of machine software installed.

All the designs and software here are subject to change without prior written notice.
Please visit our website for more information.

10. Days Recording Per HDD Size Based on 4 Channel Machine

Resolution	Quality Setting	FPS	Gb/H Per Channel	Gb/H Per Machine	80Gb	160Gb	250Gb	300Gb	400Gb	750Gb	1000Gb
D1	6	25	1.22	4.88	0.7	1.4	2.1	2.6	3.4	6.4	8.5
D1	4	25	0.79	3.16	1.1	2.1	3.3	4.0	5.3	9.9	13.2
D1	1	25	0.36	1.44	2.3	4.6	7.2	8.7	11.6	21.7	28.9
D1	6	12	0.67	2.68	1.2	2.5	3.9	3.2	5.2	6.0	6.9
D1	4	12	0.43	1.72	1.9	3.9	6.1	7.3	9.7	18.2	24.2
D1	1	12	0.35	1.4	2.4	4.8	7.4	8.9	11.9	22.3	29.8
HD1	6	25	0.66	2.64	1.3	2.5	3.9	8.9	11.9	22.3	29.8
HD1	4	25	0.43	1.72	1.9	3.9	6.1	7.3	9.7	18.2	24.2
HD1	1	25	0.15	0.6	5.6	11.1	17.4	20.8	27.8	52.1	69.4
HD1	6	12	0.36	1.44	2.3	4.6	7.2	8.7	11.6	21.7	28.9
HD1	4	12	0.23	0.92	3.6	7.2	11.3	13.6	18.1	34.0	45.3
HD1	1	12	0.11	0.44	7.6	15.2	23.7	28.4	37.9	71.0	94.7
CIF	6	25	0.35	1.4	2.4	4.8	7.4	8.9	11.9	22.3	29.8
CIF	4	25	0.22	0.88	3.8	7.6	11.8	14.2	18.9	35.5	47.3
CIF	1	25	0.11	0.44	7.6	15.2	23.7	28.4	37.9	71.0	94.7
CIF	6	12	0.19	0.76	4.4	8.8	13.7	16.4	21.9	41.1	54.8
CIF	4	12	0.12	0.48	6.9	13.9	21.7	26.0	34.7	65.1	86.8
CIF	1	12	0.08	0.32	10.4	20.8	32.6	39.1	52.1	97.7	130.2

10. Days Recording Per HDD Size Based on <u>8</u> Channel Machine

| Resolution	Quality Setting	FPS	Gb/H Per Channel	Gb/H Per Machine	80Gb	160Gb	250Gb	300Gb	400Gb	750Gb	1000Gb
D1	6	25	1.22	9.76	0.3	0.7	1.1	1.3	1.7	3.2	4.3
D1	4	25	0.79	6.32	0.5	1.1	1.6	2.0	2.6	4.9	6.6
D1	1	25	0.36	2.88	1.2	2.3	3.6	4.3	5.8	10.9	14.5
D1	6	12	0.67	5.36	0.6	1.2	1.9	6.4	2.6	12.1	3.5
D1	4	12	0.43	3.44	1.0	1.9	3.0	3.6	4.8	9.1	12.1
D1	1	12	0.35	2.8	1.2	2.4	3.7	4.5	6.0	11.2	14.9
HD1	6	25	0.66	5.28	0.6	1.3	2.0	4.5	6.0	11.2	14.9
HD1	4	25	0.43	3.44	1.0	1.9	3.0	3.6	4.8	9.1	12.1
HD1	1	25	0.15	1.2	2.8	5.6	8.7	10.4	13.9	26.0	34.7
HD1	6	12	0.36	2.88	1.2	2.3	3.6	4.3	5.8	10.9	14.5
HD1	4	12	0.23	1.84	1.8	3.6	5.7	6.8	9.1	17.0	22.6
HD1	1	12	0.11	0.88	3.8	7.6	11.8	14.2	18.9	35.5	47.3
CIF	6	25	0.35	2.8	1.2	2.4	3.7	4.5	6.0	11.2	14.9
CIF	4	25	0.22	1.76	1.9	3.8	5.9	7.1	9.5	17.8	23.7
CIF	1	25	0.11	0.88	3.8	7.6	11.8	14.2	18.9	35.5	47.3
CIF	6	12	0.19	1.52	2.2	4.4	6.9	8.2	11.0	20.6	27.4
CIF	4	12	0.12	0.96	3.5	6.9	10.9	13.0	17.4	32.6	43.4
CIF	1	12	0.08	0.64	5.2	10.4	16.3	19.5	26.0	48.8	65.1

10. Days Recording Per HDD Size Based on 16 Channel Machine

Resolution	Quality Setting	FPS	Gb/H Per Channel	Gb/H Per Machine	80Gb	160Gb	250Gb	300Gb	400Gb	750Gb	10 1000Gb
D1	6	25	1.22	19.52	0.2	0.3	0.5	0.6	0.9	1.6	2.1
D1	4	25	0.79	12.64	0.3	0.5	0.8	1.0	1.3	2.5	3.3
D1	1	25	0.36	5.76	0.6	1.2	1.8	2.2	2.9	5.4	7.2
D1	6	12	0.67	10.72	0.3	0.6	1.0	12.9	1.3	24.1	1.7
D1	4	12	0.43	6.88	0.5	1.0	1.5	1.8	2.4	4.5	6.1
D1	1	12	0.35	5.6	0.6	1.2	1.9	2.2	3.0	5.6	7.4
HD1	6	25	0.66	10.56	0.3	0.6	1.0	2.2	3.0	5.6	7.4
HD1	4	25	0.43	6.88	0.5	1.0	1.5	1.8	2.4	4.5	6.1
HD1	1	25	0.15	2.4	1.4	2.8	4.3	5.2	6.9	13.0	17.4
HD1	6	12	0.36	5.76	0.6	1.2	1.8	2.2	2.9	5.4	7.2
HD1	4	12	0.23	3.68	0.9	1.8	2.8	3.4	4.5	8.5	11.3
HD1	1	12	0.11	1.76	1.9	3.8	5.9	7.1	9.5	17.8	23.7
CIF	6	25	0.35	5.6	0.6	1.2	1.9	2.2	3.0	5.6	7.4
CIF	4	25	0.22	3.52	0.9	1.9	3.0	3.6	4.7	8.9	11.8
CIF	1	25	0.11	1.76	1.9	3.8	5.9	7.1	9.5	17.8	23.7
CIF	6	12	0.19	3.04	1.1	2.2	3.4	4.1	5.5	10.3	13.7
CIF	4	12	0.12	1.92	1.7	3.5	5.4	6.5	8.7	16.3	21.7
CIF	1	12	0.08	1.28	2.6	5.2	8.1	9.8	13.0	24.4	32.6

11 Networking a Digital Video Recorder
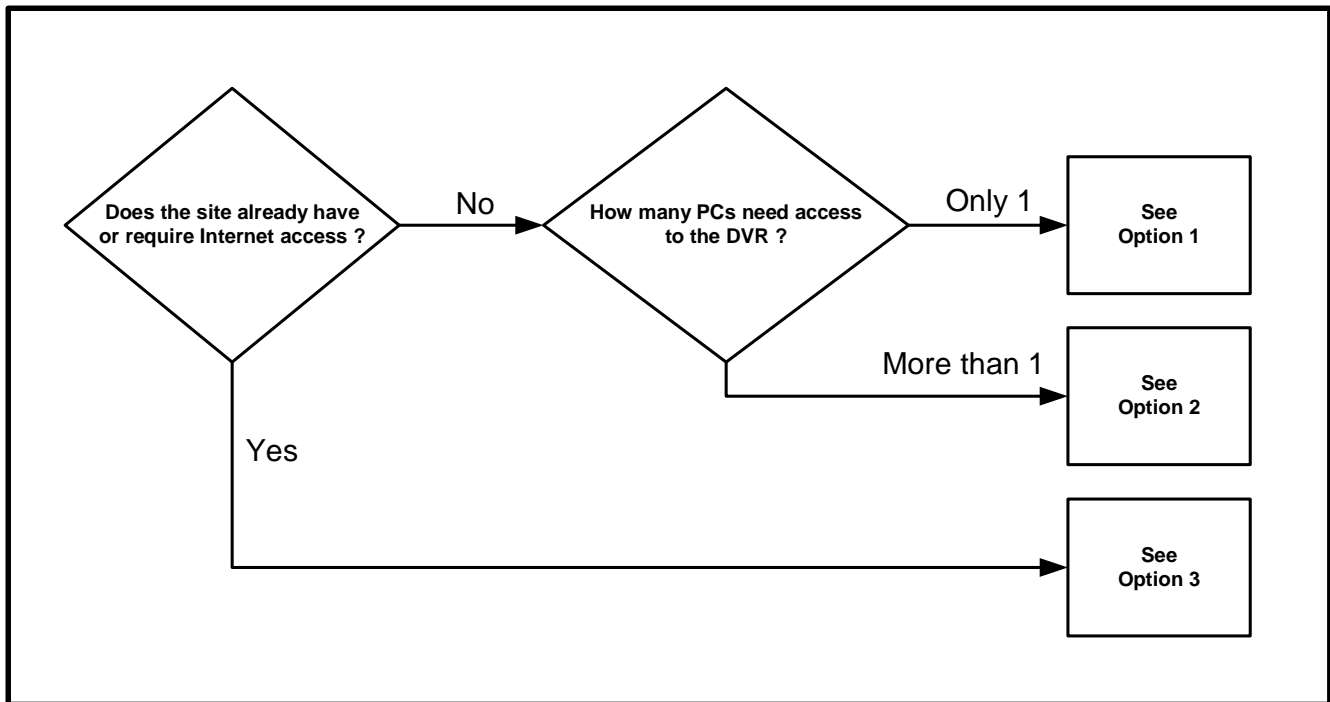
You must be able to perform some basic tasks in order to connect your Digital Video Recorder to a PC and subsequently the Internet.

The following page describes some simple tasks but more help is available online at www.systemq.com so before you start please download the following tips from the website 'Online Support' section -

Tip 117   Describing how to set a PCs IP Address
TIP 36   Describing how to perform 'ping' test
Tip 58   Describing how to configure a router for Internet access

The diagrams that follow suggest settings that if used will result in a successful connection.

Bear in mind that when it comes to Option 3 for Internet use, different router manufacturers may not use the exact settings given here so slight adjustments may be necessary.

11.1.1.1.1   How do I set my PC to 'Obtain an IP address automatically' ?

- Control Panel,
- Network Connections,
- Local Area Connection,
- Properties,
- Internet Protocol (TCP/IP),
- Properties,
- Select 'Obtain IP Address Automatically'
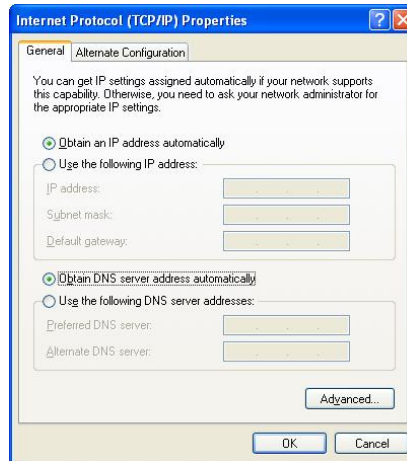
11.1.1.1.2 How do I set my PC's IP Address Manually ?

- Control Panel,
- Network Connections,
- Local Area Connection,
- Properties,
- Internet Protocol (TCP/IP),
- Properties,
- Select 'Use following IP Address'
- Enter …   IP Address
            Subnet mask
            Default gateway
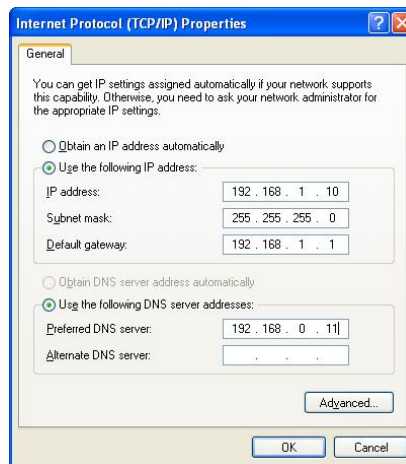
11.1.1.1.3   How do I find out my PC's IP Address ?

- Start
- Run
- Cmd
- ipconfig

11.1.1.1.4   How do I use Ping to test a Connection to my DVR ?

- Start
- Run
- Cmd
- Ping <IP-Address> <Enter>   eg: ping 192.168.1.108 <Enter>

11.1.1.1.5   How do I Configure a Router for Remote Access ?

- Instructions on the System Q website cover the NET800 and Netgear Routers

11.1.1.1.6 How do I find the On-Line Support ?

http://www.systemq.com/cgi-bin/commerce.exe?display=user2

Detailed descriptions are available there for all these questions plus more besides, including …

- How to find a device's MAC address (Tip 3)
- How to implement Dynamic DNS (Tip 56)
- Setting Internet Explorer Security Settings to install an Active-X (Tip 94)
- How to control a PTZ from a DVR
- How to play back recordings from various DVRs
- Links for downloading client software packages

11.2   Option 1 : Connect a DVR Directly to a Single PC
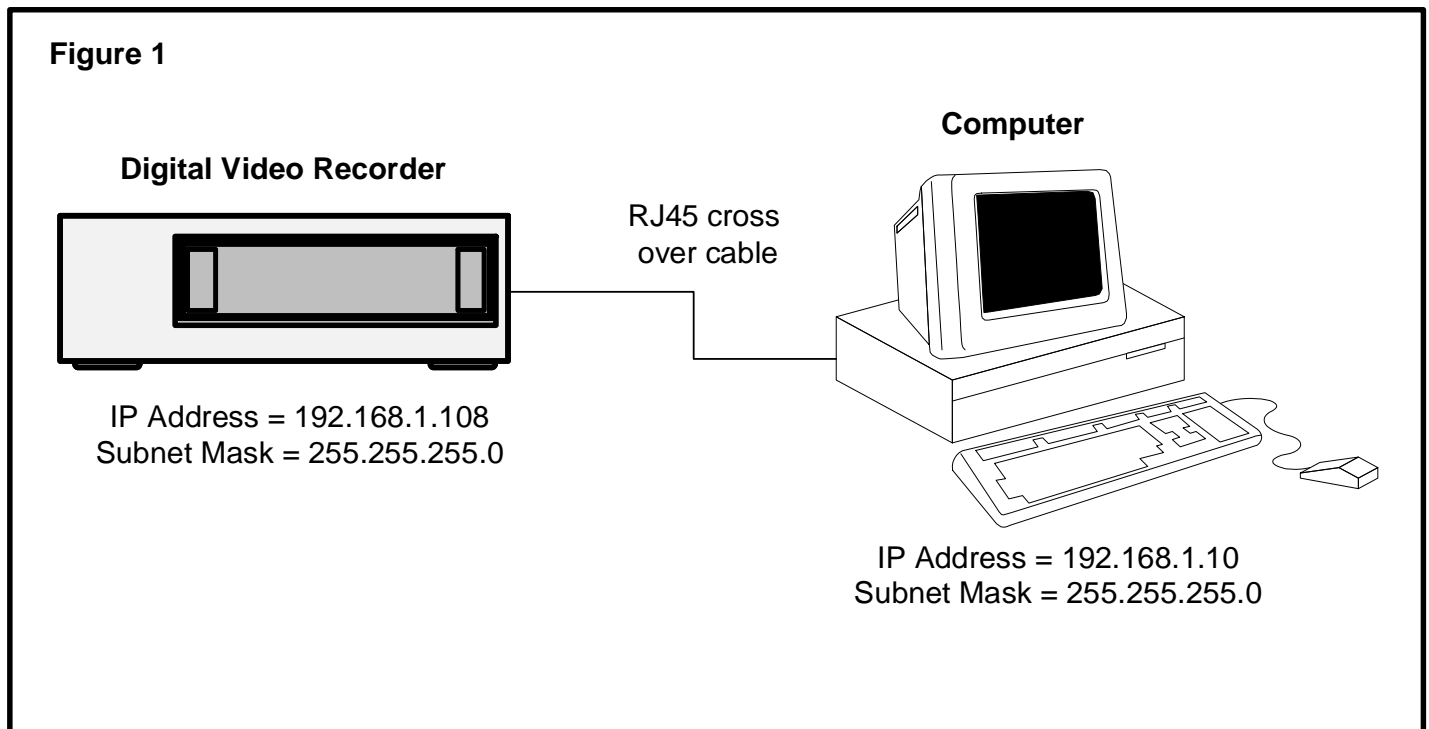
Figure 1

Computer

Digital Video Recorder

RJ45 cross
over cable

IP Address = 192.168.1.108
Subnet Mask = 255.255.255.0

IP Address = 192.168.1.10
Subnet Mask = 255.255.255.0

Tasks :

- Configure network settings in DVR manually
- Configure network settings in PC manually
- Connect DVR & PC together using an RJ45 cross over cable
- Install and configure the DVR client software
- Reboot both DVR & PC
- Test the PCs connection to the DVR using 'Ping'
- Connect using the client software

11.2 Option 2 : Connect a DVR to a PC via a Switch or Hub

Figure 2

Computer No 1

Switch or Hub

patch cable

IP Address = 192.168.1.10
Subnet Mask = 255.255.255.0

Computer No 2

patch cable

IP Address = 192.168.1.11
Subnet Mask = 255.255.255.0

Digital Video Recorder

patch cable
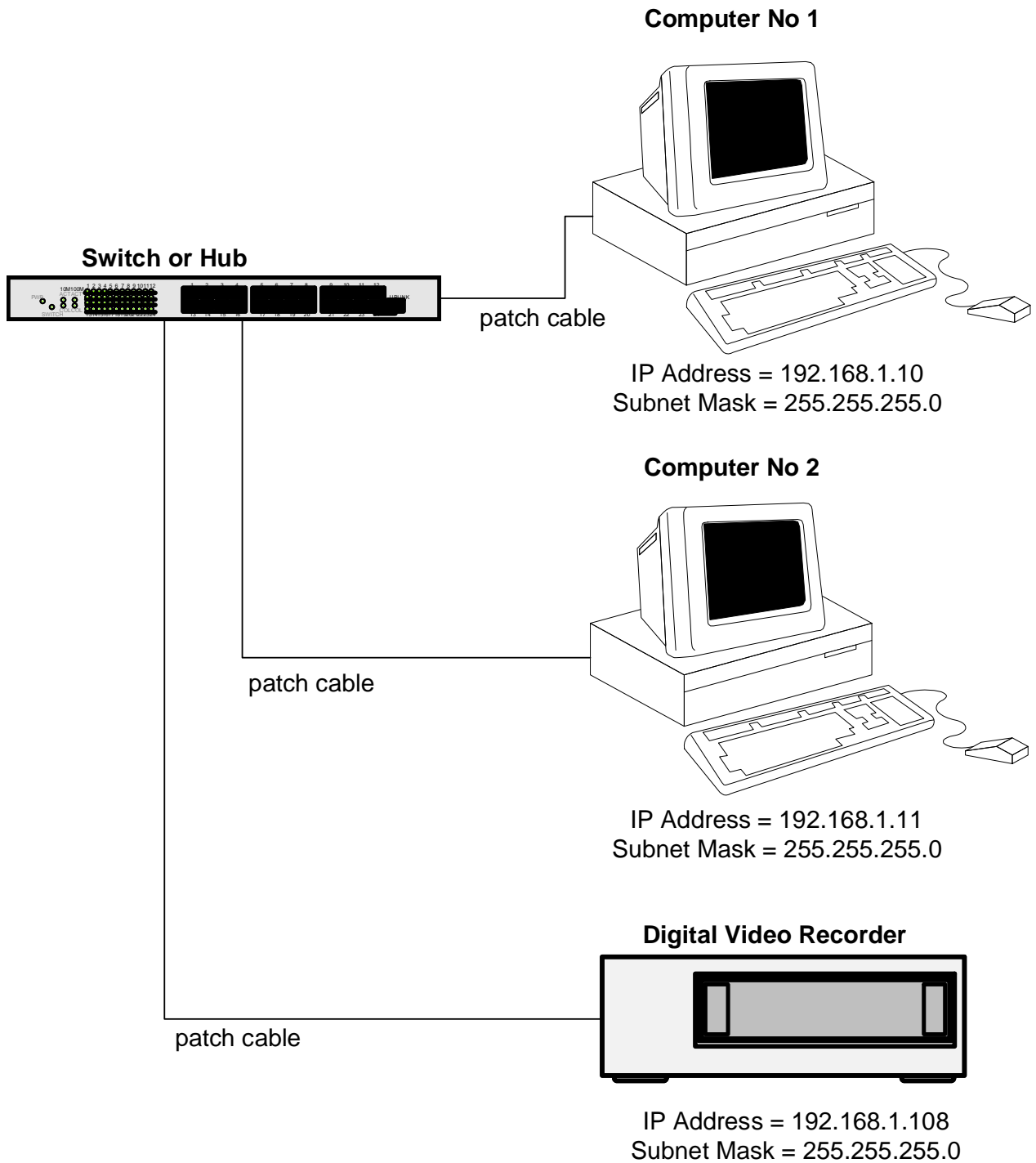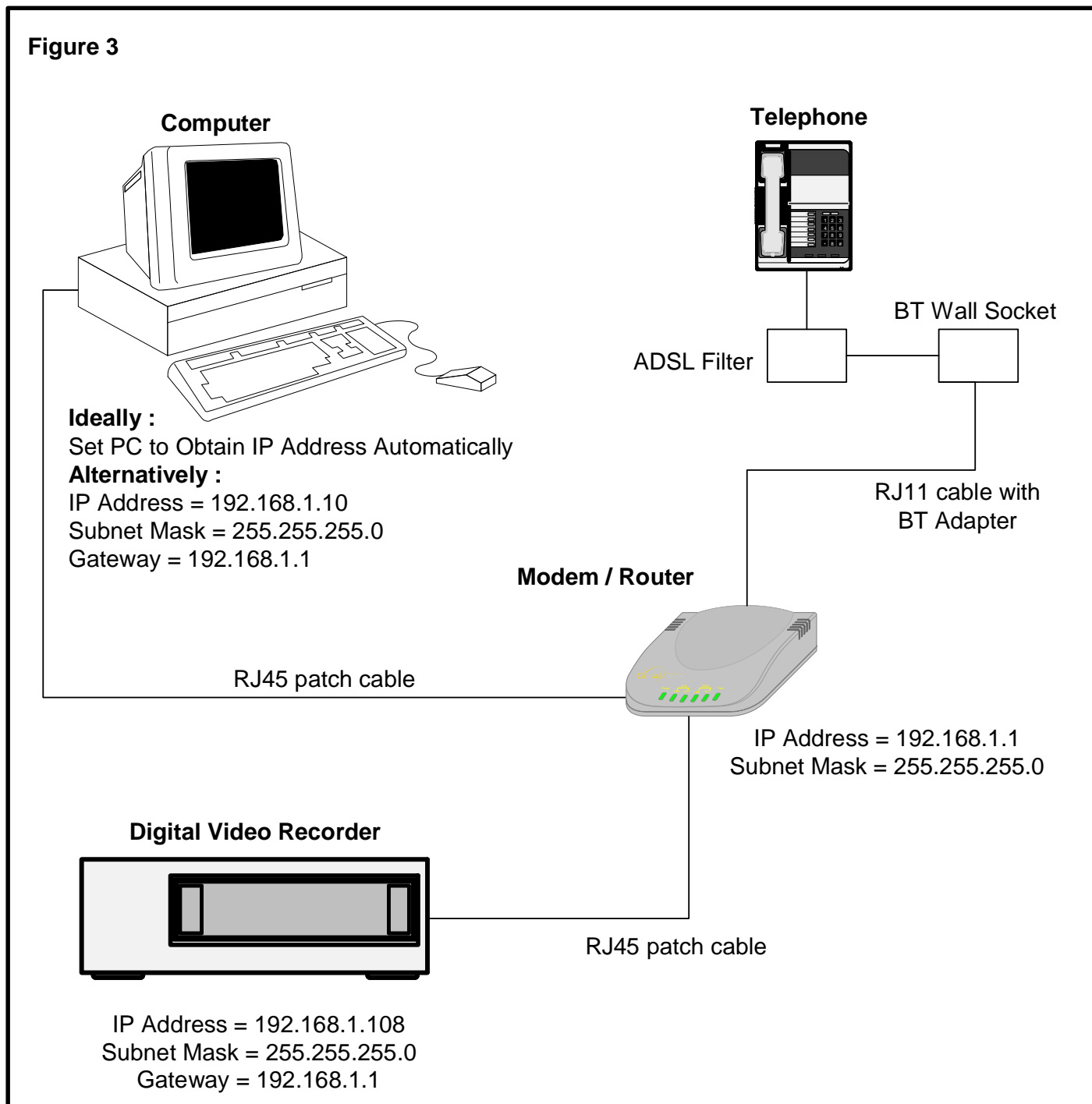
IP Address = 192.168.1.108
Subnet Mask = 255.255.255.0

Tasks :

- Configure network settings in DVR manually
- Configure network settings in PC manually

- Connect DVR & PC together using an RJ45 cross over cable
- Install and configure the DVR client software
- Reboot both DVR & PC
- Test the PCs connection to the DVR using 'Ping'
- Connect using the client software

11.2   Option 3 : Connecting for Internet Access

Figure 3

Computer

Telephone

BT Wall Socket

ADSL Filter

Ideally :
Set PC to Obtain IP Address Automatically
Alternatively :
IP Address = 192.168.1.10
Subnet Mask = 255.255.255.0
Gateway = 192.168.1.1

RJ11 cable with BT Adapter

Modem / Router

RJ45 patch cable

IP Address = 192.168.1.1
Subnet Mask = 255.255.255.0

Digital Video Recorder

RJ45 patch cable

IP Address = 192.168.1.108
Subnet Mask = 255.255.255.0
Gateway = 192.168.1.1

Important Notes :

If using a BT phone line you must use an ADSL modem router, if using a NTL or cable phone service you must use an appropriate cable router.

Be aware that when connected to the internet, the router has two IP addresses: internal and external. The internal address is seen by devices connecting to it's Ethernet ports, the external address represents it's connection to the local exchange via the telephone line.

Tasks :

- Find out what the external IP address is, this is assigned by the customer's Internet Service Provider
- Find out : is this a fixed IP address, ie: "Static, or does it change, ie: "Dynamic" ?
- Configure network settings in the DVR manually
- Configure network settings in the PC to "Obtain IP Address Automatically" if possible, if not, then configure manually
- Connect DVR & PC to the modem/router using patch cables
- Install and configure the DVR client software
- Reboot both DVR & PC
- Test the PCs connection to the DVR using 'Ping'
- Use the client software to connect to the DVR from the local PC
- Ensure the PC has outbound Internet access
- Configure the modem router for inbound access using either "Port Forwarding", or "DMZ"
- Ask a colleague offsite to test Internet access by connecting to the router's external IP address