



The new DVR365 Digital Video Recorder

H264 Compression

Model DSD104



Operations Manual

Version 1

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Welcome

Thank you for purchasing our DVR!

This operating 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 a detailed menu tree.

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

Important Safeguards and Warnings

1. Electrical Safety

The installation and operation should conform to local electrical safety codes.

2. Transportation Security

Avoid placing equipment on top of this DVR and do not subject the unit to violent vibration or water during transportation, storage and installation.

3. Installation

Always install the unit in upright position. Handle with due care.

Do not apply power to the DVR before completing installation.

Do not place objects on the DVR or restrict air flow to this DVR.

4. Qualified Engineers Needed

Only entrust examination and repair work by qualified service engineers.

We are not liable for any problems caused by unauthorised modifications or attempted repair.

5. Environment

The DVR should be installed in a cool, dry place away from direct sunlight, inflammable, explosive substances etc.

6. Accessories

Be sure to use all the accessories recommended by manufacturer.

Before installation, please open the package and check all the components listed below are included:

- | One power cable
- | One Ethernet cable
- | One HDD cable
- | Alarm & relay terminal blocks
- | Extension cable
- | One remote control (including battery)
- | One USB mouse
- | One CD (including DVR manual & client software)
- | A package of installation fittings

Note: Note that the manufacturer of this product reserves the right to make modifications to the DVR and/or these instructions without prior notice.

1 FEATURES AND SPECIFICATIONS

1.1 Features

The DSD104 DVR has the following features:

- | H.264 compression algorithm ideal for standalone DVR
- | Real-time live display up to 4 cameras, 100 fps recording for CIF
- | Pentaplex function: live, recording, playback, backup & remote access
- | 1 HDD supported.
- | Multiple control methods: Front panel, IR remote controller, USB mouse and network keyboard.
- | 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, preset, scan, auto pan, auto tour, pattern, auxiliary function supported.
- | 4 channel audio inputs and bidirectional talk supported
- | Easy backup methods: USB devices, network download
- | Alarm triggering screen tips, buzzer, PTZ preset.
- | Powerful network software: built-in web server and SightBoss. Networking access for remote live viewing, recording, playback, setting, system status, event log etc.

SPECIFICATIONS

Model

DSD104 4-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 menus.
Control Device Front panel, USB mouse, IR remote control, network keyboard,.
Input Method Numeric/Alpha (upper/lower case)
System Status HDD status, data stream statistics, log record, BIOS version, on-line user etc.

Video

Video Input 4-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
CIF 352*240 352 * 288
Video Recording CIF: PAL 1f/s~25f/s NTSC 1f/s~30f/s
Video Display Split Full and multiple screen display, 1 / 4
Tour Display Support
Image Quality 1~6 level (Level 6 is highest quality)
Privacy Masking Self-defined four-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-channel, BNC, 200-2800mV, 30K Ω
Bi-directional Audio Inpu	1-channel, BNC, 200-2800mV, 30K Ω
Audio Output	1-channel, BNC, 200-3000mv, 5K Ω
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.
Video Loss	Trigger recording, PTZ movement, tour, alarm.
Camera Masking	Trigger recording, PTZ movement, tour, alarm.
Alarm Input	4-channel, programmable, ground, manual open/close Trigger recording, PTZ movement, tour, alarm,
Relay Output	3-channel, 30VDC, 1A, NO/NC, form-C,
Hard Disk	
Hard Disk	1 IDE port.
Space Occupation	Audio : 14.4MB/H Video : 56~400MB/H
HDD Management	Hard disk hibernation technology, HDD faulty alarm
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 Interva	1 to 120 minutes (default: 60 minutes)
Overwrite Mode	Support
Raid Function	Support
Search Mode	Time/Date, Alarm, Motion Detection & exact Search (accurate to second)
Playback	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	Memory Stick/ USB HDD/ built-in IDE Burner/ network download
Network	
Interface	RJ-45 Port (10/100M)
Network Functions	TCP/IP, DHCP, DDNS, PPPoE.
Remote operation	Monitor, PTZ control, playback, system setting, file download, log information
Auxiliary Interface	
USB Interface	Two USB 2.0 ports: 1 for mouse control, 1 for backup.
RS232	PC communication
RS485	PTZ control
Environmental	
Power Supply	220V 50Hz / 110V 60Hz
Working Temperature	0 $^{\circ}$ C~+55 $^{\circ}$ C
Power Consumption	12W (Exclude HDD)

Working Humidity	10%~90%
Atmosphere Pressure	86kpa~106kpa
Dimension	1U, 375mmx285mmx45mm (W*D*H)
Weight	3.25KG
Mounting	Desktop or rack

2 Overview and Controls

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

2.1 Front Panel

This series DVR front panel is shown as in Figure 2-1.



Figure 2-1

- | | | | |
|--------------|---------------|------------------|--------------|
| 1、 Power | 2. Play/Pause | 3. Reverse/Pause | 4. Fast play |
| 5. Slow play | 6. Next | 7. Previous | 8. Assistant |
| 9. Shift | 10. Record | 11. Cancel | 12. Left |
| 13. Down | 14. O.K | 15. Right | 16. Up |

Please refer to the following sheet for more information.

SN	Button Name	Icon	Function
1	Power		Boot up or shut down the DVR
2	Play/pause	}II	In playback mode: play or pause video. In text box: input number 5.
3	Reverse/pause	II	In playback mode: reverse play video. In text box: input number 6.
4	Fast play	∞	In playback mode: click this button to switch between various fast play speeds and normal playback. In text box: input number 7.
5	Slow play	▶	In playback mode: click this button to switch between various slow play speeds and normal playback. In text box: input number 8.
6	Next	}I	In playback mode: play the next video. In text box: input number 9.
7	Previous	I	In playback mode: play the previous video. In text box: input number 0
8	Assistant	Fn	In 1-ch monitor mode: pop up assistant function: PTZ control and Video colour In motion detection interface, working with direction keys to finish setup. Clear: Press Fn for 1.5 seconds to clear all contents in current text box. In preview interface (There is no other menu), click this button for 3 seconds to switch between TV/VGA. In text box input mode, press this button to switch between numeral/English character (small/capitalized).

			Special combined operation in some menus.
9	Shift	SHIFT	In input mode, switch between numeric/character and other function keys.
			In four-window preview mode, it can work as Fn button.
10	Record	REC	Enable or disable record function manually. In record control menu, working with direction keys to select recording channel.
11	Cancel	ESC	Go back to previous menu or cancel current operation in function menu interface.
			In video playback mode, click this button to go back to real-time monitor mode.
14	O.K	ENTER	Confirm
			Go to the main menu
12 13 15 16	Direction keys	∨ ^	Move cursor
			In text box: increase or decrease numeric value.
			In dropdown list, modify current setup.
			In monitor mode, click this button to go to the 1 st channel-1 or 4 th channel. (Single-channel monitor mode).
		< >	In text box input mode, press SHIFT and then use up/down key to input number 1 or 4.
			In the main menu or sub-menu interface, click left or right key to move cursor.
			In playback mode: Click left/right key to select corresponding option in the function menu.
			In monitor mode, click left/right key to go to 2 nd channel or 3 rd channel (single-window monitor mode)
			In text box input mode, press SHIFT and then use left/right key to input number 2 or 3.

2.2 Rear Panel

2.2.1 Overview

Please refer to Figure 2-2 for real panel information.

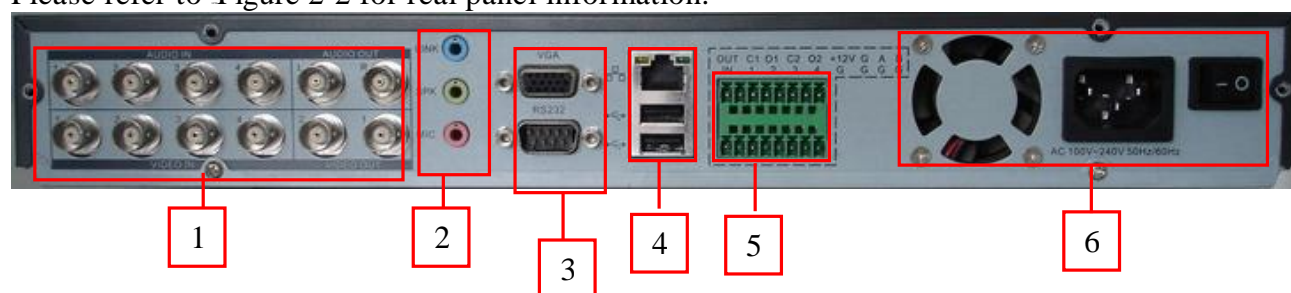


Figure 2-2

1. Audio and video input/output section: Video input/output interface、 audio input/output interface;
2. LINE SPK MIC:
 - | Blue (LINE) is input cable: Level: 2Vrms, Input resistance: 10k ohms
 - | Green (SPK) is output cable: Level: 2Vrms, Input resistance: 10k ohms
 - | Pink (MIC) is micro phone input cable : Level: 10mV-200mVp-p , Input resistance: 600k ohms-20k ohms;
3. RS232 port、VGA port;
4. Mouse/network interface: Two USB 2.0 high-speed ports、10M/100M self-adaptable Ethernet port
5. Main function section:
 - | C1/O1: Alarm output 1 public port
 - | C2/O2 : Alarm output 2 public port
 - | +12V: +12V/100mA output
 - | A~B: RS485 port
 - | 1~4: Alarm input port
 - | G : Ground
6. Power control section: Power socket (AC 100V-240V 50HZ/60HZ). On-off button fan.

Please pay attention to the ethernet connection, you need to use crossover cable to connect DVR to PC. You need to use a patch cable to connect DVR via hub or switch.

2.2.2 Connection Sample

Here is a connection sample for your reference. See Figure 2-3.

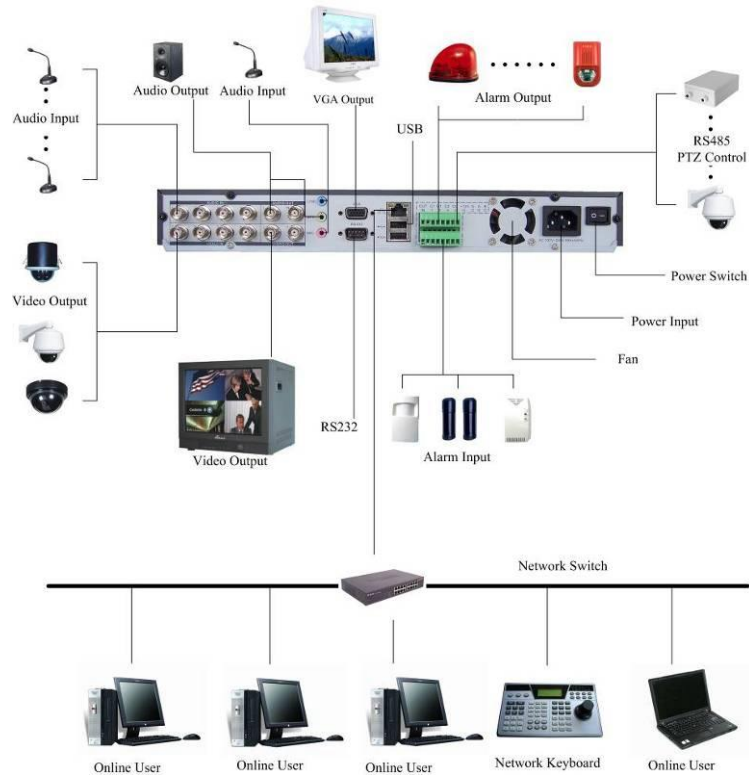


Figure 2-3

2.3 Remote Control

The remote control interface is shown below.

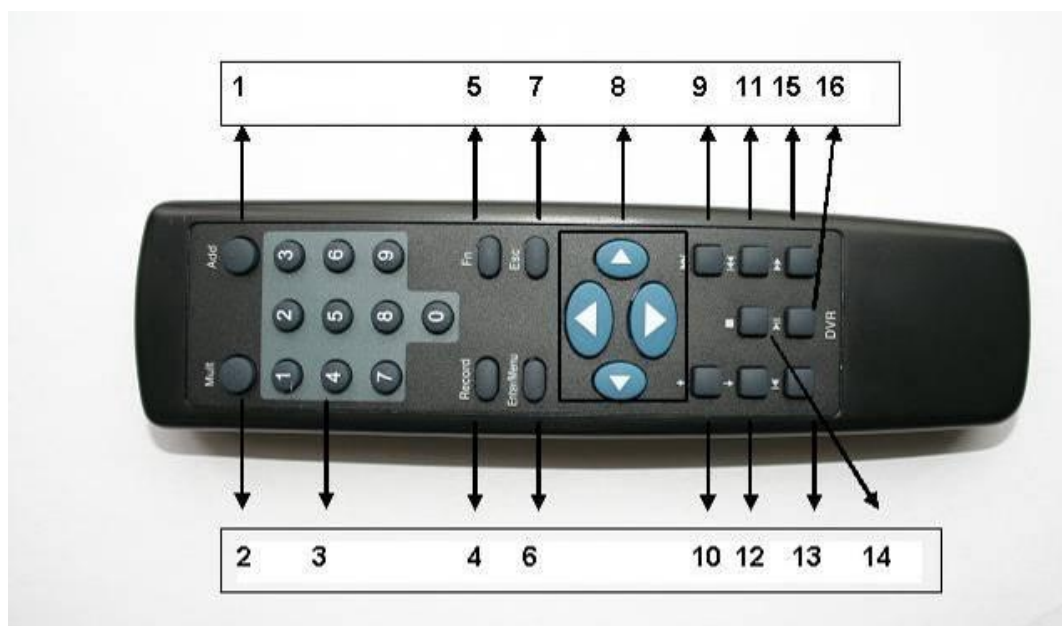






Figure 2-4

Serial Number	Function
1	remote switch
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

Besides front panel and remote control, you can also use mouse to control menu operation.

Left click mouse	System displays password input dialogue box if you have not logged in.
	In real-time monitor mode, you can go to the main menu.
	When you have selected one menu item, left click mouse to view menu content.
	Implement the control operation.
	Modify checkbox or motion detection status.
	Click combo box to pop up drop down list

	<p>In input box, you can select input methods. Left click the corresponding button on the panel you can input numeric/characters</p> <p>In English input mode: ← stands for deleting the previous character.</p>  <p>In numeral input mode: ← stands for deleting the previous numeral.</p>  <p>When input special sign, you can click corresponding numeral in the front panel to input. For example, click numeral 1 you can input“/”, or you can click the numeral in the on-screen keyboard directly.</p> 
<p>Double left click mouse</p>	<p>Implement special control operation such as double click one item in the file list to playback the video.</p> <p>In multiple-window mode, double left click one channel to view in full-window.</p> <p>Double left click current video again to go back to previous multiple-window mode.</p>
<p>Right click mouse</p>	<p>In real-time monitor mode, shortcut menu is displayed: one-window, four-window, nine-window and sixteen-window, Pan/Tilt/Zoom, colour setting, search, record, alarm input, alarm output, main menu. Pan/Tilt/Zoom and colour setting applies to current selected channel. If you are in multiple-window mode, system automatically switches to the corresponding channel.</p>  <p>Exit current menu without saving the modification.</p>

Press middle button	In numeric input box: Increase or decrease numeral value.
	Switch the items in the check box.
	Page up or page down
Move mouse	Select current control or move control
Drag mouse	Select motion detection zone
	Select privacy mask zone.

2.4 Virtual Keyboard & Front Panel

2.4.1 Virtual Keyboard

The system supports two input methods: Numeric input and Alpha (lower and upper case) input.

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 upper and lower case, Use > or < to shift between upper and lower case alpha characters.

2.4.2 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 & CONNECTIONS

Note: All the installation and operations here should conform to your local electric safety rules.

3.1 Check Unpacked DVR

Please check DVR packaging for damage prior to opening and report any instances to the courier.

3.2 HDD Installation

3.2.1 Choose HDDs

We recommend Samsung HDDs of 7200rpm or higher.

3.2.2 Calculate HDD Size

This series has no limit to HDD capacity. You can use 120G-750G HDD to guarantee higher stability.

The formula of total HDD size is:

Total Capacity (MB) = Camera Amount * Recording Hours * HDD Usage Per Hour (M/h)

H.264 compression is ideal for standalone DVRs. It can save more than 30% HDD capacity than MPEG4. When you calculate the total HDD 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. Now if you hope the DVR can record video for 12 hours each day for 30 days, the total capacity of HDDs needed is: 4 channels * 30 days * 12 hours * 200 M/h = 288G. So you need to install one 300G HDD.

3.2.3 HDD Installation

Data ribbons, fastening screws and smart HDD shelf design are already provided in the accessories. You need to set current HDD as MASTER since there is only one HDD.

Please follow the instructions below to install hard disk.



1. Loosen the screw s



2. Remove the upper cover of the DVR



3. Dismantle the HDD bracket



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



5. Fix the HDD bracket.



6. Connect to IDE port



7. Connect to HDD power cable.



8. Place upper cover back.



9. Screw cover firmly.

After HDD installation, please check connection of data ribbon and power cord.
Note: You need to set current HDD as MASTER since there is only one HDD.

3.3 Desktop and Rack Mounting

3.3.1 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 air flow around the unit is not obstructed.

3.3.2 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.

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

3.4 Connecting Power Supply

Please check input voltage and device power button match.

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

3.5 Connecting Video Input and Output Devices

3.5.1 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.

NOTE:

You need to use a BNC installation tool to connect coaxial cables to the rear panel.



Figure 3-1

3.5.2 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 automatically detects 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.

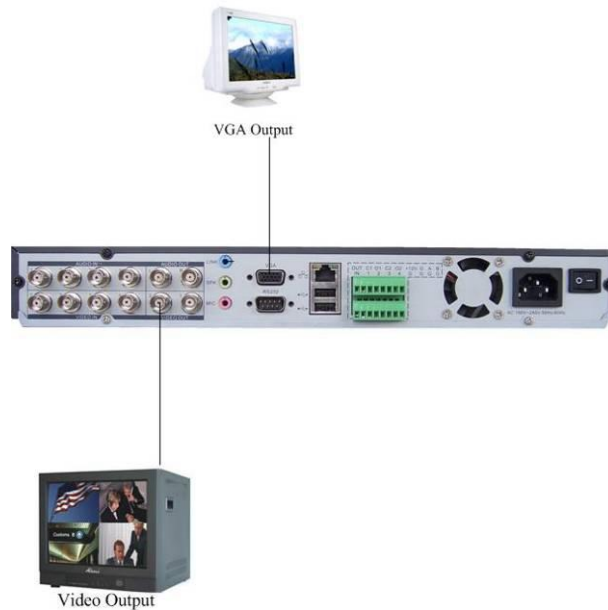


Figure 3-2

3.6 Connecting Audio Input & Output, Bidirectional Audio

3.6.1 Audio Input/One Audio Output

The DSD104 has 4-ch audio input, 2-ch audio output, I-ch bidirectional audio input. 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 3-3.

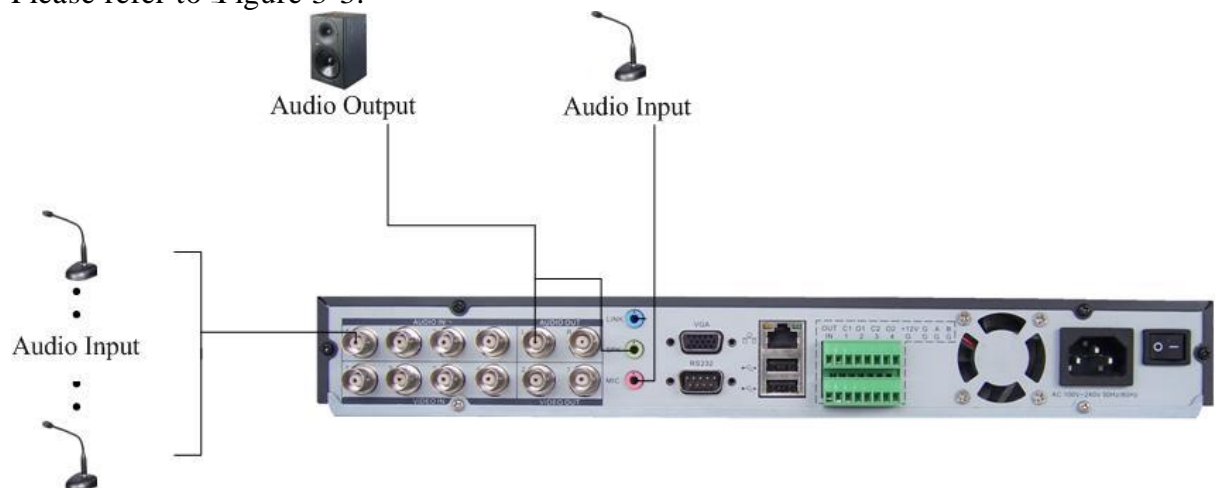


Figure 3-3

3.6.2 Alarm Input and Relay Output

This series DVR offers 4-ch alarm input 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.

3.6.3 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 3-4 for more information.

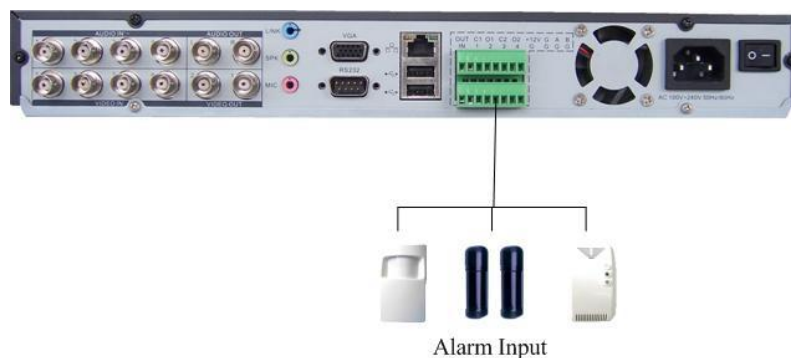


Figure 3-4

3.6.4 Alarm Output

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

You can use the connector to provide the connection between the alarm output port and the load.

Please refer to Figure 3-5 for more information.

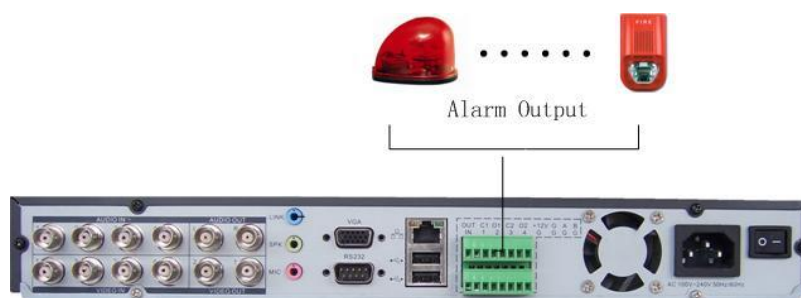


Figure 3-5

3.6.5 Alarm Input and Output Details

You can refer to the following sheet and Figure 3-6 for more information.

Parameter	0404 L(N)(Grounding Alarm)
G	Ground line
C1/O1;C2/O2	These are two alarm output ports(Normal Open)
485 A、 B	485 communication port. They are used to control devices such as PTZ.
+12 (C)	Provide 100mA power to the main board. You need to provide external power if the power is more than 100mA, otherwise it will damage PC power.

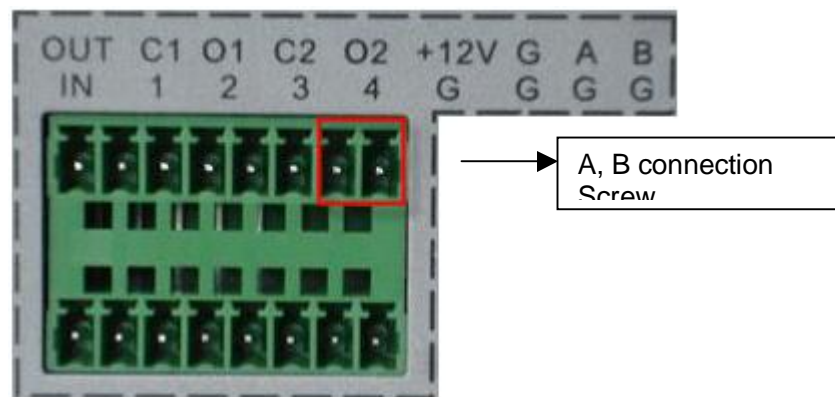


Figure 3-6

Please see Figure 3-7 for more information.

- | 4-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 triggered alarm remotely, you can use DVR to supply controllable 12 V power to the alarm detector such as the smoke detector.
- | Use the same ground with that of DVR if you use external power to the alarm device.

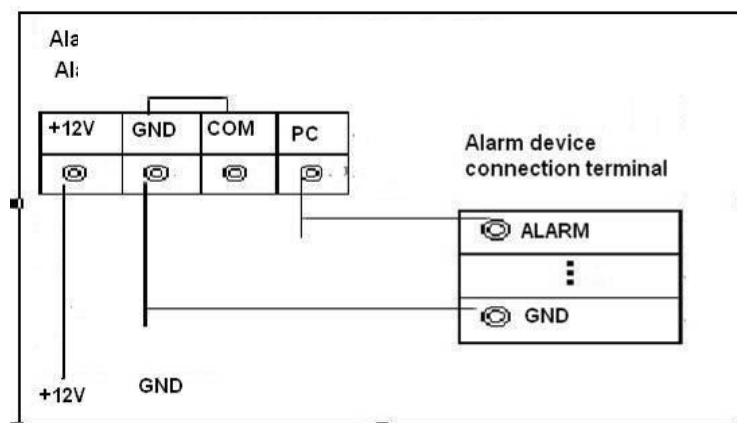


Figure 3-7

3.6.6 Relay Output Description

- | 4 way relay alarm output. Provide external power to external alarm device.
 - | To avoid overloading, please read the following relay parameters sheet carefully. (See below table)
 - | The controllable +12v can be used to restore the smoke detector.
- Please refer to Figure 3-8 for alarm input module information.

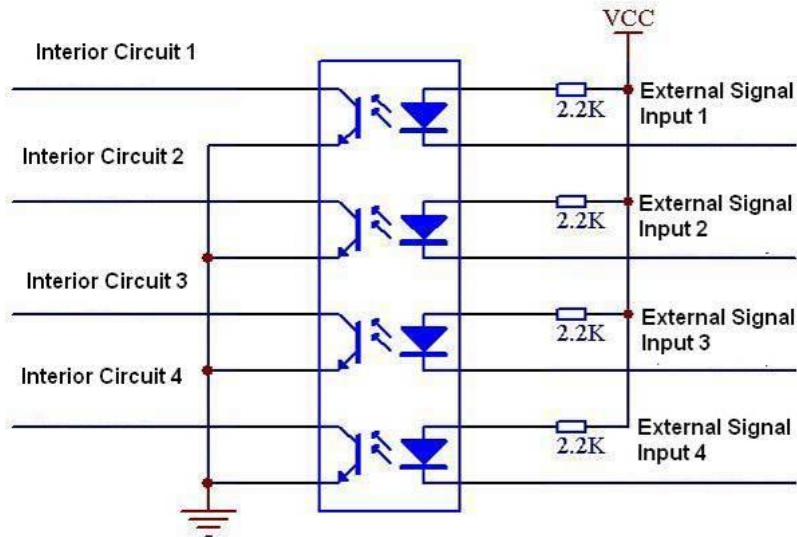


Figure 3-8

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

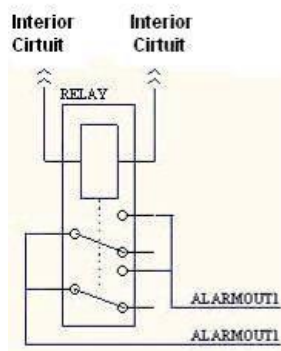


Figure 3-9

Relay Specification

Model:	JRC-27F	
Material of the contact	Silver	
Rating (resistance load)	Rated switch capacity	30VDC 2A, 125VAC 1A
	Maximum switch power	125VA 160W
	Maximum switch voltage	250VAC, 220VDC
	Maximum switch current	1A
Insulation	between contacts with same polarity	1000VAC 1minute
	between contacts with different polarity	1000VAC 1minute
	between contact and winding	1000VAC 1minute
Surge voltage	between contacts with same polarity	1500V (10×160us)
Length of open time	3ms max	
Length of close time	3ms max	
Longevity	Mechanical	50×10 ⁶ MIN(3Hz)
	Electrical	200×10 ³ MIN (0.5Hz)
Working Temperature	-40 ~+70	

3.7 RS232

You can connect the DVR with POS or Keyboard through RS232.

With POS system, the DVR can communicate through RS232 and network. For the POS system, the DVR can integrate the text content and even search the record through the info. Note that RS232 whilst available is not supported by Technical Support.

3.8 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 proper pins in the connector on the camera.
3. Follow the instructions for configuring a camera to enable each PTZ device on the DVR.

3.9 Other Interfaces

There are still other interfaces on the DVR, such as USB ports. You can refer to the Figure 3-10 for more information.

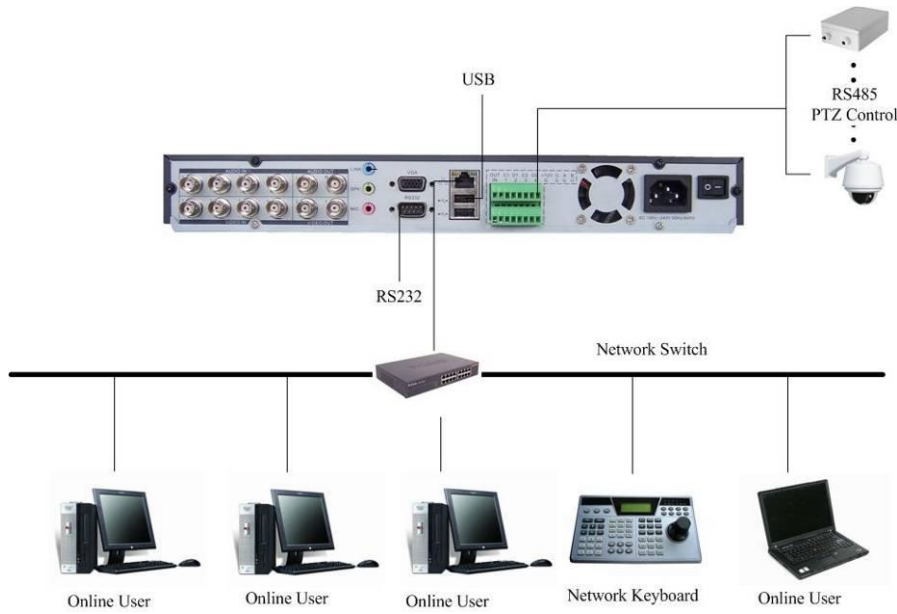


Figure 3-10

4 OVERVIEW OF NAVIGATION AND CONTROLS

Before operation, please make sure you have properly installed the HDD 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, you can 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 your 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 numeric and alpha (Upper and lower case modes).

Note:

If login fails after 3 incorrect login attempts unit will account lock for 30 minutes.



Figure 4-1

4.1.2 Main Menu

When you login, the system main menu is shown as 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.

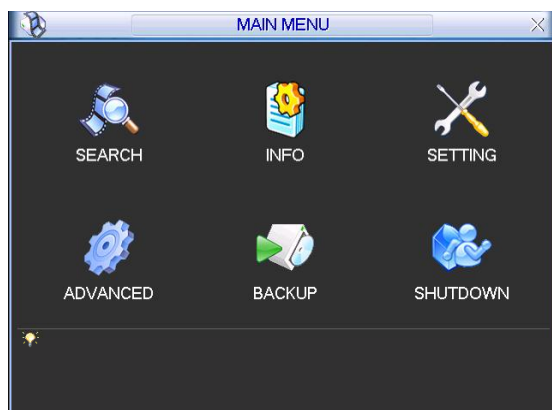


Figure 4-2

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 an interface is shown as below. See Figure 4-3.



Figure 4-3

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

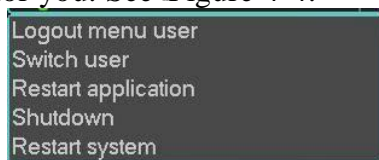


Figure 4-4

The other ways 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 power failure.

4.1.5 Replace Button Battery





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

We recommend regular battery replacement (such as once per year) to guarantee system time accuracy.



4.2 Recording Operation

4.2.1 Live Viewing

When you login, the system is in live viewing 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 modify the channel name, please refer to the display settings (Main Menu->Setting->Display)

1		Recording status	3		Video loss
2		Motion detection	4		Camera lock

Note:

Please refer to the following sheet for channel status.  stands for opening switch function,  stands for closing switch function.

4.2.2 Manual record

Note: You need to have proper rights to implement the following operations. Please make sure the HDD has 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 in the front panel or record button in the remote control.

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

4.2.2.2 Basic operation

There are three status settings: schedule/manual/stop. Highlight icon “○” to select corresponding channel.

System is in schedule mode by default.

- | 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.

The three modes have the following priority: Manual->Schedule->Stop.



Figure 4-5

4.2.2.3 Enable/disable record

Please check current channel status: “○” means it is not in recording status,

“●” means it is in recording status.

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.

l All channel schedule record

Please highlight “ALL” after “Schedule”. See Figure 4-7.

When system is in schedule recording, all channels will record as you have previously set in schedule interface (Main menu->Setting->Schedule).

The corresponding indication light in front panel will turn on.



Figure 4-7

l All channel manual record

Please highlight “ALL” after “Manual.” See Figure 4-8.

When system is in manual recording, all scheduled set up you have set in schedule interface will be null (Main menu->Setting->Schedule).

You can see indication light in front panel turns on, system begins manual record now.



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 schedule interface. (Main menu->Setting->Schedule)



Figure 4-9

4.3 Search & Playback

4.3.1 Search Menu

There are two ways for you to go to search menu.

- | Click Pause/Play button in the remote control.
- | Click search in the main menu.

Search interface 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 some special series only)

There are several playback windows. System supports 1-ch playback.

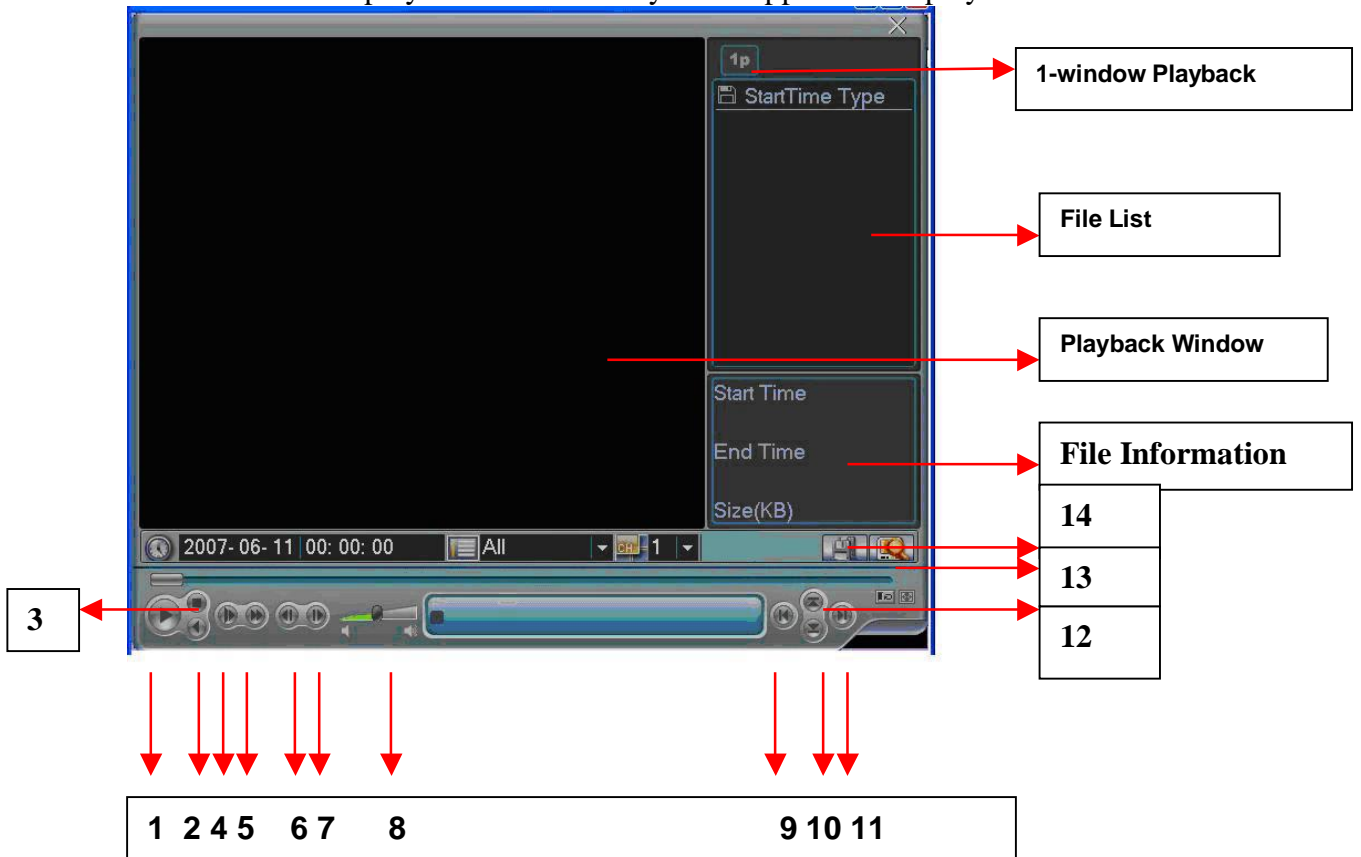


Figure 4-10

Please refer to the following sheet for more information.

Serial Number	Function
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 max display 32 files in 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 view file content.

4.3.2.2 Accurate playback

Input time (h/m/s) in the time column and then click playback button, system can operate accurate playback.

4.3.2.3 Synchronized playback function when playback

During playback process, click numeral key, system can 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 in the screen to select a section and then left click mouse to operate digital zoom. You can right click mouse to exit.

4.3.2.5 File backup

System supports backup operation during search. You can place a √ before file name (multiple choices). Then click backup button (Button 14).

4.3.2.6 Slow playback and fast playback

Please refer to the following sheet for slow play and fast playback function.

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 etc. (Fast play 1 means fast play level 1. It does not relate to 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 ►	In slow playback mode, click this button to switch between play/pause modes.	
4、 Previous/next	In playback mode, you can click and } to view previous or next video in current channel.	

4.3.2.7 Backward playback and frame by frame playback

Button	Illustration	Remarks
Backward play in playback interface.	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) clockwise to view frame by frame, anti clockwise to view I frame playback.	

Note: All the operations here (such as playback speed, channel, time and progress) have relationship with the hardware version. Some series DVRs do not support some functions or playback speeds.

4.3.3 Calendar


Click calendar icon  and Figure 4-11 displays a calendar for your reference. Highlighted date means that there are recorded files for that day. You can click blue date to view file list. Figure 4-11, there are video files in June 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 interface.

4.4.1 Go to Schedule Menu

In the main menu, from setting to schedule, you can go to schedule menu. See Figure 4-12.

There are three record types: R-Regular, MD-Motion detection, A- Alarm. (Note: Regular is continuous record)

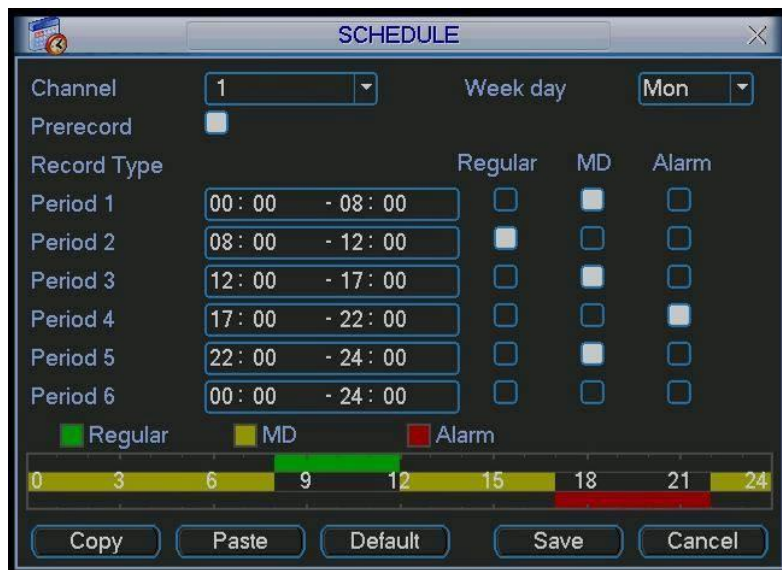



Figure 4-12

4.4.2 Basic Operation

There are totally six periods. 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: ranges from Saturday to Sunday and All.
- | Prerecord: System supports prerecord function. The previous one to three seconds video before alarm occurs can be included in recorded video.
- | Record types: There are three types: Regular, Motion Detection (MD) and Alarm.

Please highlight icon  to select the corresponding function. After all the setups please click save button, system goes back 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.

4.4.2.1 Quick Setup

This function allows you to copy one channel setup to another. After setting channel 1, you can click copy button and turn to channel 2 and then click paste 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. After all the setups please click save button, system goes back to the previous menu.

4.5 Motion Detect


4.5.1 Go to Motion Detect Menu

In the main menu, from Setting to Detect, you can see motion detect interface. See Figure 4-13. Note that setting motion detection requires changes to both the Schedule and Detect menus.

4.5.2 Motion Detect

Detection menu is shown as below. See Figure 4-13.

- | 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 (Main Menu->Setting->Schedule) and schedule record in manual record interface (Main Menu->Advanced->Manual Record)
- | Enable tour: This activates sequencing between different cameras.
- | Latch: When motion detection completes, system continues recording for a specified time. The value ranges from 10-300 seconds) Suggested setting 180.
- | PTZ preset: Click set button, the interface is shown as in Figure 4-14. Here you can set preset for one or more channels.
- | Region: click “select” button to set motion detection region. See Figure 4-14.
- | Sensitivity: there are six levels. Level 6 is the highest sensitivity.
- | Alarm output: when alarm occurs, system enables peripheral alarm device/s.
- | Show message: System displays screen alert when alarm triggered.

Please highlight icon  to select the corresponding function. After all the setups please click save button, system goes back to the previous menu.

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 4-14, you can left click mouse and then drag it to set a region for motion detection. Click Fn to switch between applying motion and withdraw motion detection. After setting, click enter button to exit.

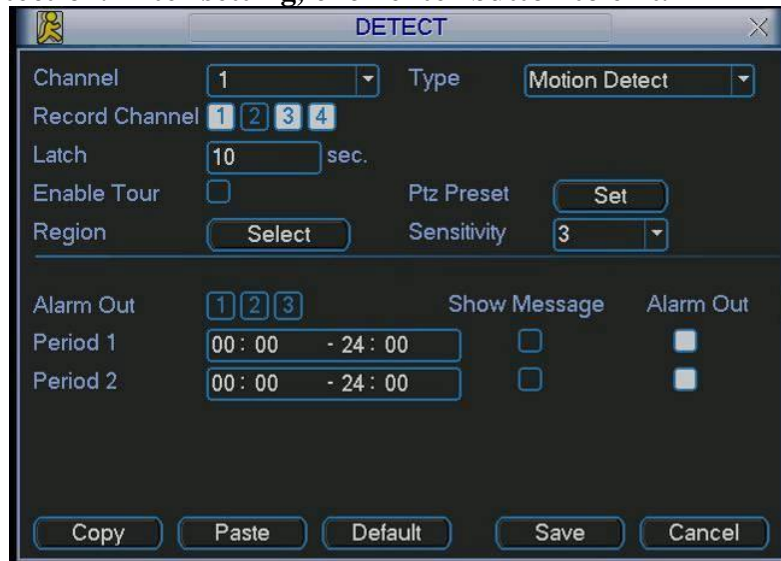


Figure 4-13

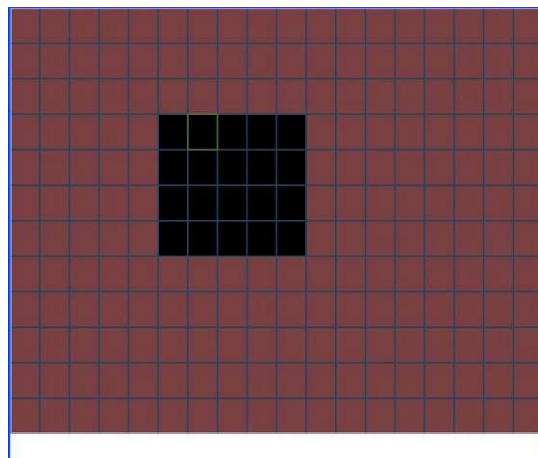


Figure 4-14



Figure 4-15

4.5.3 Video Loss

In Figure 4-13, select video loss in the Type item. You can see the interface is shown as in Figure 4-16. This function allows you to be informed when video loss has occurred. You can enable alarm output channel and then enable show message function.

- | **Channel:** select the channel you want to enable lens shading 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:** activate tour between different cameras.
- | **Latch:** When motion detection completes, system continues recording for a specified time. The value ranges from 10-300 seconds) Suggested setting 180.
- | **PTZ preset:** Click set button to set preset for one or all channels. See Figure 4-15.
- | **Period 1/2:** allows two periods to be set (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 screen alert when video alarm is triggered. Please highlight icon to enable this function.

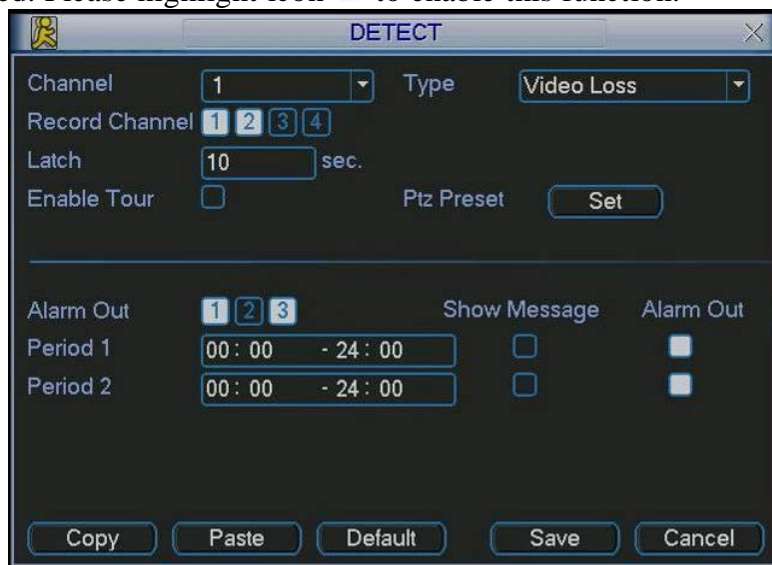


Figure 4-16

4.5.4 Camera Mask Detect

When someone maliciously masks lens, the system can alert you to guarantee video continuity. Camera mask detection interface is shown in Figure 4-17.

- | **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:** activate tour between different cameras.
- | **Latch:** When motion detection completes, system continues recording for a specified time. The value ranges from 10-300 seconds) Suggested setting 180.
- | **PTZ preset:** Click set button to set preset for one or all channels. See Figure 4-15.
- | **Period 1/2:** allows two periods to be set (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 screen alert when alarm triggered. 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.

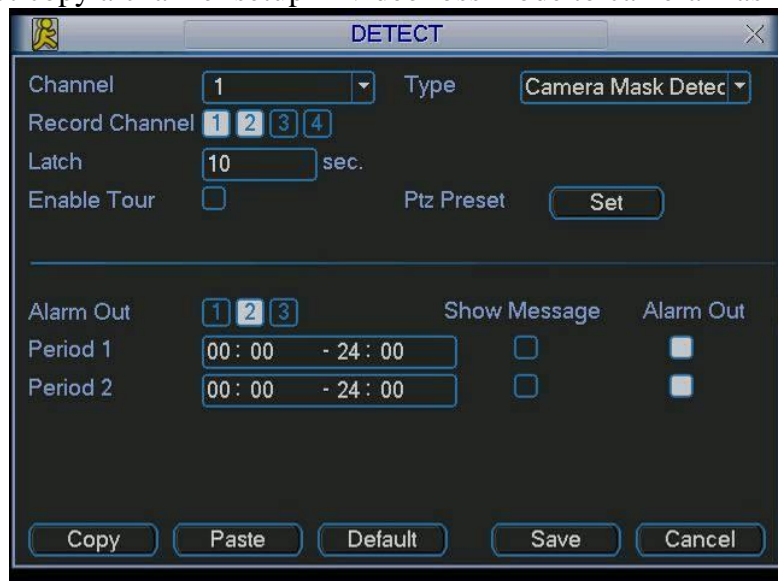


Figure 4-17

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, from Setting to Alarm, you can see alarm setup interface. See Figure 4-18.

4.6.2 Alarm setup

Alarm interface is shown as below. See Figure 4-18.

- | **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 required channel to record alarm video (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:** set required delay duration. Value ranges from 10 to 300 seconds. System automatically delays turning off alarm and activating output after external alarm cancelled by time value set in seconds.
- | **PTZ preset:** activate PTZ control.
- | **Relay out:** select proper alarm activation output channel (multiple choices).
- | **Show message:** System displays screen alert when alarm triggered.
- | **Period 1 and period 2:** set time options.


Please highlight icon  to select the corresponding function. After setup please click save button. System goes back to the previous menu.



Figure 4-18

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

Displays devices detected information. See Figure 4-19.

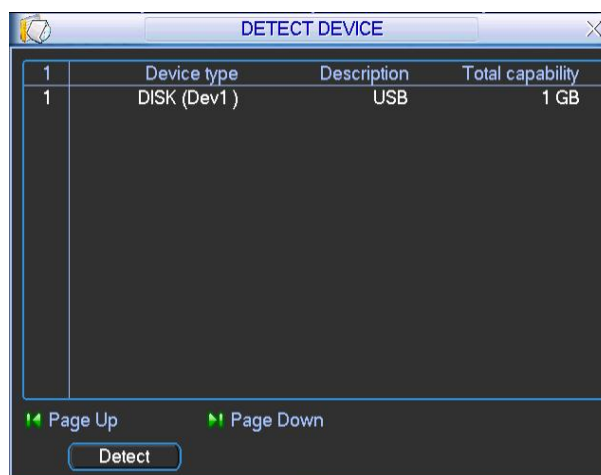


Figure 4-19

4.7.2 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 4-20.

System only backs up files with a ✓ before channel name. You can use Fn or cancel button to delete ✓ after file serial number.

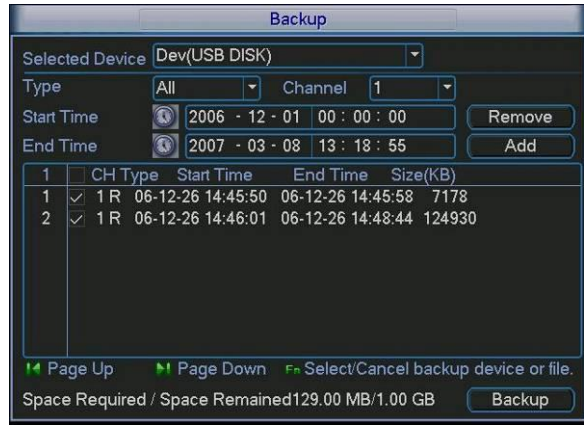


Figure 4-20

Click backup button, system begins burning. At the same time, the backup button then becomes a stop button. You can view the remaining time and process bar at bottom left. See Figure 4-21.

When the system completes backup, you can see a dialogue box prompting successful backup.

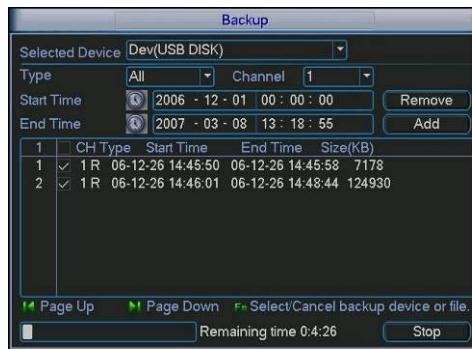


Figure 4-21

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, system can backup the data currently captured. For example, if there is a file of 10 minutes, when you click stop after five minutes backup, system will save the previous 5-minute data in the device. The file name format usually is: SN_CH+channel number+time Y+M+D+H+M+S. In the file name, the YDM 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 some differences.

4.8.1 RS485 & Video Cable Connections

Please follow the procedures below for cable connection

- | 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 correct:

- | PTZ and decoder connection. Decoder address setup.
- | 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 as in Figure 4-22. Here you can set the following items:

- | Channel: select the current camera channel.
- | Protocol: select corresponding PTZ protocol (such as PELCO-D1)
- | 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 4-22

After completing all settings please click save button.

In one window display mode, right click mouse (click “Fn” Button in the front panel or click “Fn” key in the remote control). The interface is shown as in Figure 4-23.



Figure 4-23

Click Pan/Tilt/Zoom, the interface is shown as below. See Figure 4-24.

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 4-24

In Figure 4-24, please click direction arrows (See Figure 4-25) to adjust PTZ position. There are a total of 8 direction arrows.



Figure 4-25

4.8.3 3D Intelligent Positioning Key

In the middle of the eight direction arrows, there is a 3D intelligent positioning key. See Figure 4-26.

Click this key, system goes back to the single screen mode. Drag the mouse in the screen to adjust section size. It can control PTZ automatically.



Figure 4-26

Name	Function key	function	Shortcut key	Function key	function	Shortcut Key
Zoom		Near			Far	8

Focus		Near			Far	
Iris		close	:		Open	" ;

4.9 Preset/ Patrol/Pattern/Scan

In Figure 4-24, click the “set” button. The interface is shown as below. See Figure 4-27.

Here you can set the following items:

- | Preset
- | Patrol(Tour)
- | Pattern (this can only be used with some PTZ cameras)
- | Border



Figure 4-27

In Figure 4-24, click page switch button, the interface is shown as in Figure 4-28.

Here you can activate the following functions:

- | Preset
- | Patrol(Tour)
- | Pattern (this can only be used with some PTZ cameras)
- | Aux on
- | Aux off
- | Auto scan
- | Auto pan
- | Light on



Figure 4-28

Note: The following setups are usually operated in the Figure 4-24, Figure 4-27 and Figure 4-28 .

4.9.1 Preset Setup

In Figure 4-24, use eight direction arrows to adjust camera to required position.

In Figure 4-27, click preset button and input preset number. The interface is shown as in Figure 4-29.

Now you can add this preset to one patrol (tour).



Figure 4-29

4.9.2 Activate Preset

In Figure 4-28, please input preset number in the No. box, and click preset button.

4.9.3 Patrol Setup (Tour setup)

In Figure 4-27, click patrol button. The interface is shown as in Figure 4-30. Input preset number and add this preset to a patrol (tour). For each patrol (tour), you can input max 80 presets.



Figure 4-30

4.9.4 Activate Patrol (tour)

In Figure 4-27, input patrol (tour) number in the No. box and click patrol button

4.9.5 Pattern Setup

In Figure 4-27, click pattern button and then click “begin” button. The interface is shown as in Figure 4-31. Then you can go to Figure 4-24 to modify zoom, focus, and iris.

Go back to Figure 4-31 and click “end” button. You can memorise all these operations as pattern 1.

NOTE: Pattern will only work with certain types of PTZ cameras.



Figure 4-31

4.9.6 Activate Pattern Function

In Figure 4-28, input mode value in the No. box and click pattern button.

4.9.7 Auto Scan Setup

In Figure 4-27, click border button. The interface is shown as in Figure 4-22.

Please go to Figure 4-24, use direction arrows to select camera left limit

Then please go to Figure 4-32 and click left limit button

Repeat the above procedures to set right limit.



Figure 4-32

4.9.8 Activate Auto Scan

In Figure 4-28, 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 4-28, click page switch button, the interface is shown as below. See Figure 4-33.

Click menu to enter dome menu. The direction arrows here are to control dome menu.

Click page switch button, system goes back to Figure 4-24.

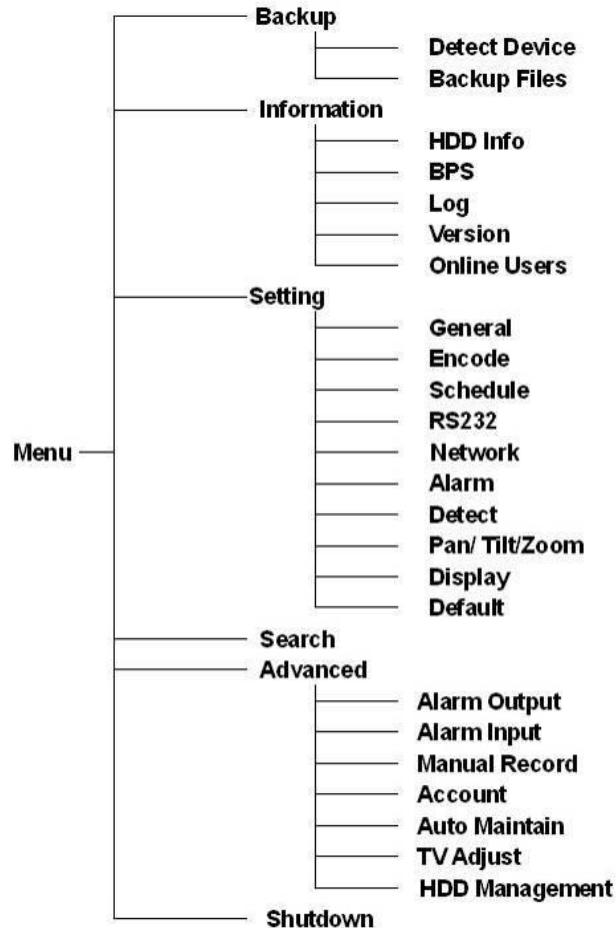


Figure 4-33

Understanding Menu Operations

4.11 Menu Tree

The DSD104 menu tree is shown below:



Please note, you need to click the Save button at the bottom of each menu to save the setup you have amended. You need to highlight check boxes to enable corresponding functions, otherwise the function is disabled. All the operations below are based on our 4-ch series DVR.

4.12 Main Menu

When you login, the system main menu is displayed. See Figure 4-34 .

There are six menus: Search, Information, Setting, Backup, Advanced and Shutdown. Move the cursor to highlight the icon; you can see the corresponding help information at the bottom of the interface. Please double click mouse left button to enter the sub-menu.

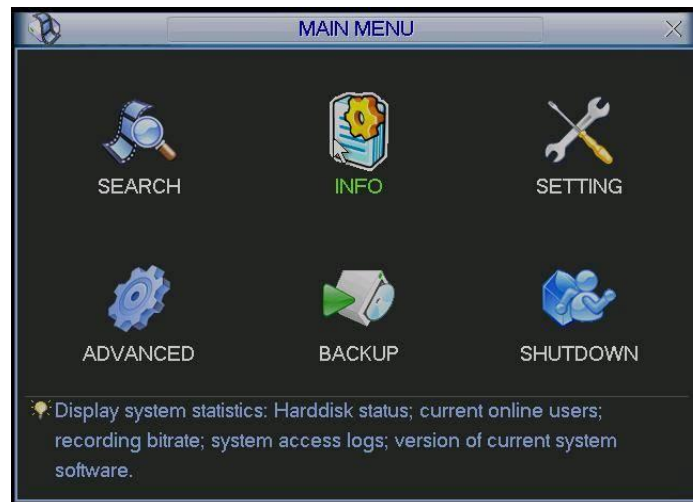


Figure 4-34

4.13 Setting

In the main menu, highlight setting menu and double click left mouse button. System setting interface is shown as below. See Figure 4-35.

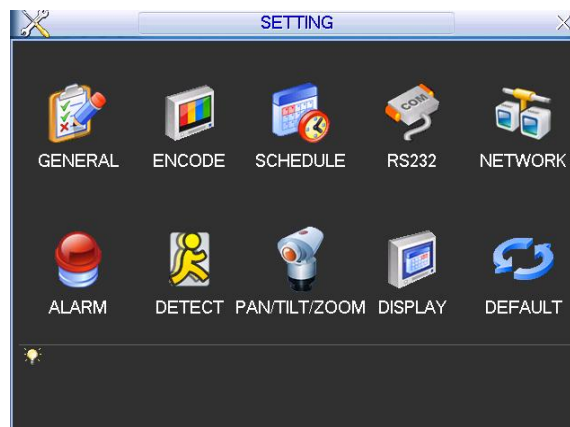


Figure 4-35

4.13.1 General

General setting includes the following items. See Figure 4-36.

- | **System time:** set system time
- | **Date format:** there are three types: YYYY-MM-DD; MM-DD-YYYY or DD-MM-YYYY.
- | **Date separator:** there are three denotations to separate date: dot, hyphen and colon.
- | **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 series.)
- | **HDD full:** select mode when hard disk is full. There are two options: stop recording or overwrite.
- | **Pack duration:** specify record duration. Default value is 60 minutes. This is the size in time of each file created. Recommended setting is 15 minutes.

- | **DVR No:** when you are using one remote control to control several DVRs, you can give a name to each DVR for management.
- | **Video standard:** There are two formats: NTSC and PAL.
- | **Auto logout:** 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, so do not modify time unless there is a must. If you duplicate a file by turning back the clock you will get a message saying files collide. This means you have created two files with the same name. You will have to set all recordings off, erase the hard drive/s, check date and time are now correct and then switch recordings back on.

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

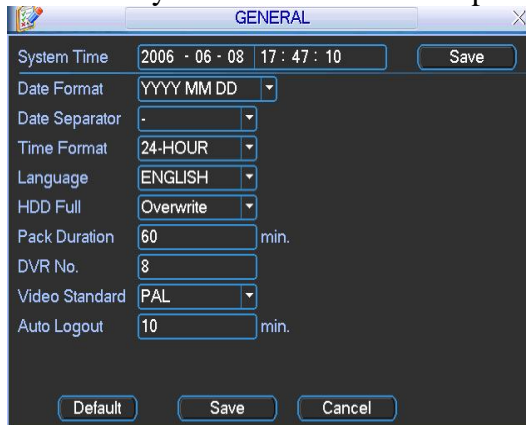


Figure 4-36

4.13.2 Encode

Encode setting includes the following items. See Figure 4-37.

- | **Channel:** Select the channel you want.
- | **Compression:** system supports H.264.
- | **Resolution:** System supports various resolutions, you can select from the dropdown list.
- | **Bit rate:** system supports two types: CBR and VBR. Use VBR if system networked.
- | **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):** set window blanking area. You can drag your mouse to set proper area size.
- | **Time display:** select whether system displays time or not.
- | **Channel display:** select whether system displays channel number or not.

System default setup is:

- | **Channel:** 1
- | **Compression:** H.264
- | **Resolution:** CIF
- | **Bit rate:** CBR
- | **Quality:** 4
- | **Frame rate:** 25f/s

Please highlight icon  to select the corresponding function.

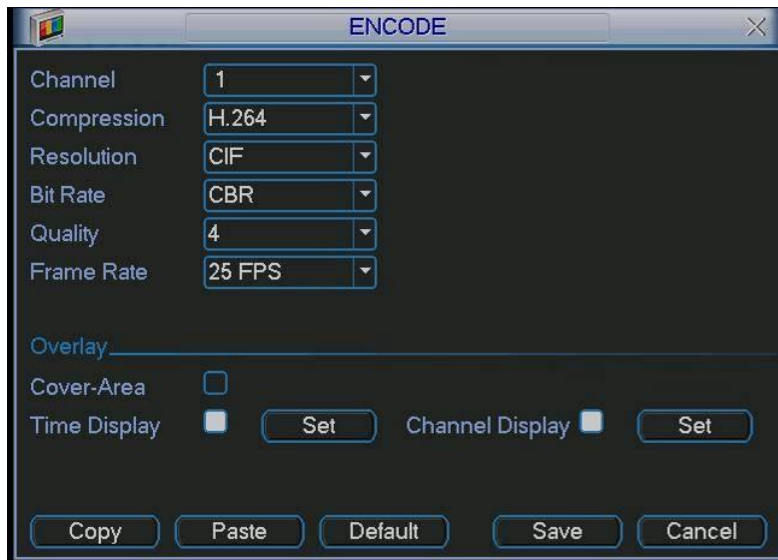


Figure 4-37

4.13.3 Schedule

Please refer to chapter 4.4 schedule.

4.13.4 RS232

RS232 interface is shown below. There are five settings.

- | Baud rate: select baud rate.
- | Data bit: select data bits.
- | Stop bit: set stop bit. There are three values: 1 / 1.5 / 2.
- | Parity: there are three choices: none / odd / even.

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

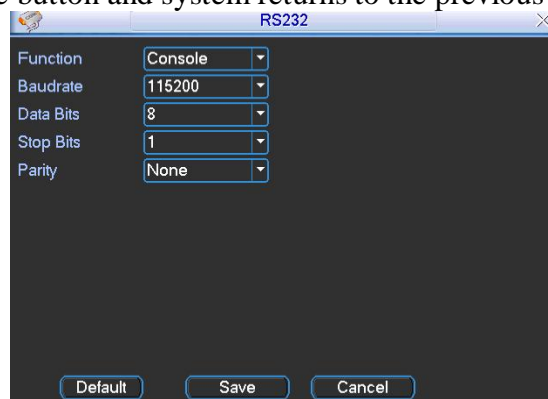


Figure 4-38

4.13.5 Network

Input network information. See Figure 4-39.

- | IP address
- | Subnet mask
- | Gateway
- | Service port: Default value is 37777. (Service port 37778 is reserved for network UDP use.)

- | HTTP port: Default value is 80
 - | Protocol: TCP
 - | Max connection: supports 10 users.
 - | Properties: There are three options: FTP/NTP/Alarm center. You can select corresponding option and then click properties button to go to setup interface.
 - | Authorization: Click authorization button and highlight icon to enable IP authentication function. When you enable this function, only the IP addresses set in the list can login to this DVR. See Figure 4-40.
- After setup click save button and return to the previous menu.

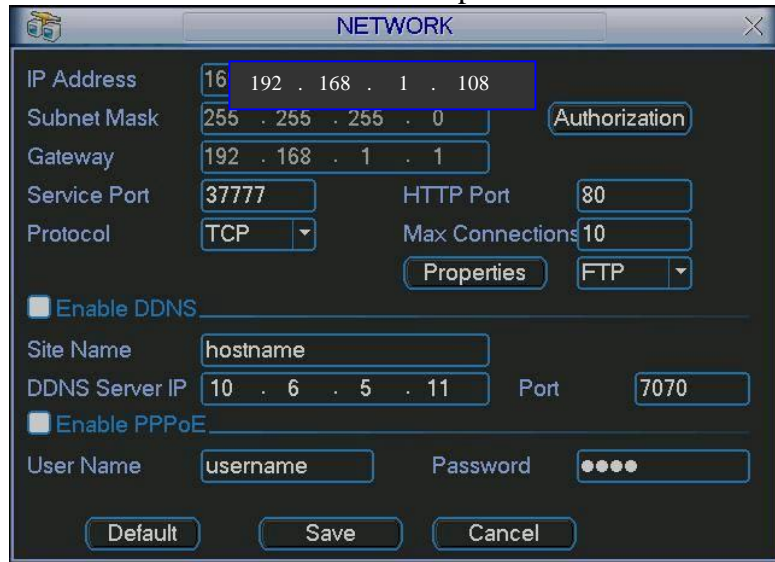


Figure 4-39

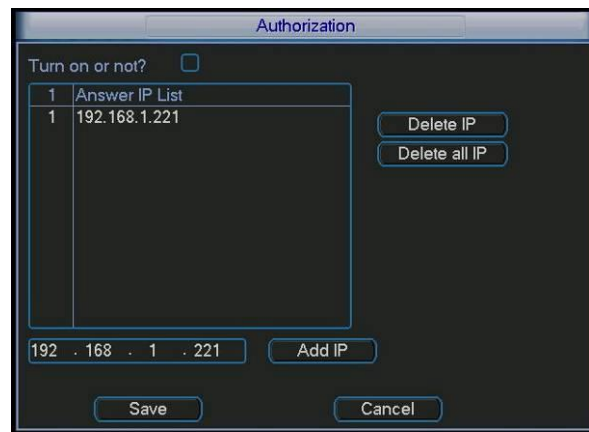


Figure 4-40

4.13.5.1 PPPoE Connection (**Note:** This is a limited function allowing one connection only and there are limited ISPs providing PPPoE in the UK)

Enable PPPoE function and then input “PPPoE name” and “PPPoE password” you get from your ISP (Internet service provider).

Click save button, you need to restart to activate your configuration.

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

4.13.5.2 Visit Web via PPPoE (see note above)

There are two ways.

a. visit via current IP

After DVR connected with Internet by PPPoE, please get your device’s current IP in Figure 4-39. 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 DDNS software is 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 button and then reboot system.

Click save button and system prompts for rebooting to get 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 DDNS Server web search page.

4.13.6 Alarm

Please refer to chapter 4.6 Alarm Setup and Activation.

4.13.7 Detect

Please refer to chapter 4.5 Detect.

4.13.8 Pan/Tilt/Zoom

The pan/tilt/zoom setup includes the following items. Please select channel first. See Figure 4-41.

| Protocol: select corresponding PTZ protocol such as PELCO-D1.

| 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 returns to the previous menu.

For detailed setup, please refer to chapter 4.9 preset / patrol / pattern / scan.

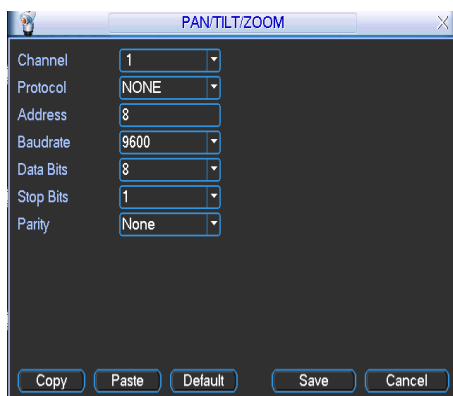




Figure 4-41

4.13.9 Display

Display setup interface is shown below. See Figure 4-42.

- | **Transparency:** adjusts transparency level. The value ranges from 128 to 255.
- | **Channel name:** modify channel name. Please note any changes here only apply to DVR local end. You need to open web or client end to also change channel names.
- | **Time display:** select display time or not.
- | **Channel display:** select channel name or not.
- | **Overlay information:** System displays some information in the screen for reference.
- | **Enable tour:** activate sequencing function.
- | **Interval:** set sequencing interval time. The value ranges from 5-200 seconds. In tour process, you can use mouse or click Shift to turn on window switch function.
 -  Stands for open switch function,  stands for closed switch function.
- | **View1/4:** System support 1/4 window tour.


Please highlight icon  to select the corresponding function.

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



Figure 4-42

4.13.10 Default

Click default menu and system displays a dialogue box. You can highlight  to restore default factory setup. See Figure 4-43.

- | 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 color, language, time display mode, video format, IP address, user account will not maintain previous setup after default operation!

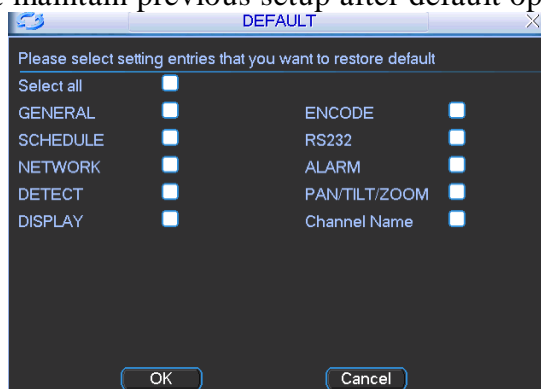


Figure 4-43

4.14 Search

Please refer to chapter 4.3 Search.

4.15 Advanced

Double click Advanced menu in the main window, the interface is shown below. See Figure 4-44. There are seven menu keys: Hard Disk Management, Alarm Output, Alarm Input, Manual Record, Account, Auto Maintain, and TV Adjust.

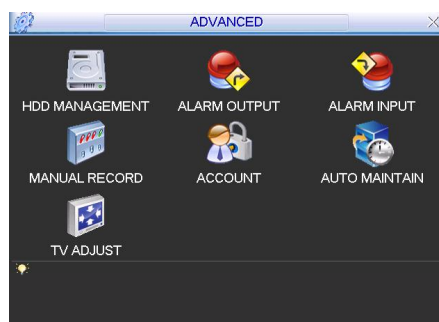


Figure 4-44

4.15.1 HDD Management

View and implement hard disk management. See Figure 4-45.

You can set required mode for current hard disk from the dropdown list.

Since there is only one HDD, you need to set as read-write. Otherwise system cannot record video.

After setup click save button and system needs to reboot to activate changes made.

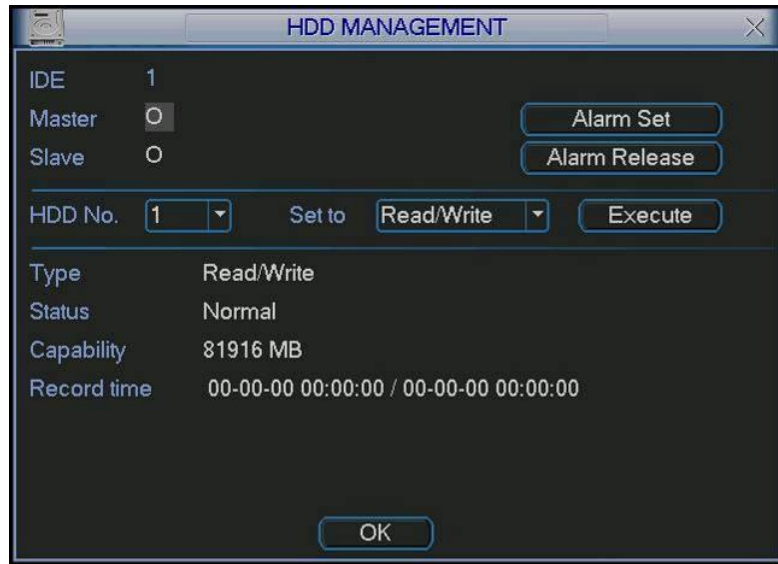


Figure 4-45

Click alarm set button in Figure 4-45, the interface is shown as below. See Figure 4-46.

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 setups click OK button and system returns to the previous menu



Figure 4-46

4.15.2 Alarm Output

Select alarm output channel.



Please highlight icon  to select the required alarm output channel.
After setup click OK button and system returns to the previous menu. See Figure 4-47.



Figure 4-47

4.15.3 Alarm Input

Select alarm input channel.

Please highlight icon  to select the corresponding input channel.
After setup click save button and system returns to the previous menu. See Figure 4-48.

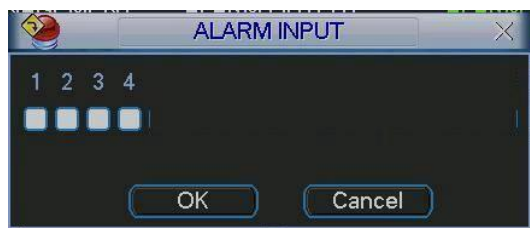


Figure 4-48

4.15.4 Manual Record

Please refer to chapter 4.2.2 manual record.

4.15.5 Account

Select Account Management for the following options: See Figure 4-49.

- | Add new user
- | Modify user
- | Add group
- | Modify group
- | Modify password.

For account management please note:

- | System account adopts a two-level management: Group and User. There are no limits to the number of Groups or Users set.
- | For Group or User management, there are two levels: admin and user.
- | The user name and group name can consist of eight bytes. One name can only be used once. There are four default users: admin/888888/666666 and hidden user "default". Except user 666666, all users have administrator rights.
- | Hidden user "default" is for system interior 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 login.

- | Each 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.

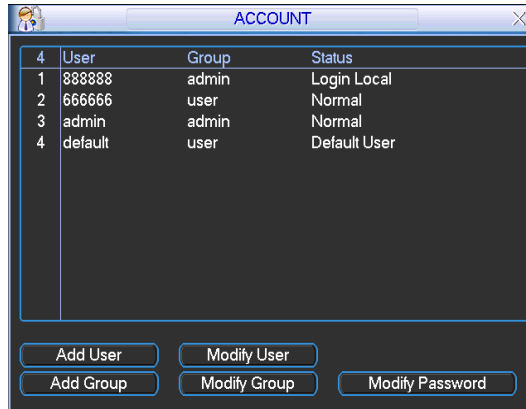


Figure 4-49

4.15.6 Auto Maintain

Here you can set auto-reboot time and auto-delete old files setup. See Figure 4-50. You can select required option from dropdown list.

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

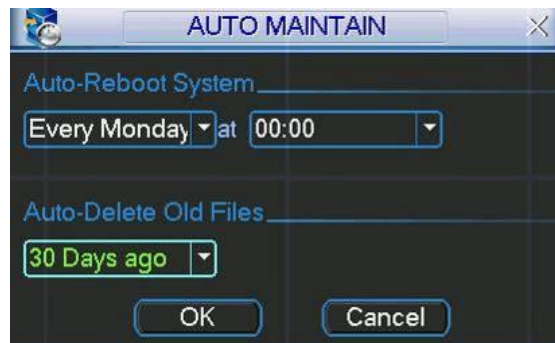


Figure 4-50

4.15.7 TV Adjust

Adjust TV output setup. See Figure 4-51.

Drag slide bar to adjust each item.

After setups click OK button and system returns to the previous menu.



Figure 4-51

4.16 Information

View system information. There are five menu options: HDD (hard disk information), BPS (data stream statistics), Log, Version, and Online User. See Figure 4-52.

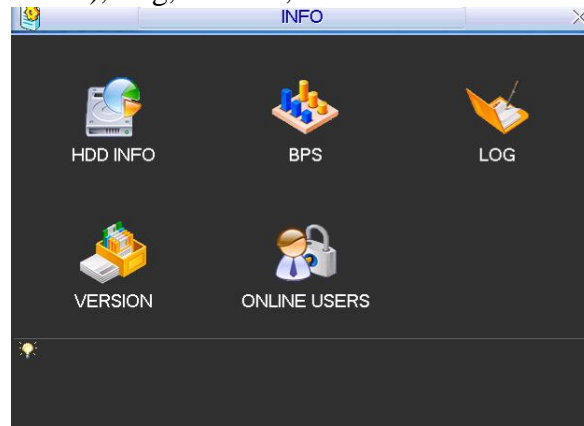


Figure 4-52

4.16.1 HDD Information

This menu lists hard disk type, total space, free space, video start time and status. See Figure 4-53.

Note:

If replacing a faulty Hard Drive remove the faulty drive before fitting new one.

If there is a hard disk conflict, please check hard disk time and system time are the same. Please go to Main Menu > Setting > General to modify system time. Then reboot system to resolve 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 current working disk.

If disk is damaged, system shows as “?”



Figure 4-53

4.16.2 BPS

View current video data stream (KB/s) and hard disk storage (MB/h). See Figure 4-54.

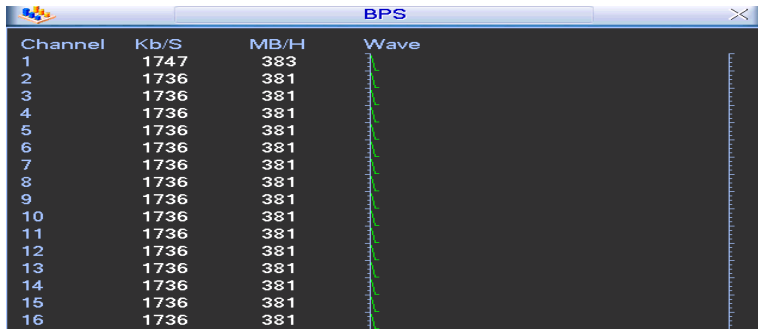


Figure 4-54

4.16.3 Log

View system log file. System lists the following information. See Figure 4-55.

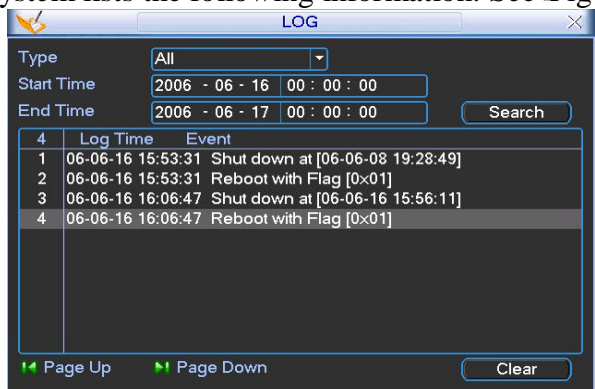


Figure 4-55

4.16.4 Version

View version information. See Figure 4-56.

- | Channel
- | Alarm in
- | Alarm out
- | System version:
- | Baud rate:
- | Start upgrade



Figure 4-56

4.16.5 Online Users

Manage Online Users. See Figure 4-57.

You can disconnect one user or block one user if you have proper system rights. The max interval length is 65535 seconds.

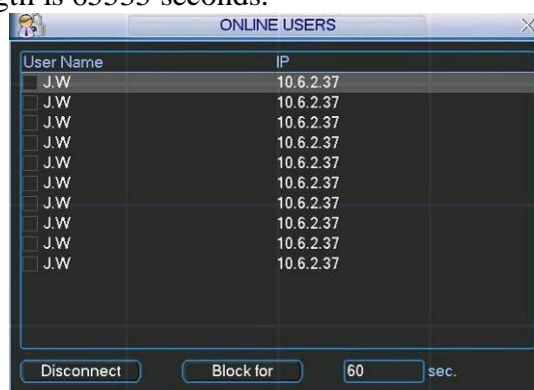


Figure 4-57

4.17 Exit

Double click exit button, system displays a dialogue box for you to select. See Figure 4-58.

- | **Logout menu user:** Log out of 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.

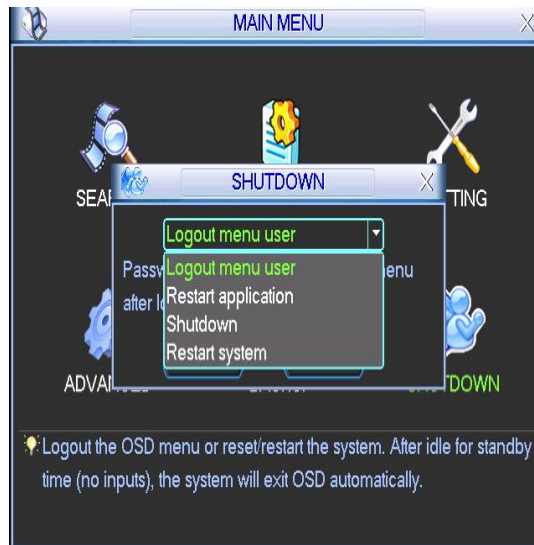


Figure 4-58

5 ABOUT AUXILLIARY MENU

5.1 Go to Pan/Tilt/Zoom Menu

In the one-window surveillance mode, right click mouse (click “fn” Button in the front panel or click AUX key in the remote control). The interface is shown as below: See Figure 5-1.



Figure 5-1

Click Pan/Tilt/Zoom, the interface is shown as in Figure 5-2. Here you can set the following items:

- | Zoom
- | Focus
- | Iris



Click icon  and  to adjust zoom, focus and Iris.



Figure 5-2

In Figure 5-2, please click direction arrows (See Figure 5-3) to adjust PTZ position. There are eight direction arrows. (Please note there are only four direction arrows in DVR front panel.)



Figure 5-3







5.1.1 3D Intelligent Positioning Key

In the middle of the eight direction arrows, there is a 3D intelligent positioning key. See Figure 5-4 . Click this button and system goes back to the single screen mode. Drag the mouse in the screen to adjust section size.



Figure 5-4

Reference details for PTZ operation.

Name	Function key	function	Shortcut key	Function key	function	Shortcut key
Zoom		Near	▶		Far	⌂
Focus		Near			Far	▶
Iris		close	; t		Open	„ ;

5.2 Preset /Patrol / Pattern /Border Function

In Figure 5-2 click the set button. The interface is shown below:

Here you can set the following items:

- | Preset
- | Patrol
- | Pattern
- | Border



Figure 5-5

In Figure 5-2, click page switch button. You will see an interface as in Figure 5-6.

Here you can activate the following functions:

- | Preset
- | Patrol
- | Pattern
- | Aux on
- | Aux off
- | Auto scan
- | Auto pan
- | Light on



Figure 5-6

5.2.1 Preset Setup

Note: The following setups are usually operated in the Figure 5-2, Figure 5-5 and Figure 5-6.

In Figure 5-2, use eight direction arrows to adjust camera to the proper position.

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

Add this preset to a patrol number



Figure 5-7

5.2.2 Activate Preset

In Figure 5-6 please input preset number in the No. box and click preset button.

5.2.3 Patrol Setup

In Figure 5-5, click patrol button. The interface is shown as in Figure 5-8. Input preset number and then add this preset to a patrol.



Figure 5-8

5.2.4 Activate Patrol

In Figure 5-6, input patrol number in the No. box and click patrol button

5.2.5 Pattern Setup

In Figure 5-5, click pattern button and then click begin button. The interface shows as per Figure 5-9.

Please go to Figure 5-2 to modify zoom, focus, and iris. Go back to Figure 5-9 and click end button.

You can save all these setups as pattern 1.



Figure 5-9

5.2.6 Activate Pattern Function

In Figure 5-6 input mode value in the No. box and click pattern button.

5.2.7 Border Setup

In Figure 5-5, click border button. The interface is shown as in Figure 5-10.

Please go to Figure 5-2, use direction arrows to select camera left limit, and then please go to Figure 5-10 and click left limit button

Repeat the above procedures to set right limit.



Figure 5-10

5.2.8 Activate Border Function

In Figure 5-6, click auto scan button and the system begins auto scan.

Correspondingly, the auto scan button changes to a stop button.

Click stop button to terminate scan operation.

5.3 Dome Menu Control

In Figure 5-6, click page switch button. The interface is shown below. See Figure 5-11

Click menu to enter dome menu. The direction arrows here control dome menu.

Click page switch button and system goes back to Figure 5-2.



Figure 5-11

6 WEB CLIENT OPERATION

Please note, all the operations here in chapter seven are based on our 4-ch DVR. There may be differences in the interface due to different models.

6.1 Network connection

Before web client operation, please check the following items:

- 1 Network connection is correctly configured
- 1 DVR and PC network setup is correct. Please refer to network setup(Main Menu->Setting->Network)
- 1 Use ping *****.***.***.***** (* DVR IP address) to check connection is OK or not. Usually the return TTL value should be less than 255.

6.2 Login and logout

Open IE 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 may display 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 6-1.

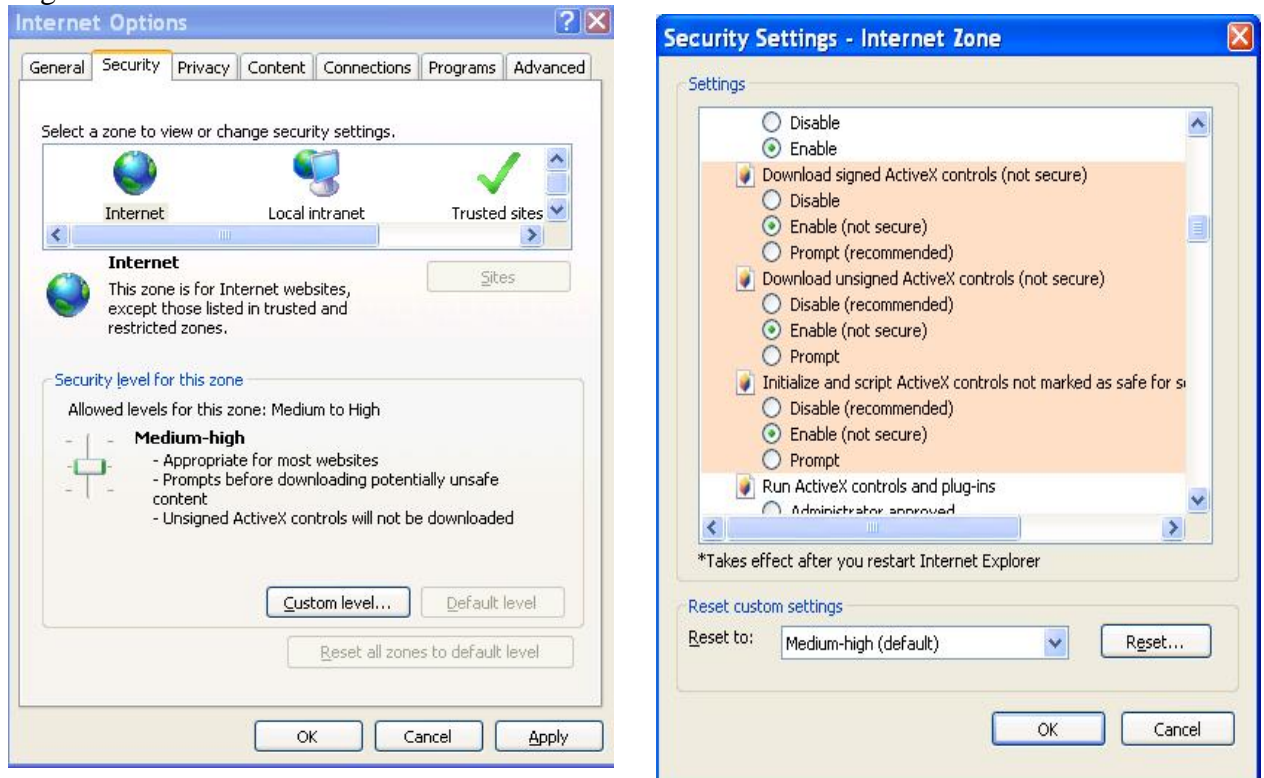


Figure 6-1

After installation, the interface is shown as below. See Figure 6-2.

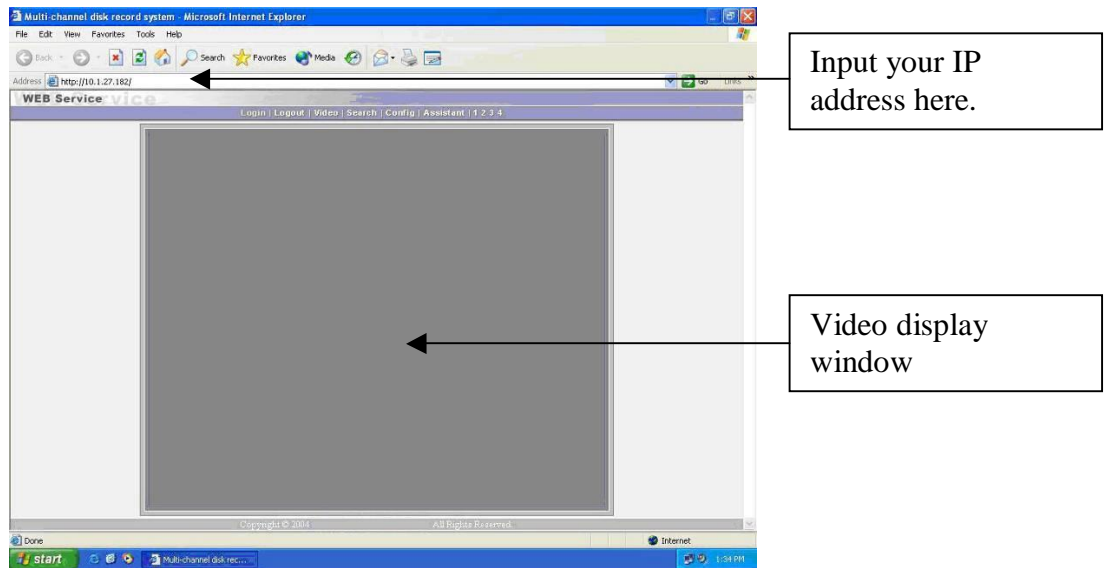


Figure 6-2

There are six function keys: login, logout, video, search, configuration and assistant. See Figure 6-3.

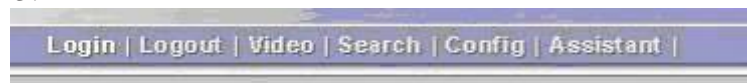


Figure 6-3

Click login the following interface will be displayed. See Figure 6-4. 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.

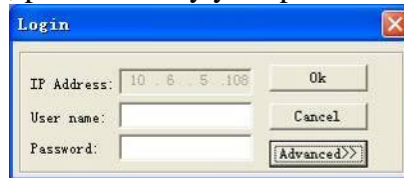


Figure 6-4

6.3 Go to Real-time Monitor Mode

There are three ways for you to go to real-time monitor mode.

- | Select the channel number near function key. See Figure 6-5.



Figure 6-5

- | In Figure 6-5, click “video” button, select real-time monitor then 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.

6.4 Video (Right Mouse Menu Operation)

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

- | **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 four levels: general, good, better and best.
- | **Playback control bar:** this controls playback.
- | **PTZ control:** controls PTZ movement. Before operation, ensure you have selected correct protocol for DVR
- | **Volume adjustment:** adjust 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:** there are four options:20%,40%,60%,80%,100%
- | **Video windows:** Support 1/2/4 window display mode.



Figure 6-6

6.4.1 Real time Monitor

Select the channel you want to implement real-time monitor.

6.4.2 Multi-camera Preview

Select view modes: 1/2/3/4.

6.4.3 Start Dialog

Click this button to enable audio talk function.

6.4.4 Decode Quality

Select decode quality. There are four levels: general, good, better and best.

6.4.5 Playback Control Bar

Select playback bar when you are viewing video file. See Figure 6-7.



Figure 6-7

6.4.6 PTZ Control

Please click the corresponding direction arrow to adjust zoom, focus and iris. See Figure 6-8.

Note: before you operate this function, please make sure you have properly set the PTZ menu (Main menu->Setting->Pan-tilt Zoom).

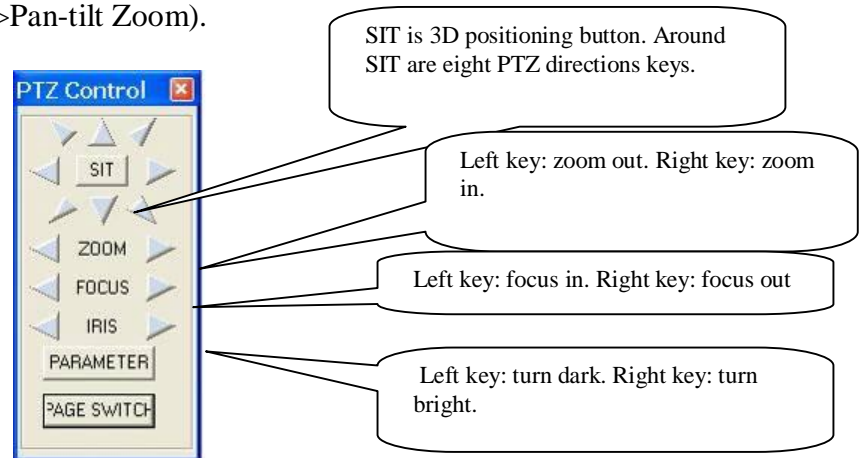


Figure 6-8

Click parameter button in Figure 6-8. The interface is shown as below. See Figure 6-9.

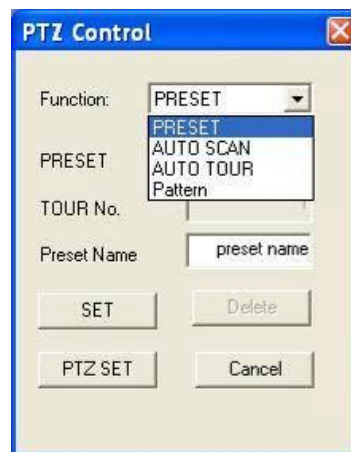


Figure 6-9

In Figure 6-9, click PTZ set button. You can see the following dialogue box. See Figure 6-10. You can select the dropdown list.

This controls direction operation. There are eight levels ranging from 1 to 8. Level 8 is the fastest speed.

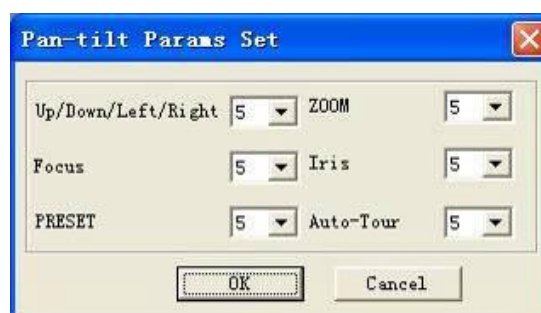


Figure 6-10

6.4.7 Volume Adjustment

Please drag volume bar to adjust audio level. You can click in box before Mute to turn off audio. See Figure 6-11.



Figure 6-11

6.4.8 Alarm Setting

Click alarm setting, you can set alarm input and output. See Figure 6-12.

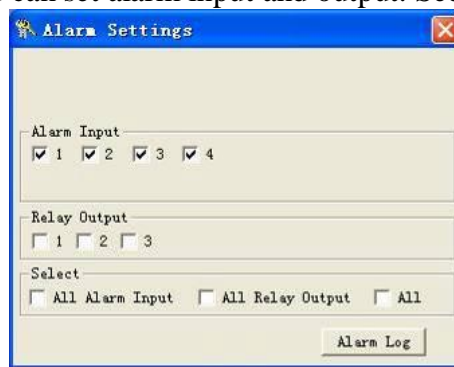


Figure 6-12

6.4.9 Network Data Flux

Displays the network transmission data flux. See Figure 6-13.

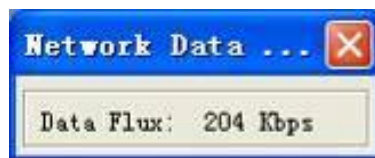


Figure 6-13

6.4.10 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.

6.4.11 Resize Video

There are four display ratios for you to choose: 40%, 60%, 80% and 100%. See Figure 6-14.

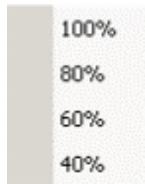


Figure 6-14

6.4.12 Video Windows

Choose display mode. See Figure 6-15.



Figure 6-15

6.5 Search

Select video type, channel number and time to search the file you want.

Click search button, the interface is shown below. See Figure 6-16

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

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

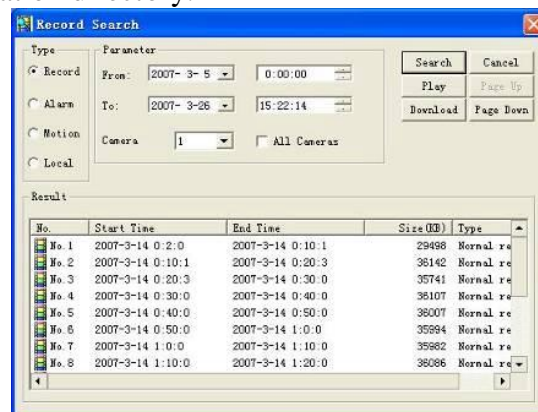


Figure 6-16

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

The playback bar is shown below. See Figure 6-17.

- 1: Save
- 2: Stop
- 3: Snapshot
- 4: Fast Backward
- 5: Play
- 6: Pause
- 7: Fast play

- 8: Hide
- 9: Full-screen
- 10: Close

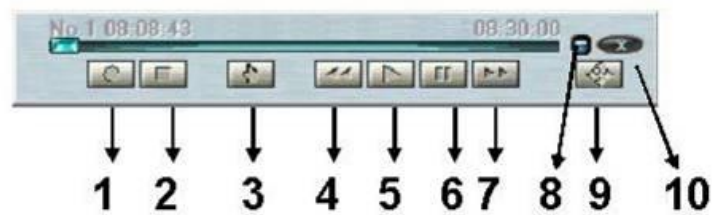


Figure 6-17

6.5.1 Download

You can select one or more files you want to download and then click down load button. System displays a dialogue box asking you specify directory. See Figure 6-18.

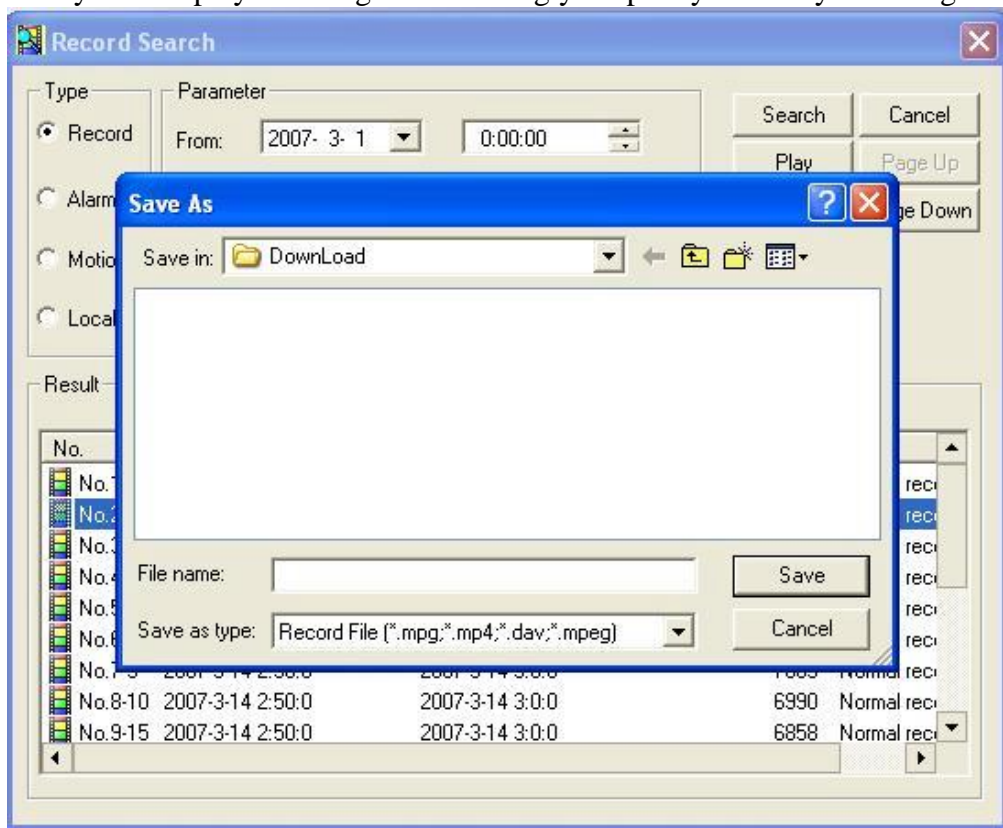


Figure 6-18

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 to view. See Figure 6-19.

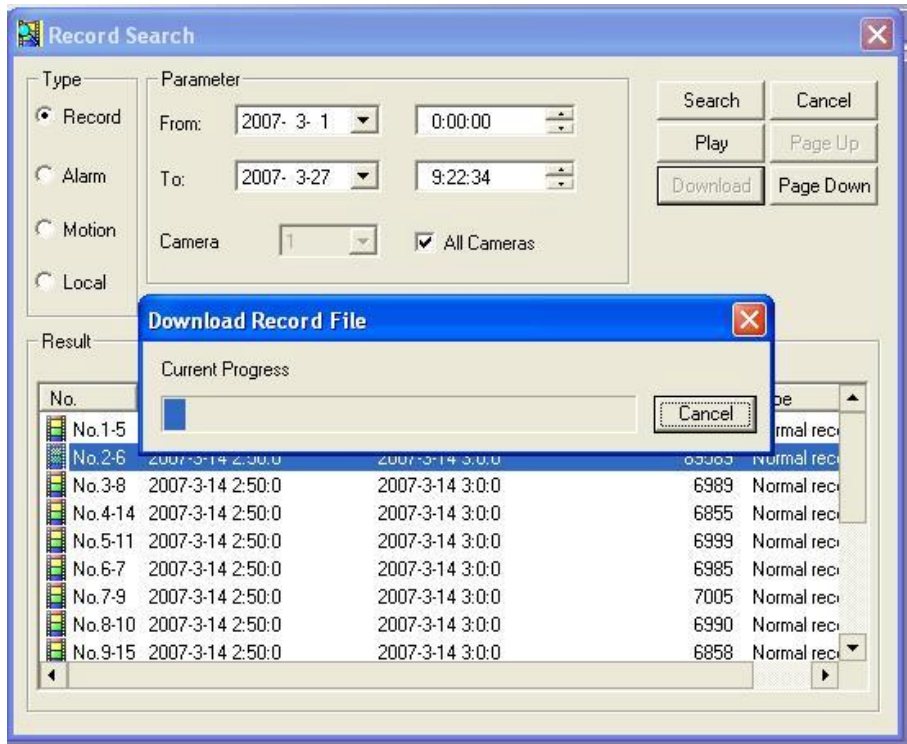


Figure 6-19

The Download file name is usually made up of: file name +Channel N +date +time.
File extension name is .dav.

For example: file name a-0120081205071028.dav means:

- | 01: channel 1
- | 20081205: 5th December, 2008 in reverse.
- | 071028 :7 hours 10 minutes 28 seconds.

6.6 Configure

Click configure button, there are seven function keys. See Figure 6-20.

- | Image
- | Alarm
- | Motion detection
- | Network
- | Video parameter
- | General
- | Schedule

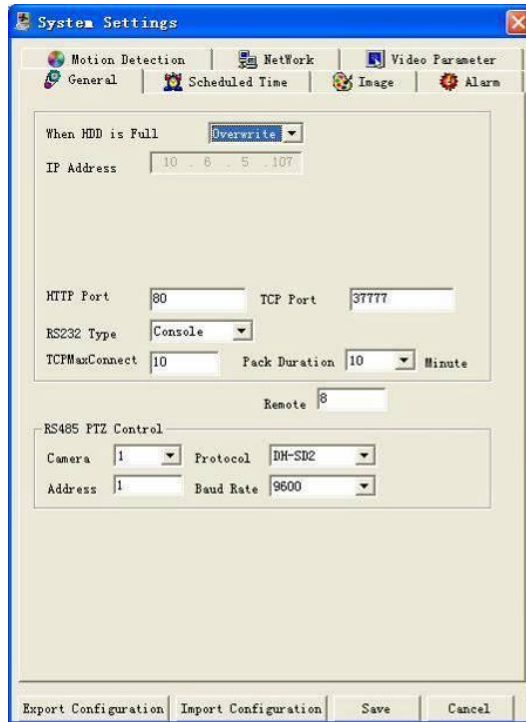


Figure 6-20

6.6.1 Load and Save Configuration

6.6.1.1 Save configuration

Click export configuration button in Figure 6-20. You can save current configuration to a directory. The file extension name is CFG. See Figure 6-21.

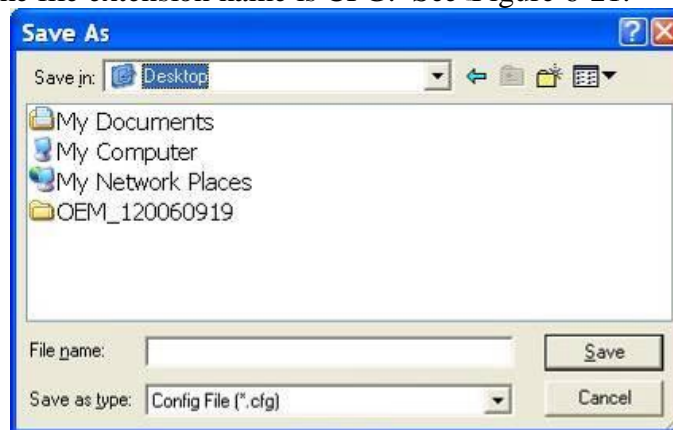


Figure 6-21

6.6.1.2 Load configuration

Click import configuration button in Figure 6-20. You can draw a select checkbox to load your previously saved backup file. See Figure 6-22. Click Ok button and then select file extension name of .CFG. This will update system setup.

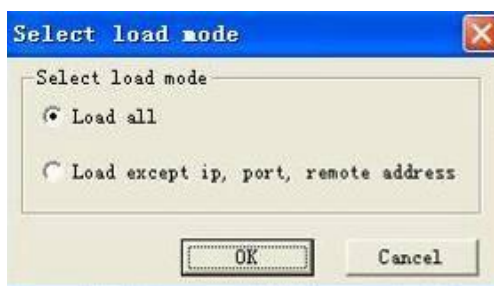


Figure 6-22

6.6.2 General

Click general button and the menu below is displayed. See Figure 6-23.

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 the lens or PTZ.

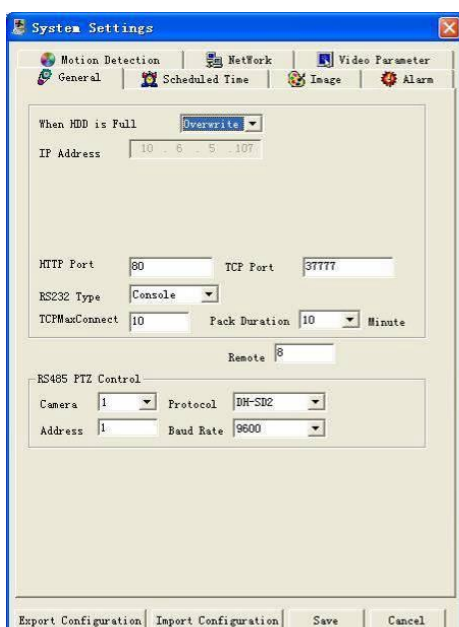


Figure 6-23

6.6.3 Schedule Time

Click Schedule Time button, the interface is shown as in Figure 6-24.

Click to select \checkmark for Sunday to Saturday and then set various time periods (from 0 to 24:00 hours).

You must select \checkmark in the relevant column for the record type: record/motion/alarm.

Record is continuous record, Motion is motion detect and Alarm is an alarm record.

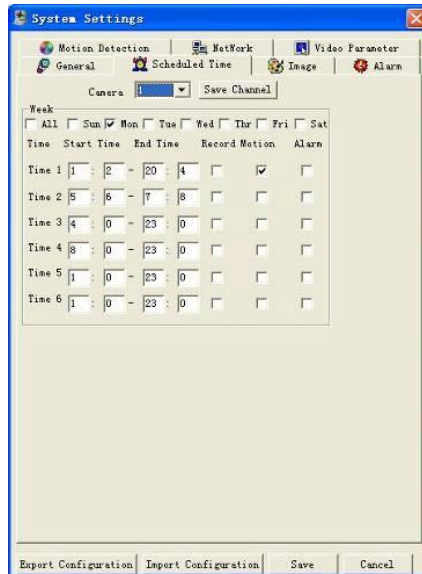


Figure 6-24

6.6.4 Image

Click Image button, the interface is shown below. See Figure 6-25.

Select the image quality and protocols for each channel.

Also set encode mode, quality and protocol for each channel. You can select from the dropdown list.

- | **FPS (PAL):** there are several options: 1/2/3/6/12/25.
- | **Data:** there are two data modes: CBR/VBR. Always use VBR when networking.
- | **Quality:** There are six levels. The different data flux occupies different bandwidths and the transmission image qualities are also different. Among them, level 6 needs the widest bandwidth and can reveal the best image quality. Please note your setup here only applies to 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.

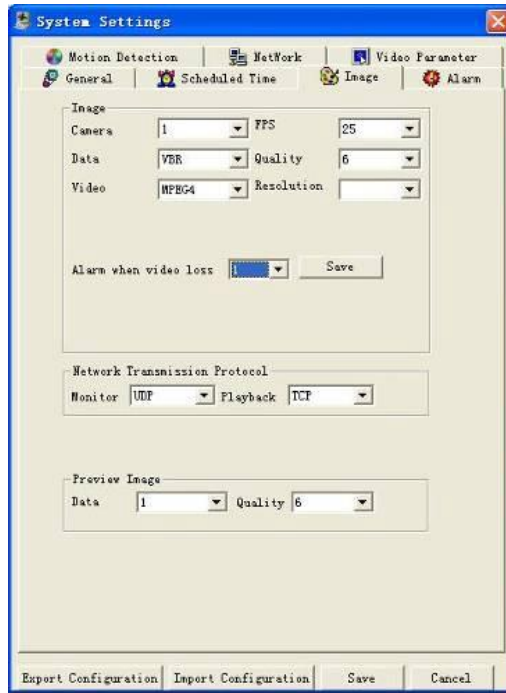


Figure 6-25

6.6.5 Alarm

Select record channel and output port. See Figure 6-26.

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

Delay time ranges from 10 to 300 seconds.

You can tick before the check box to enable record and set output port.

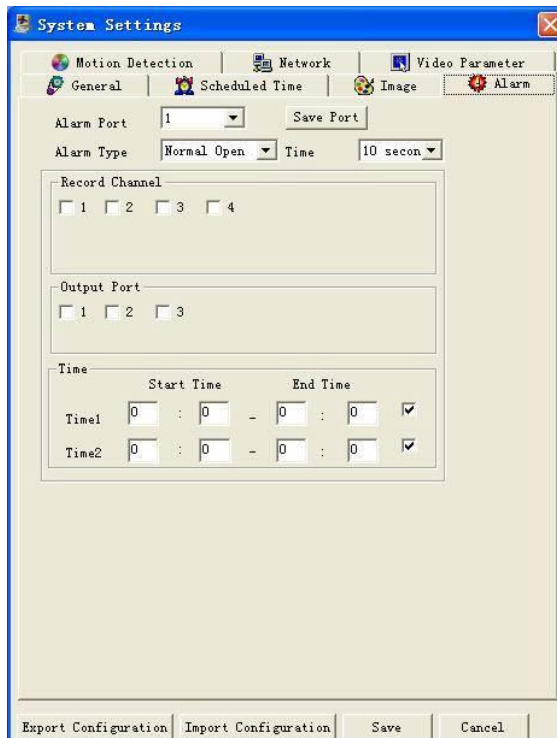


Figure 6-26

In Figure 6-26 click alarm PTZ button, you can see the following interface. See Figure 6-27.

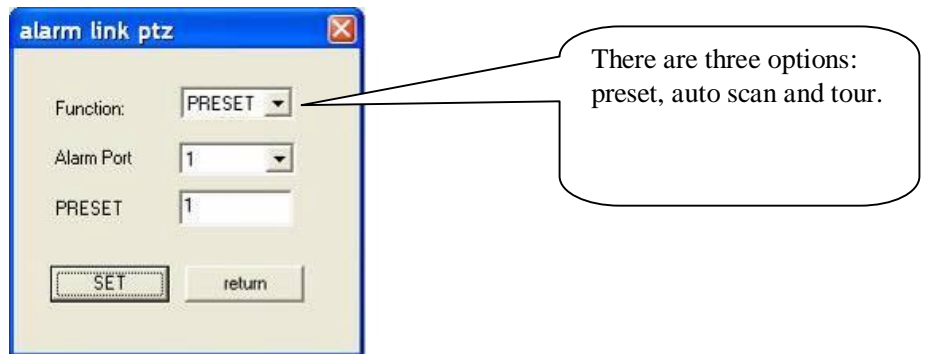


Figure 6-27

6.6.6 Motion Detection

Motion detection will take effect excluding the time you set to schedule recording. See Figure 6-28.

The blue 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 draw a \checkmark before 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).

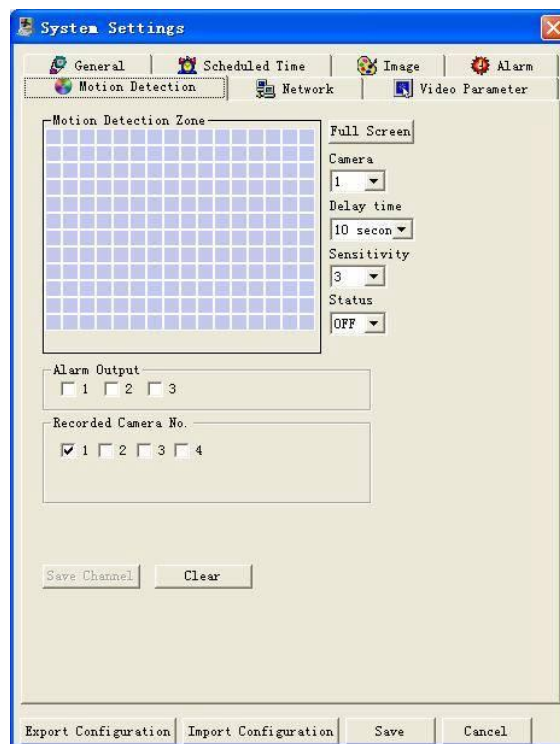


Figure 6-28

6.6.7 Network (This facility only allows one camera connection. PPPoE is not widely available in the UK)

Network interface is shown as in Figure 6-29.

6.6.7.1 PPPoE Connection

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 activate your configuration.

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

6.6.7.2 Web visit via PPPoE (see note above)

There are two ways.

c. 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.

d. Visit via DNS

You need a PC of fixed IP in the internet and there is the 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.

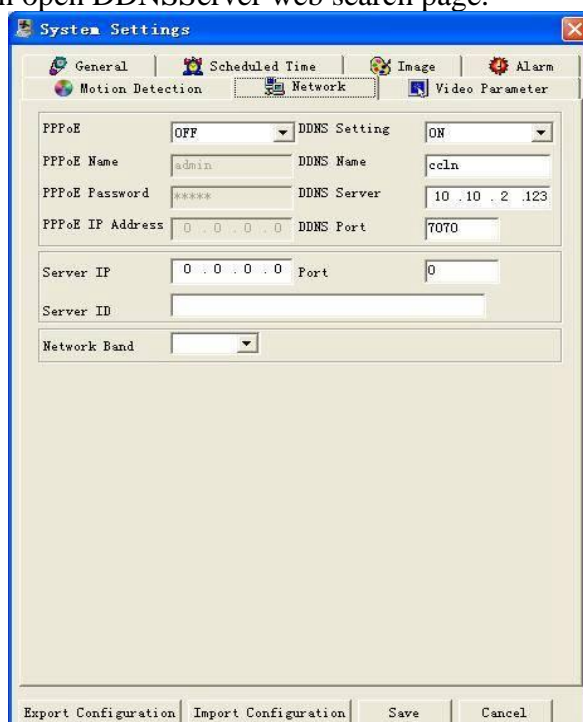


Figure 6-29

6.6.8 Video Parameter

Video parameter setup interface is shown as in Figure 6-30. Before setup please select channel number first

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

After finishing all channels setup, you can click “save” to save all configurations.

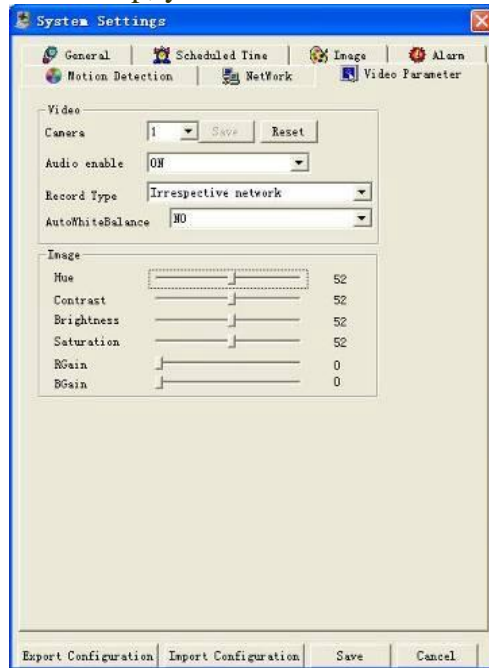


Figure 6-30

6.7 Assistant

Click assistant setting, the interface is shown as below. See Figure 6-31. There are nine function keys.

Please note Matrix control item only applies for some special series.



Figure 6-31

6.7.1 User Manage

Manage users and user groups. See Figure 6-32. You can click '+' to see the whole group list.

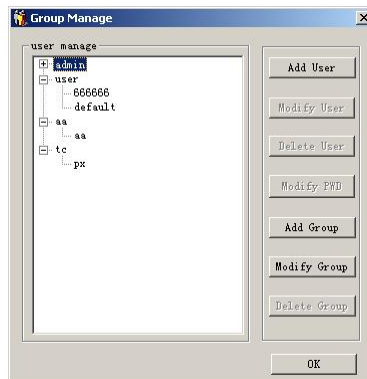


Figure 6-32

6.7.1.1 Add Group

Click "add group" button to input group name. See Figure 6-33.



Figure 6-33

Click "Power" button to set group power.

Click "Save" button to save configuration

6.7.1.2 Delete Group

Click "Delete Group" button, the interface is shown as in Figure 7-34.

Note: You can only delete an empty group (E.g.: There is no user in current group).

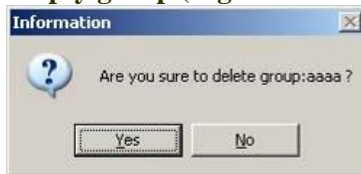


Figure 6-34

6.7.1.3 Modify Group

Click modify group, the interface is shown as in Figure 6-35. You can modify group name and then click "power" button to set proper right for the whole group.



Figure 6-35

6.7.1.4 Add User

Click “Add User” button the interface is shown in Figure 6-36.

Input user name, password, and then input password again to confirm.



Figure 6-36

6.7.1.5 Power

When you add a new user or a new group (such as in Figure 6-33, Figure 6-36.), click the “power” button to display the interface shown in Figure 6-37. Here you set the user’s power. There are three power groups: main control power/monitor power/playback power.

You can enter a \checkmark before the checkbox to enable the corresponding function.

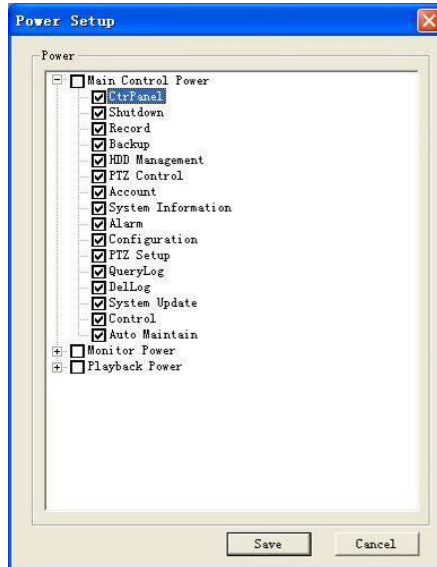


Figure 6-37

6.7.1.6 Modify user

Select user and then click modify user button. The interface shown in Figure 6-38 will be displayed. Here you can modify user name.

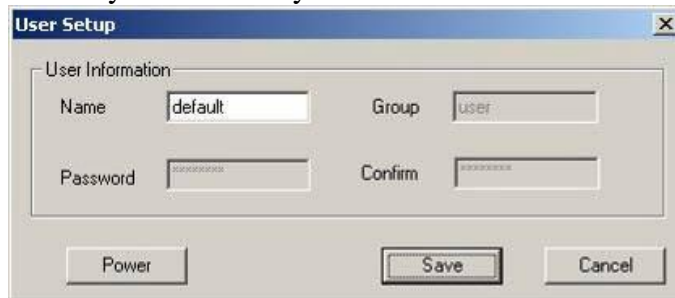


Figure 6-38

6.7.1.7 Delete user

Select user and then click “delete user” button. The following dialogue box is displayed. See Figure 6-39. Click “Yes” to delete current user.

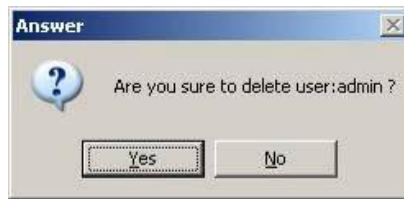


Figure 6-39

6.7.2 Record Control

Click “record control” button. The interface shown below is displayed. See Figure 6-40. You can select mode for each channel.



Figure 6-40

6.7.3 Log Information

The System can automatically backup log information.

Click this button to view detailed information. See Figure 6-41.

Once you click the 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)

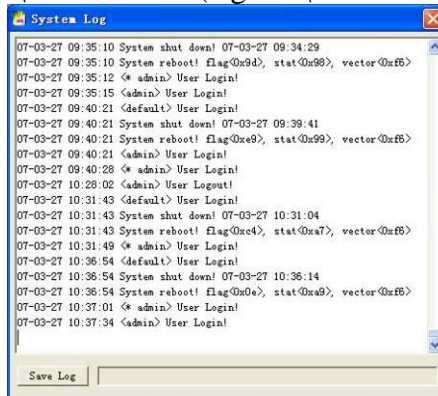


Figure 6-41

6.7.4 Date and Time

Modify system date and time. See Figure 6-42.

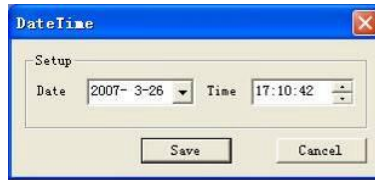


Figure 6-42

6.7.5 System Information

View basic system information. See Figure 6-43.

You can

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

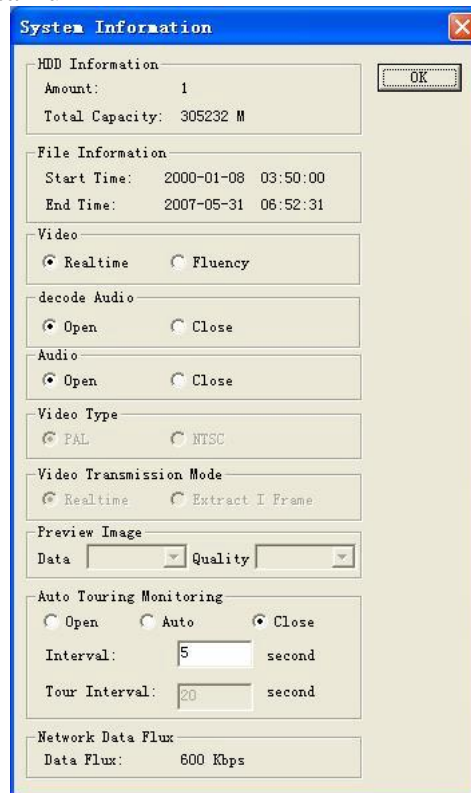


Figure 6-43

6.7.6 Alarm Prompt

Choose different alarm warning sounds. See Figure 6-44.

Select system AlarmSound.wav file from folder system32 as your audio sound.

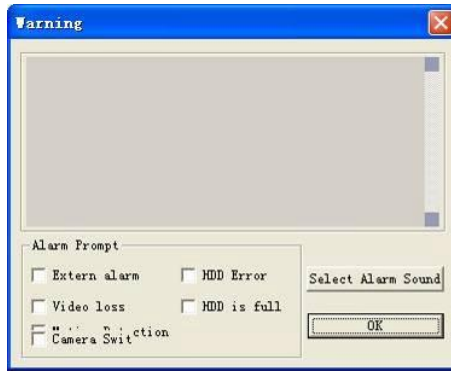


Figure 6-44

6.7.7 Camera Title

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.4.

See Figure 6-45.

Please note when you modify channel name at DVR end, this modification does not apply to web end or standalone end.



Figure 6-45

6.7.8 Upgrade BIOS

Click upgrade BIOS button. The interface is shown below. See Figure 6-46.

Open the BIOS file and then click send BIOS button. During the upgrade process, there is a process bar for your reference. **NOTE: NEVER UPGRADE THE BIOS WITHOUT FIRST CONTACTING YOUR SUPPLIER. INCORRECTLY UPGRADING THE BIOS CAN LEAVE THE UNIT INOPERABLE.**

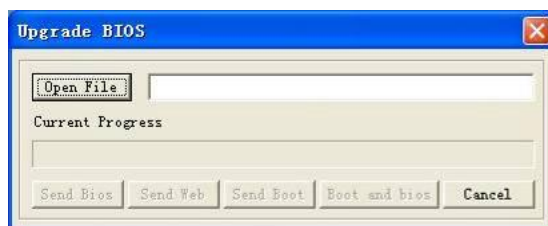


Figure 6-46

6.7.9 Reboot

Click reboot button, system displays a warning dialogue box to alert you. See Figure 6-47.

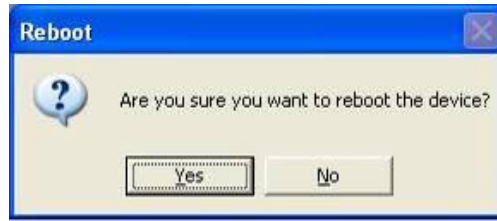


Figure 6-47

6.7.10 About

View basic system information. See Figure 6-48.



Figure 6-48

6.8 Un-installing the ActiveX Plugin

To remove or uninstall the ActiveX Plugin from your system launch a DOS prompt and type the following:

```
regsvr32 -u WebRec.ocx.
```

The Webrec.ocx file can then be deleted manually from the System32 folder.

7. DAYS RECORDING PER HDD

Resolution	Quality Setting	FPS	Gb/H Per Channel	Gb/H Per Machine	80Gb	160Gb	250Gb	300Gb	400Gb	750Gb	1000Gb
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

8. ADDITIONAL MENUS AVAILABLE USING SOFTWARE

This DVR can be controlled via a number of methods.

1. Direct control through the DVR using buttons, mouse or hand remote.
2. Networked connection either direct from PC to DVR, via a local area connection or via Internet connection.

The network methods can be controlled via the Web browser or by using Client software. The SightBoss Client Software is supplied with this DVR. The previous Client software prior to SightBoss can still be used but this will be withdrawn by the manufacturer in due course. This can be downloaded from the website. The SightBoss Client software supplied with this DVR allows you to manage a number of DVRs remotely.

The menu options covered in this manual therefore refer only to direct access through the DVR, networking setup and access via the Web browser. All options covered by the SightBoss Client software are covered in the SightBoss Manual

8.1 SightBoss

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

8.1.1 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

8.1.2 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.

8.1.3 Overview

Multiple-client main window is shown in **Error! Reference source not found..**

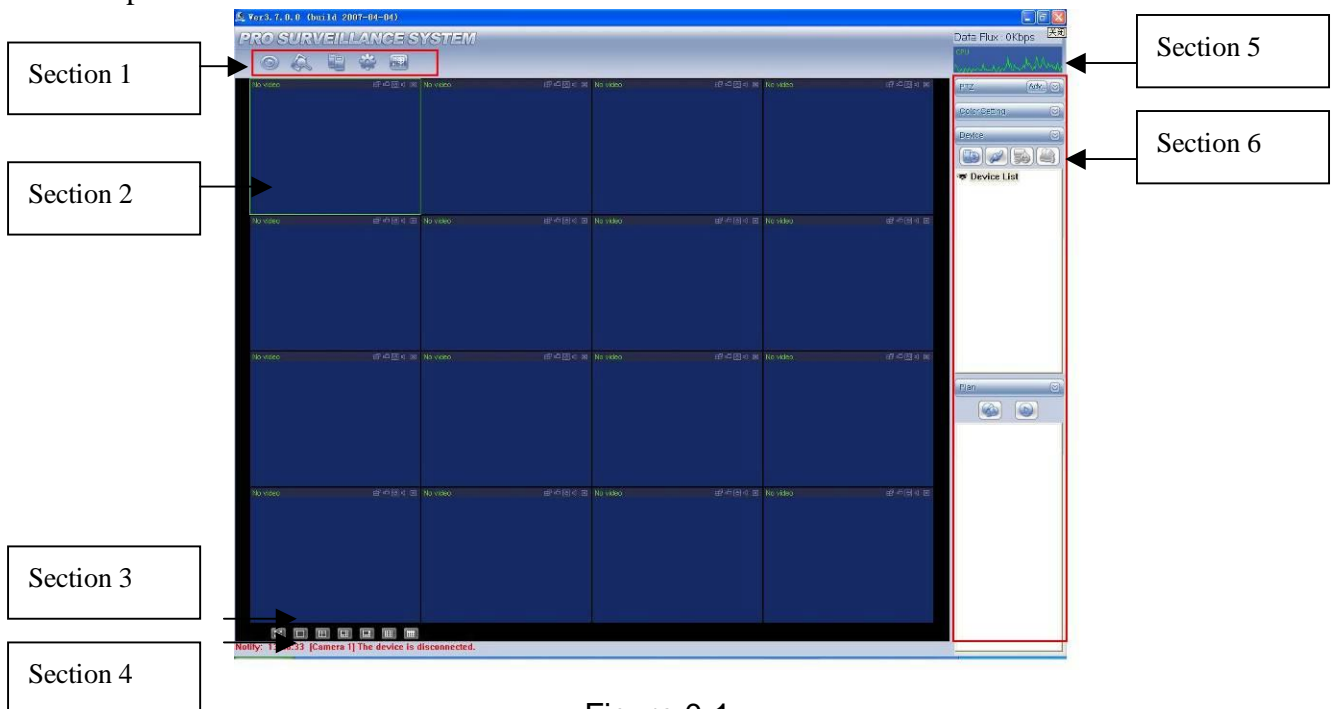


Figure 0-1

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.

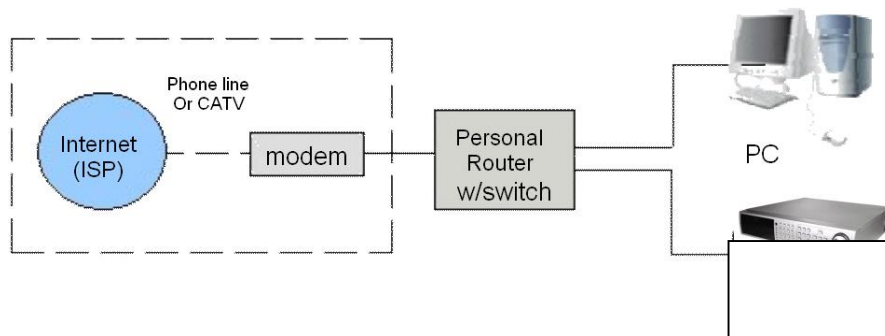
8.1.4 More Details

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

9. NETWORKING A DIGITAL VIDEO RECORDER

9.1 Configure the DVR to operate with a modem router.

For experienced Users



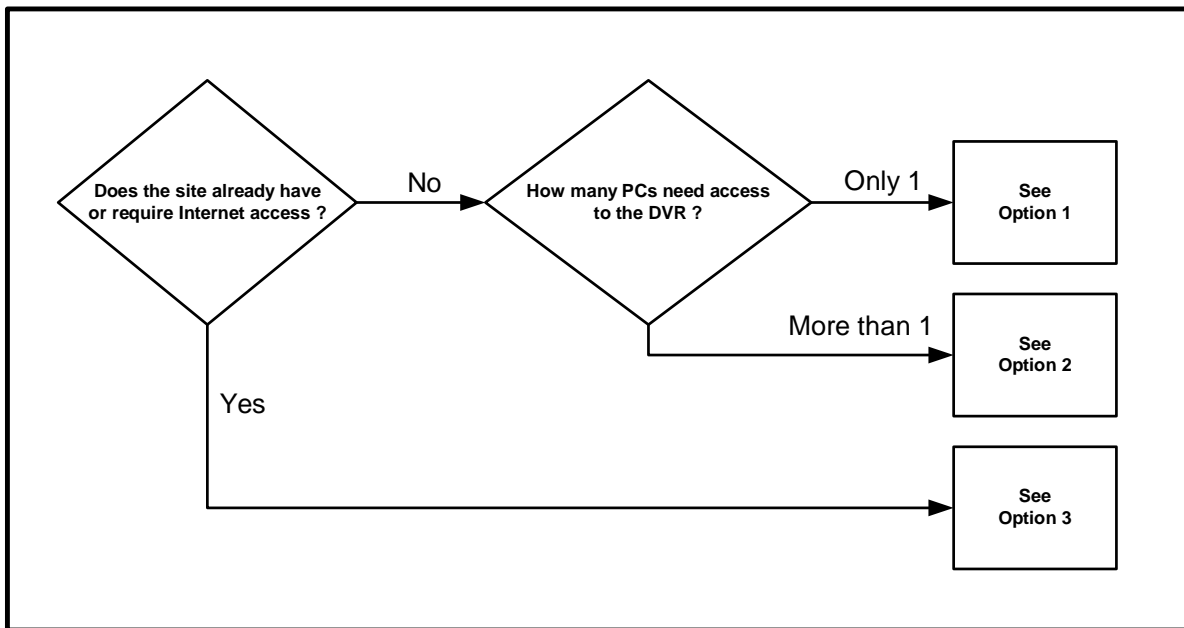
Configure the DVR as follows:

- a. It is assumed you have a PC working on Broadband Internet.
- b. Check IP address in P.C and record IP Address, Subnet Mask & Gateway Address.
Example: IP Address **192.168.1.10** Subnet: **255.255.255.000**
Gateway: **192.168.1.1**

- c. Connect LAN cable from router to DVR.
- d. Assign DVR a private IP address Example : **192.168.001.108**
You need to assign the DVR an IP address similar to PC. The IP address you assign must be unique but the first three levels must match your local network. When configuring the DVR's IP address information, the version of firmware within the units may display the IP addresses differently. For simplicity 192.168.1.108 may have to be configured as 192.168.001.108

1. Enter the DVR Menu – Go to Settings > Network
2. Enter Network menu
3. SET IP ADDRESS (see above), Subnet Mask: 255.255.255.000 (example), GATEWAY 192.168.1.1 (example - Router local address), Service Port 37777, HTTP Port 80, Protocol TCP and Max Connections 10 and press SAVE.
4. EXIT MENU.
5. Now turn Router off and on. This will take about one minute to reset.
6. Your DVR is now ready for access via the local PC using the Client or Sight Boss Software.
7. Refer to your modem/router manual for instructions on how to configure it to allow incoming Internet access.
8. If you fail to access DVR check all steps again.

9.2 For Beginners



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 -

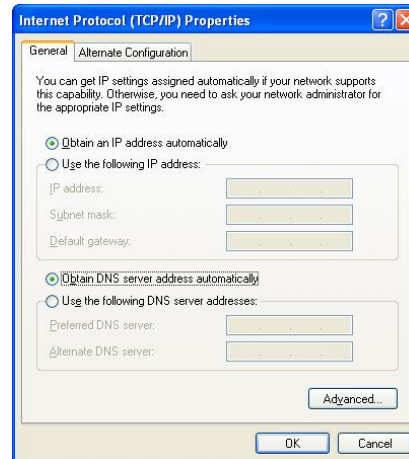
- Tip 117 Describing how to set a PC's IP Address
- TIP 36 Describing how to perform 'ping' test
- Tip 58 Describing how to configure a router for Internet access

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.

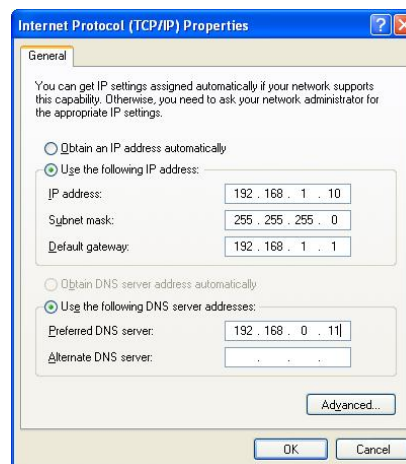
9.2.1 How do I set my PC to 'Obtain an IP address automatically' ?

- Control Panel,
- Network Connections,
- Local Area Connection,
- Properties,
- Internet Protocol (TCP/IP),
- Properties,
- Select 'Obtain IP Address Automatically'



9.2.2 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



9.2.3 How do I find out my PC's IP Address ?

- Start
- Run
- Cmd
- ipconfig

9.2.4 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>

9.2.5 How do I Configure a Router for Remote Access ?

- Instructions on the SystemQ website cover the NET800 and Netgear Routers

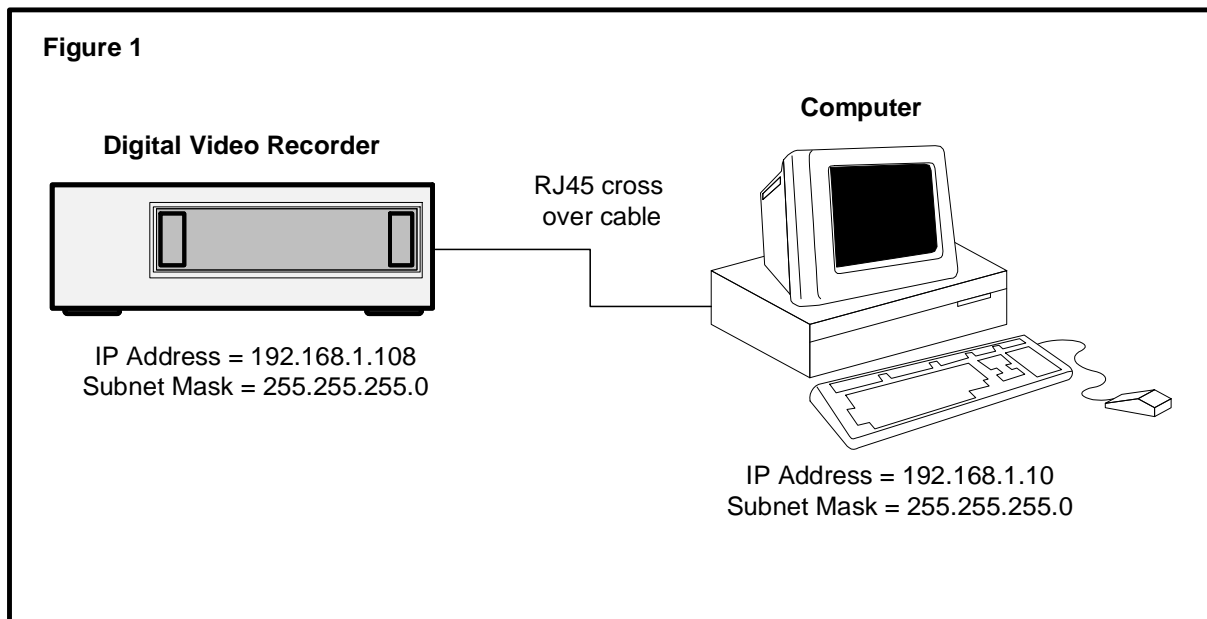
9.2.6 How do I find the On-Line Support ?

<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

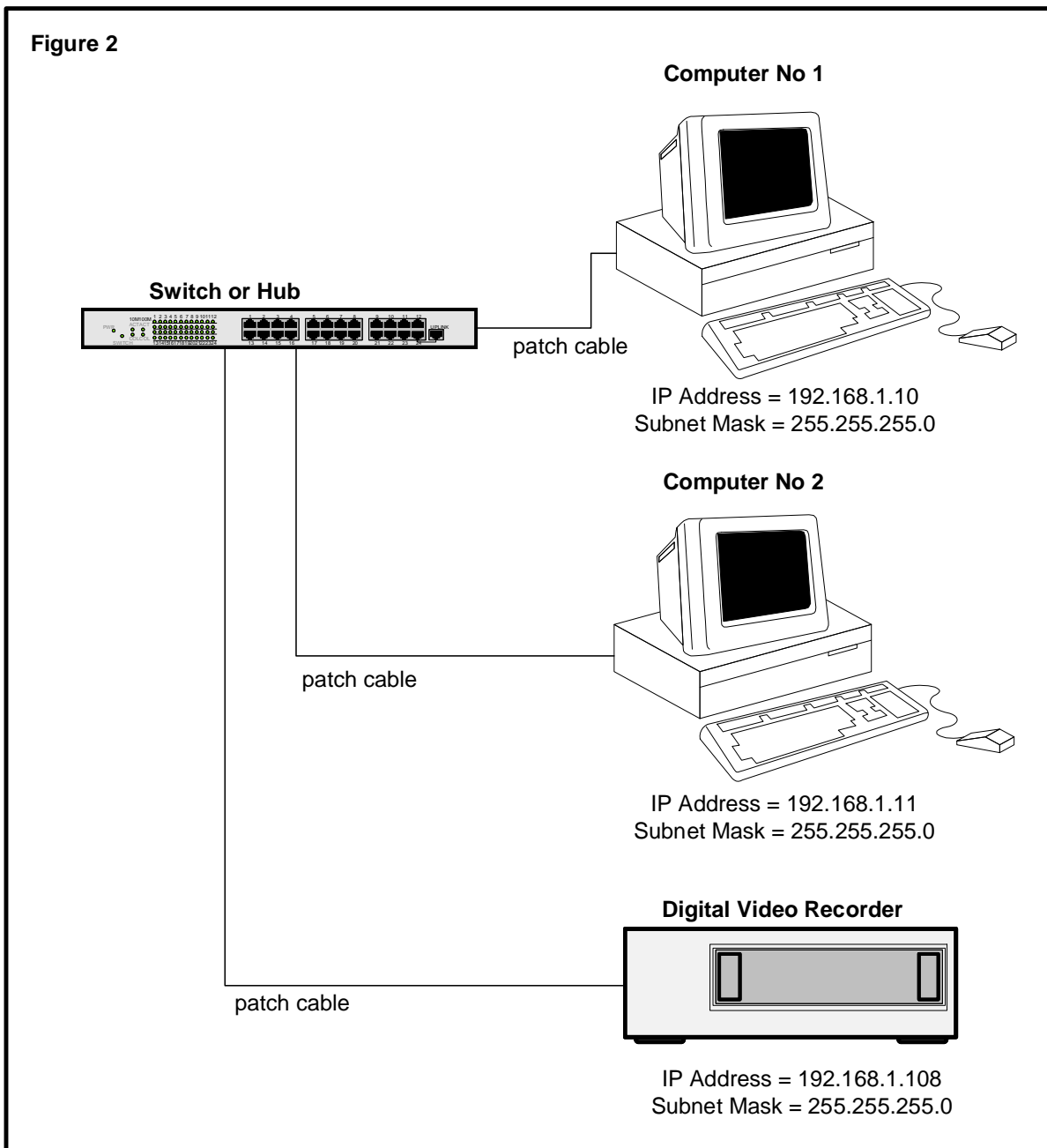
9.3 Option 1: Connect a DVR directly to a single PC



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 PC's connection to the DVR using 'Ping'
- Connect using the client software

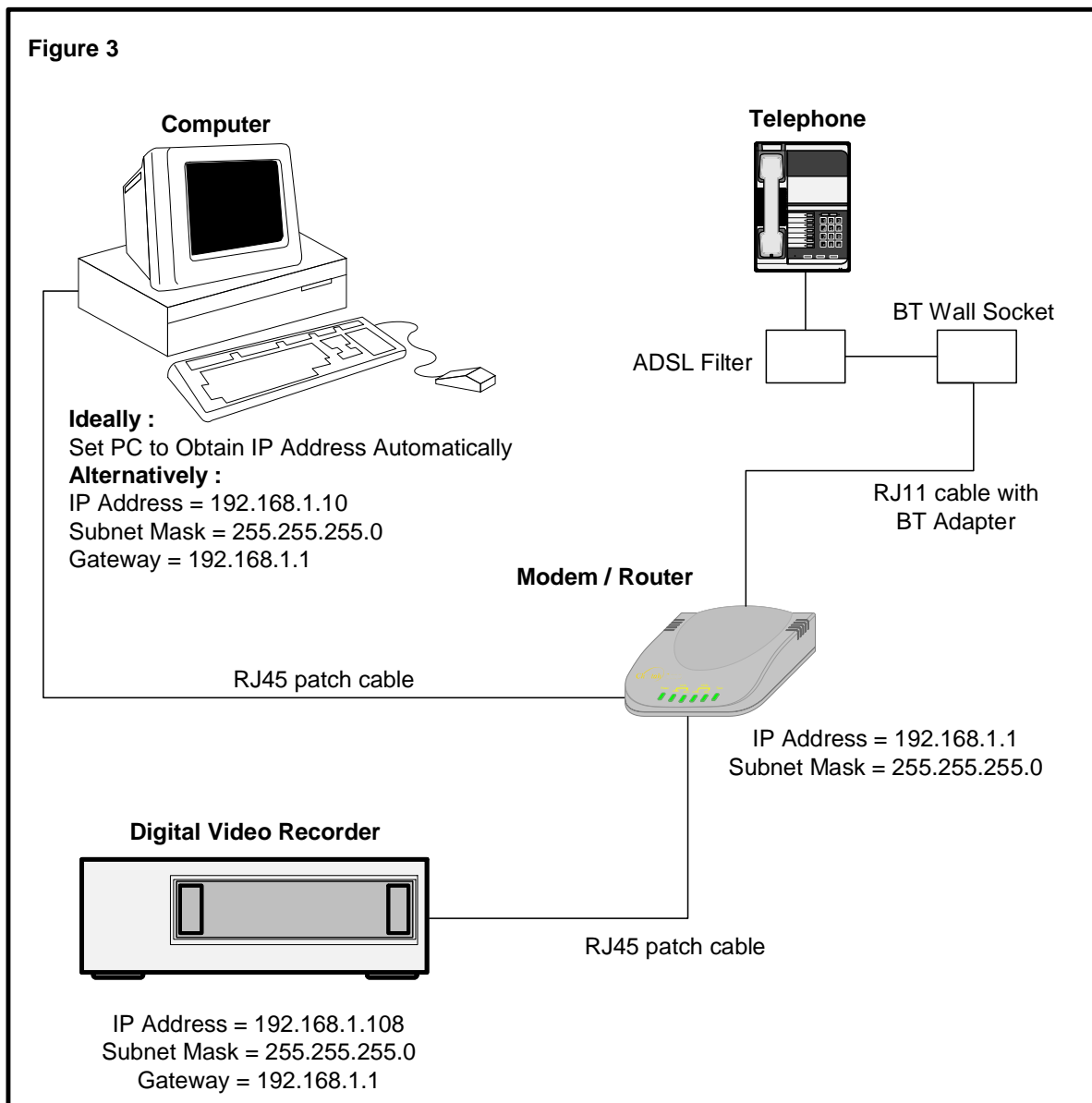
9.4 Option 2: Connect a DVR to a switch or hub



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

9.5 Option 3: Connecting for Internet Access



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 PC's 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

10. FREQUENTLY ASKED QUESTIONS

1. Can this system run in windows 98?

Yes but you will need to install DIRECTX 7.0 or higher first. Note that performance on an older type PC may be degraded. Note that SightBoss must be run on Windows 2000 or XP and there are restrictions using Vista (see SightBoss manual.)

2. System cannot detect hard disk.

First check serial data cable and power cord are correctly connected inside DVR.

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. Do not overlap recording slot times and only setup slots within the same 2400 hour period. For example setting 22:00 ~ 06:00 motion detect and 06:00 ~ 22:00 continuous recording is set as follows:

Timeslot 1	00:00 ~ 05:59	highlight Motion Detect column
Timeslot 2	06:00 ~ 22:00	highlight Regular column
Timeslot 3	22:01 ~ 24:00	highlight Motion Detect column

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, power supply 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 5.3.3 pan-tilt setup.

Protocol and Baud Rate must agree with physical PTZ setup.

9. I cannot login via web

There are two conditions:

l 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.

l 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.

12. Abnormal Video Output

If video output is abnormal when switching between monitor and VGA mode, quit menu, press shift up arrow key or Fn keys for three seconds to switch video modes.

13. Why cannot I enable audio?

In order to highlight the audio enable box it is necessary to ensure that the Encode menu Compression parameter is set from blank to H264.

14. My television screen is losing some of the page display

The can be accommodated by entering the TV Adjust screen in the Advanced Menu and using the Top, Bottom, Left and Right adjustment controls.

15. Why can't I initiate a PTZ tour using the Web browser software?

First go to the PTZ settings menu via the DVR and ensure the correct channel, ID number, Protocol and Baud rate are setup. To setup a tour do not tick the tour box. Move camera to first preset position and then click preset and select 01. Then move to next position and set preset 02 and so on. Now use the PTZ manual supplied to provide the preset/call code to start the tour. e.g for PTZ300 range set 51 Preset. You can also select the on-screen display menus by entering the relevant preset/call value.

16. The police require DVD evidence. Will it contain the Player Software?

The player software is written to a DVD media automatically if the DVR has an internal DVD Writer installed or to a Memory Stick.

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.

APPENDIX A HARD DISK CAPACITY INFORMATION

Rather than use the earlier Disk Recording Schedule for timings and if you are mathematically minded you may wish to use the following formulae to calculate storage capacity. This information has been provided by the manufacturer and we are unable to provide support on this data.

Calculate total capacity needed by each DVR according to video recording (video recording type and video file storage time).

Step 1: According to Formula (1) to calculate storage capacity q_i that is the capacity of each channel needed for each hour, unit Mbyte.

$$q_i = d_i \div 8 \times 3600 \div 1024 \quad (1)$$

In the formula: d_i means the bit rate, unit Kbit/s

Step 2: After video time requirement is confirmed, according to Formula (2) to calculate the storage capacity m_i , which is storage of each channel needed unit Mbyte.

$$m_i = q_i \times h_i \times D_i \quad (2)$$

In the formula:

h_i means the recording time for each day (hour)

D_i means number of days for which the video shall be kept

Step 3: According to Formula (3) to calculate total capacity (accumulation) q_T that is needed for all channels in the DVR during **scheduled video recording**.

$$q_T = \sum_{i=1}^c m_i \quad (3)$$

In the formula: c means total number of channels in one DVR

Step 4: According to Formula (4) to calculate total capacity (accumulation) q_T that is needed for all channels in DVR during **alarm video recording (including motion detection)**.

$$q_T = \sum_{i=1}^c m_i \times a\% \quad (4)$$

In the formula: $a\%$ means alarm occurrence rate

APPENDIX B COMPATIBLE MEMORY STICK LIST

NOTE: Please format the USB memory stick before use in a PC to FAT32 format.

Manufacturer	Model	Capacity
Sandisk	Cruzer Micro	512M
Sandisk	Cruzer Micro	1G
Sandisk	Cruzer Micro	2G
Sandisk	Cruzer Freedom	256M
Sandisk	Cruzer Freedom	512M
Sandisk	Cruzer Freedom	1G
Sandisk	Cruzer Freedom	2G
Kingston	DataTraveler	1G
Kingston	DataTraveler	2G
Kingston	DataTraveler	1G
Kingston	DataTraveler	2G
Maxell	USB Flash Stick	128M
Maxell	USB Flash Stick	256M
Maxell	USB Flash Stick	512M
Maxell	USB Flash Stick	1G
Maxell	USB Flash Stick	2G
Kingmax	Super Stick	128M
Kingmax	Super Stick	256M
Kingmax	Super Stick	512M
Kingmax	Super Stick	1G
Kingmax	Super Stick	2G
Netac	U210	128M
Netac	U210	256M
Netac	U210	512M
Netac	U210	1G
Netac	U210	2G
Teclast	Ti Cool	128M
Teclast	Ti Cool	256M
Teclast	Ti Cool	512M
Teclast	Ti Cool	1G
Teclast	Ti Cool	2G