



Digital Video Products

DVC-800

DVC-400

DVC-400C

User's Manual

Version: 1.0

(May, 2006)

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Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio technician for help.

FCC Caution:

To assure continued compliance.(example-use only shielded interface cables when connecting to computer or peripheral devices). Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the Following two conditions: (1) This device may not cause harmful interference, and (2) this Device must accept any interference received, including interference that may cause undesired operation.

Federal Communication Commission (FCC) Radiation Exposure Statement

This equipment complies with FCC radiation exposure set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20 cm(8 inches) during normal operation.

R&TTE Compliance Statement

This equipment complies with all the requirements of DIRECTIVE 1999/5/CE OF THE EUROPEAN PARLIAMENT AND THE COUNCIL OF 9 March 1999 on radio equipment and telecommunication terminal Equipment and the mutual recognition of their conformity (R&TTE)

The R&TTE Directive repeals and replaces in the directive 98/13/EEC (Telecommunications Terminal Equipment and Satellite Earth Station Equipment) As of April 8,2000.

Safety

This equipment is designed with the utmost care for the safety of those who install and use it. However, special attention must be paid to the dangers of electric shock and static electricity when working with electrical equipment. All guidelines of this and of the computer manufacture must therefore be allowed at all times to ensure the safe use of the equipment.

WEEE regulation

To avoid the potential effects on the environment and human health as a result of the presence of hazardous substances in electrical and electronic equipment, end users of electrical and electronic equipment should understand the meaning of the crossed-out wheeled bin symbol. Do not dispose of WEEE as unsorted municipal waste and have to collect such WEEE separately.

Revision

User's Manual for PLANET Digital Video Product

Model: DVC-800 / DVC-400 / DVC-400C

Rev: 1.0 (June, 2006)

Part No. EM-DVC

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1.Product Characteristics

1-1 Product Characteristics

■ Optimum Replacement for Time-lapse Recorder

Traditional Time-lapse Recorder is a mechanical device. It is very easy to break down after long-term operation and it causes many problems such as: the overly used magnetic heads which cause blurred image; tapes need to be changed often and manually; the recording time is not long enough; the management of recorded tapes is complicated; inefficient when trying to locate the needed data; recording a huge amount of useless images, etc.

DVC products adopt digital recording technology. The quality of images will not deteriorate with time. With its high compression rate, the storage time can last for months under normal applications. The overwrite operation mode will overwrite the earliest data, and no more tape change is required. Motion detection function will enable the recording only when there is motion of the objective, and makes the system and data retrieval more efficient.

■ High Reliability

Normal PC digital surveillance system adopts the MS-Windows OS (Operating Systems). Such kind of system is so often to crash. It usually makes a negative impression which digital surveillance system is unreliable.

DVC products adopt Embedded-Linux OS. Our advanced embedded technology condenses the entire system into a tiny flash module, which makes the system more reliable. Even when the power fails, the system will re-boot and return to normal operation in less than one minute.

■ Longer Recording Days

DVC products adopt the advanced MPEG-4 compression to store the video images. It allows you to record more data on the same capacity of hard disks.

■ **Ease of Operation**

Mouse clicking on the Graphical User Interface controls all the operations. No keyboard is needed so that it is most suitable for the security guards and normal non-IT based users to use.

■ **Multi-Function**

Function of one set of *DVC products* = Time-lapse Video Cassette Recorder + Multiplexer processor + Motion Detection Processor

You can backup the data to CD-R/RW, remotely monitor the images and still recording the current video data at the same time.

1-2 Main Features for DVC Products

	Items	Description
System	OS	Embedded Linux
	Video Inputs	4/8 channels in BNC jack, up to 16 channel per PC
	Video Outputs	D type 15 Pins VGA (from PC)
	Video Format	NTSC / PAL
	Audio Input/Output	1 Channel input and 1 Channel Output (from PC)
	PC Interface	PCI Slot
	Multi-Tasking	Yes
Display	User Interface	800 x 600, very user friendly
	Frame rate	Real-time display
	Resolution	640 x 480
	HDD Usage Display	Yes
	Motion to Zoom	Yes
	Hidden Camera	Yes
	Video Loss Detection	Yes
	Image Parameter Adjustment	Brightness/Contrast/Hue/Saturation for each camera
Recording	Compression	MPEG 4 like Compression
	Resolution	640 x 480, 640 x 240, 320 x 240
	Frame rate @320*240	NTSC:120/240/240/240 PAL:100/200/240/240
	Pre-Schedule Recording	By 7days x 24hours, set each hour as: recording by motion, continuously recording, non-recording
	Motion detection area	Define any 8 x 8 cell for motion detection. Free combinations of detected areas. No limitation on the number of detection areas.
	Motion detection sensitivity	10 ranges per camera
	Pre-Recording	0~10 sec
	Post-Recording	0~20 sec
	Watermark	Yes
	Date Code	Recording includes time/date information. To prevent date code from being modified
Playback	Playback channels	4 channels playback at the same time
	Playback mode	Play, Pause, frame by frame play, fast forward, fast backward
	Video Enhancement	De-interlace, Sharpen

	Search	Search by time, date and event.
	Image Adjustment	Brightness/Contrast
Remote Functions	Network Access	LAN/ WAN/ Internet, by Ethernet/ Modem
	Network Interface	10/100/1000 Ethernet (from PC)
	Remote Monitoring	JPEG mode or MPEG 4 streaming.
	Remote Playback	Yes. with MPEG 4 Streaming Technology.
	Remote Setup	Yes
	Download and Local Play	Yes
	Central Management	Yes
	Remote Backup	by Windows Network Neighborhood
	DHCP Support	Yes
	DDNS Support	Yes
Alarm (DVC-IO required)	i-Mode	Yes
	Inputs	4 / 8 / 12 / 16; NC/NO dry contact inputs
	Outputs	4 / 8 / 12 / 16; NC/NO relay
	IO & Camera Relations	1-1, 1-many, many-1, many-many
Storage & Backup	Alarm to notice	by Email / FTP / SMS (Short Message requires GSM modem)
	HDD interface	Support up to IDE/SCSI/SATA HDDs
	RAID support	Support IDE/SCSI RAID
	Backup	USB/ IDE burning device (CD-R/RW, DVD±R/RW) ; USB storage (Pen Drive, HDD)
	HDD SMART Diagnostics	Yes
Other	Password protection	100 user accounts, each one can see different cameras
	PTZ camera support	Yes (RS-232 to RS-485 converter required)
	Power Down Management	Yes. Auto-recovery when power back
	Watchdog	Yes. Hardware Watchdog.
	Time Zone/Daylight Saving	Yes
	AVI Format Export	Yes. Convert by bundled software.
	Time Sync	Support Time Server, FM and RTC Time Sync
	UI Language	8 languages in single software: English, French, German, Japanese, Polish, Portuguese, Spanish, Traditional Chinese

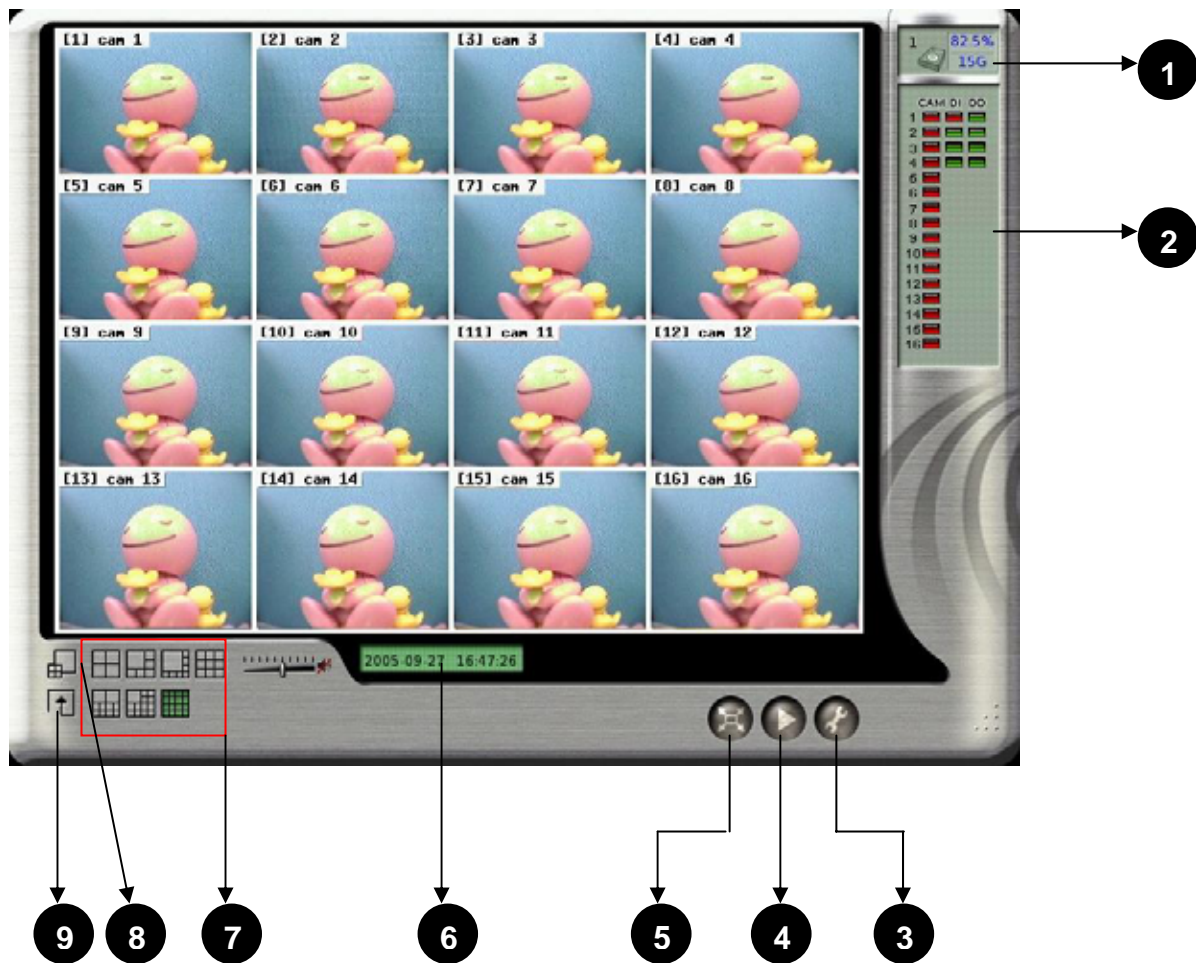
* Specifications subject to change without notice

1-3 Hardware Requirement

Items	Description
PC	Hardware platform that can install the DVC adapter(s). Please also refer to Appendix the tested PC platform and the peripherals
Mouse	PS2 Mouse for DVC PC control
Keyboard (optional)	PS2 Keyboard for DVC PC control. This is an optional accessory.
VGA monitor	For local control and management. This monitor could also be an optional accessory if the central management system is built.
DVC adapters	At least one of the DVC adapters. Please also refer to the Appendix for the maximum DVC adapters in one PC platform
DVC-DOM	Each PC platform will require one DVC-DOM
DVC-IO (optional)	4-channel input / 4-channel output adapter. This is an optional accessories may depends on the needs of the real environment. Pleas also refer to Appendix for the maximum adapter supports.

2. Main Screen


After turning on the DVR, launch the DVR program and it will show the following main screen,



The controls in the main screen including:

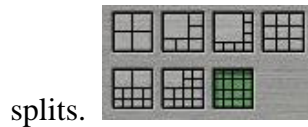
	Function	Description
1	Storage Space	Indicate the HD free space status
2	Recording/ DI/DO Status	Camera recording status and alarm/sensor input and output status
3	System Setting	Quick access to system configuration
4	Playback	Quick access to playback mode
5	Full Screen Monitoring	Monitor in full Screen
6	Date/Time	Display current date and time
7	Display Mode	Select display divisions
8	Motion to Zoom	Activate zoom function when motion occurs
9	Sequencer	Display in sequence

Note:

Whenever you click this button  on the top-right of the configure screen, the system will ask your to save the configuration and return to the main screen.

2-1 Display Mode

There are 7 kinds of Display mode, 4 splits, 6 splits, 8 splits, 9 splits, 10 splits, 13 splits, and 16

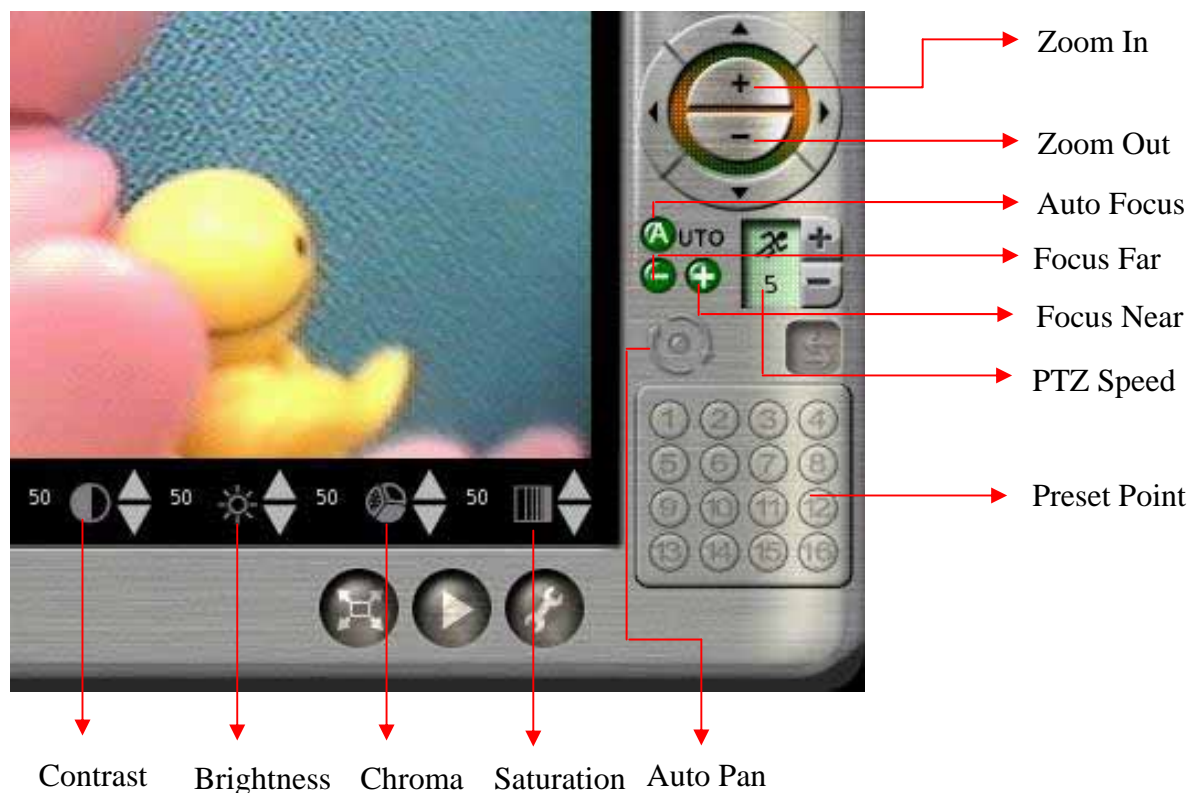


The default display mode is 16 splits. The cameras displayed on each split mode can be configured in the system setting menu.


Besides the different kinds of split modes, you can click in a camera image on any split screen to show the full screen of that specific camera as shown in the example below.

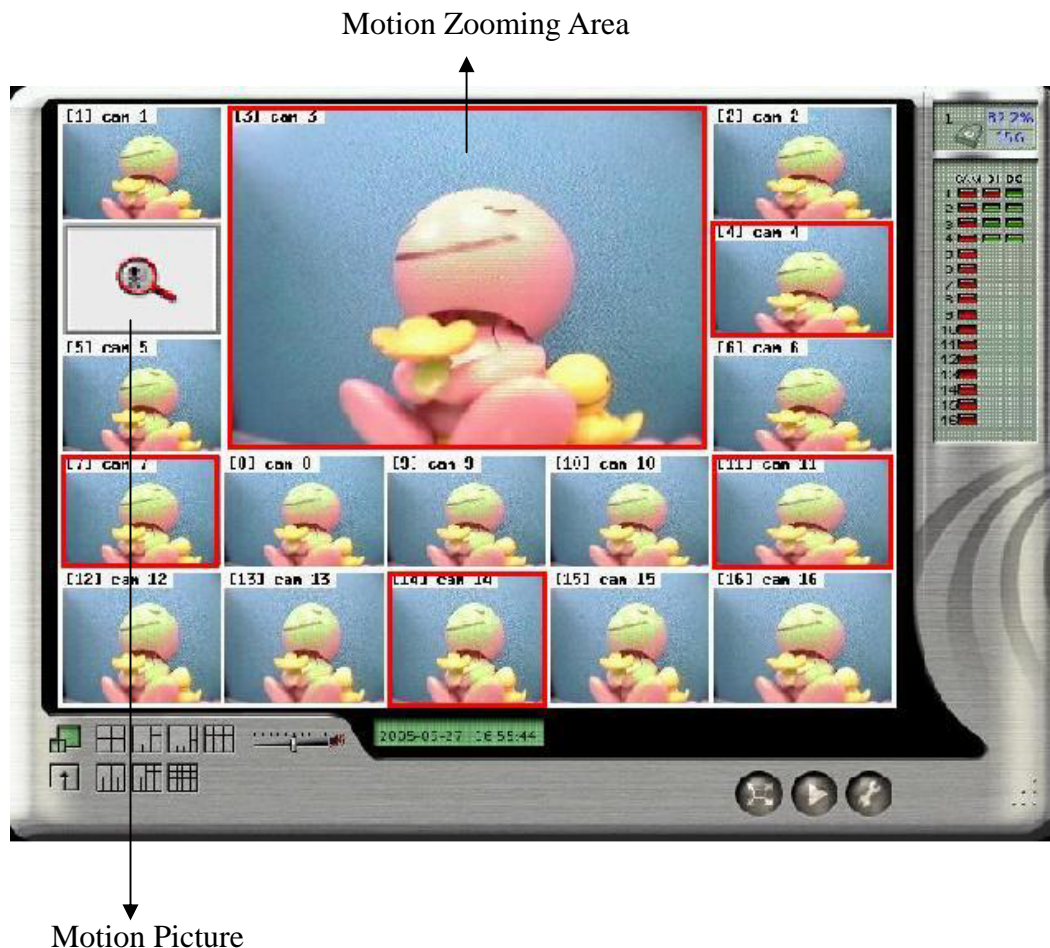
In the full screen mode the “Screen Adjustment Parameters” will locate at the bottom of the screen. These parameters are “contrast”, “brightness”, “chroma”, and “saturation”.

When a Speed Dome is connected and the system is in full screen mode, PTZ control buttons will pop up in the lower right of the screen. These controls include “Zoom in”, “Zoom out”, “Auto Focus”, “Focus Near”, “Focus Far”, and “PTZ Speed”.



2-2 Motion to Zoom

The function of “Motion to Zoom” is zooming in the screen when there is any motion occurring. After clicking  icon, it will activate the “Motion to Zoom” mode.



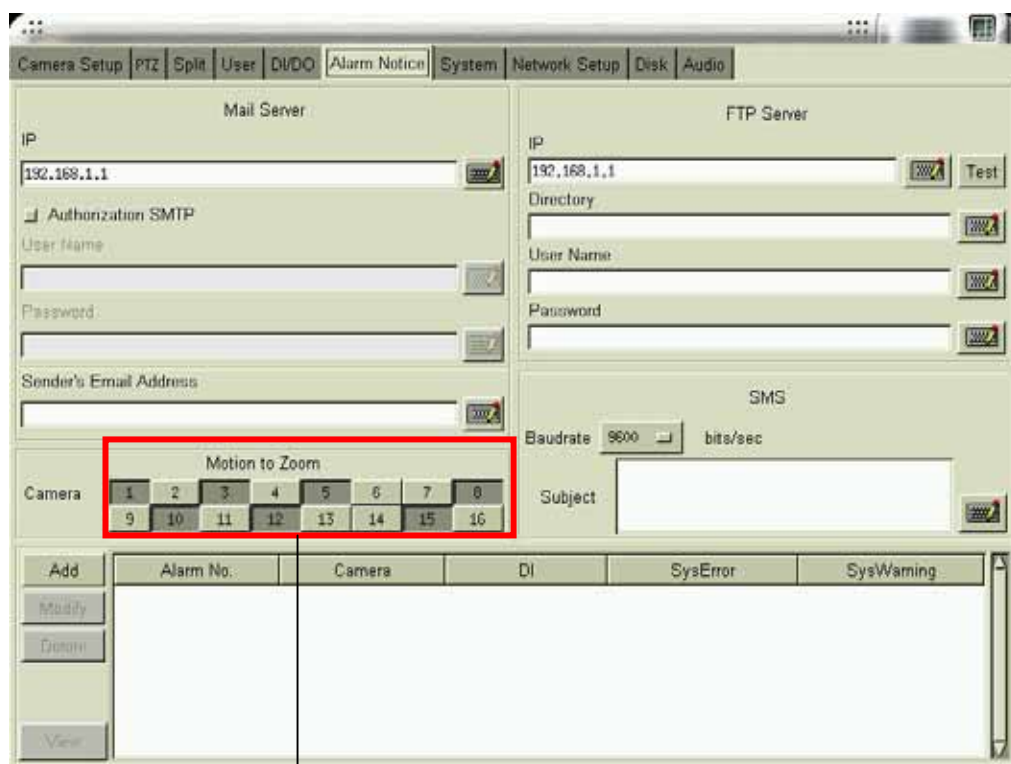
1. At first, you can go to “ **Alarm Notice**” in “**System Setting**” menu to set up the channels that you want to enable the “ Motion to Zoom” function and then return to the “**Main Menu**” to click the “ Motion to Zoom” icon.

2. When the channel enabled the “ Motion to Zoom” function occurs motion, its screen will be zoomed in the “ Motion Zooming” area and the original screen of this channel will be replaced by a “**Motion Picture**”. If the channel is not enabled the “ Motion to Zoom” function, the screen of this channel will not be zoomed and will not be marked in red frame even there is motion in this channel.

3. If there is no other motion occurring, the current zoomed screen will be continually kept in

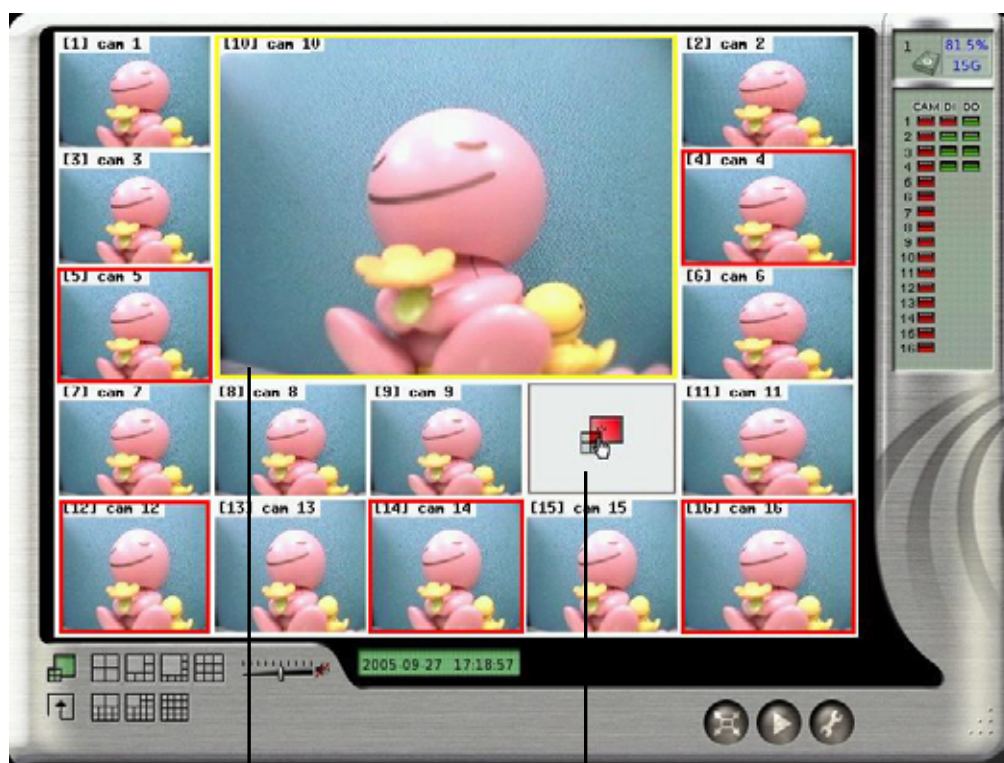
“ Motion Zooming Area”. If yes, the zoomed screen will be kept in “ Motion Zooming Area” just for three seconds and will be replaced by the one from any channel waiting for zoomed after three seconds. If there are more than one motion occurring at the same time, the zooming rule will be as following,

- a. The previous zooming channel will be the first priority for zooming again and others will be marked in red frame to wait for zooming in after three seconds. However, the number of continually zooming the same channel will be limited to three times. After three times, even this channel occurs motion again, the motion zooming area will show the screen of other channel. If the motion in one of the channels waiting for zooming and marked in red frame disappears within three seconds waiting time, this channel will not be zoomed in and the red frame will disappear.
- b. If the previous zoomed channel does not have motion again, the first priority being zoomed is the channel of which number is the smallest. For example, if channel #3 and channel #7 occur motions at the same time, channel #3 will be zoomed firstly for three seconds and the screen of channel #7 will be marked in red frame to wait for zoomed after three seconds



Select the channels you want to enable
“ Motion to Zoom” function

4. **Zooming in a specific channel:** You can decide just to zoom in a specific channel. When clicking any channel you want to zoom in, the screen of this channel will be zoomed in to the “Motion Zooming” area marked in **yellow** color frame and the original screen of this channel will be replaced by a “**locked picture**”. Then, the screen of other channels, even occurring motion, will not be zoomed in “Motion Zooming Area” and it will be just marked in red color frame. You can click the “ Motion Zooming Area” to cancel the “ Zooming in a specific channel”.



**Motion Zooming Area
marked in yellow color**

Locked Picture

2-3 Storage Space

On the right side of the main screen, you can find the free space of hard disks. If there are more than one hard disk is connected, it will display the status of each HD every 5 seconds.



When you start using a new hard disk (for example, a hard disk with capacity 80GB), the percentage of free space will be very close to 100% (e.g. 99%), and the color will be **BLUE**.

However, as recording continues, the available space will diminish. When the remaining available space is less than **4GB**, the display color will change to **ORANGE**. This serves as a warning message that the system will soon enter the **Recycle Mode**; which means, the earliest recorded data will be replaced by the newest recording data. If you would like to keep all the data, this is the time to swap a new hard disk.

If the disk has not been changed and the recording continues, the system will go into **Recycle Mode** when the hard disk free space is less than 1GB. The color of “Hard Disk Free Space” will turn **RED**.

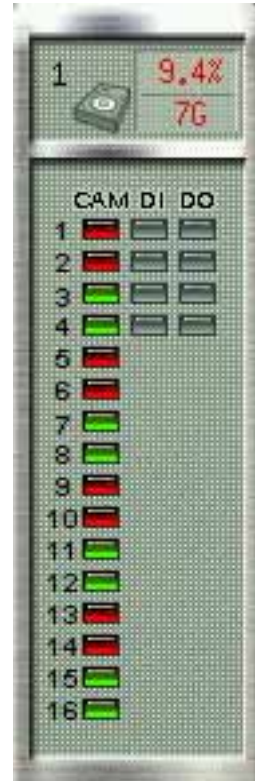
2-4 Recording & DI/DO Status

The first column indicates the recording status of each camera:

Color	Recording Mode	Status
Orange (●)	Full recording	
Green (●)	Motion-sensor	Motion not detected
Red (●)	Motion-sensor	Motion detected & recording
Gray (●)	No recording	

The second and third column shows the status of each DI and DO device.

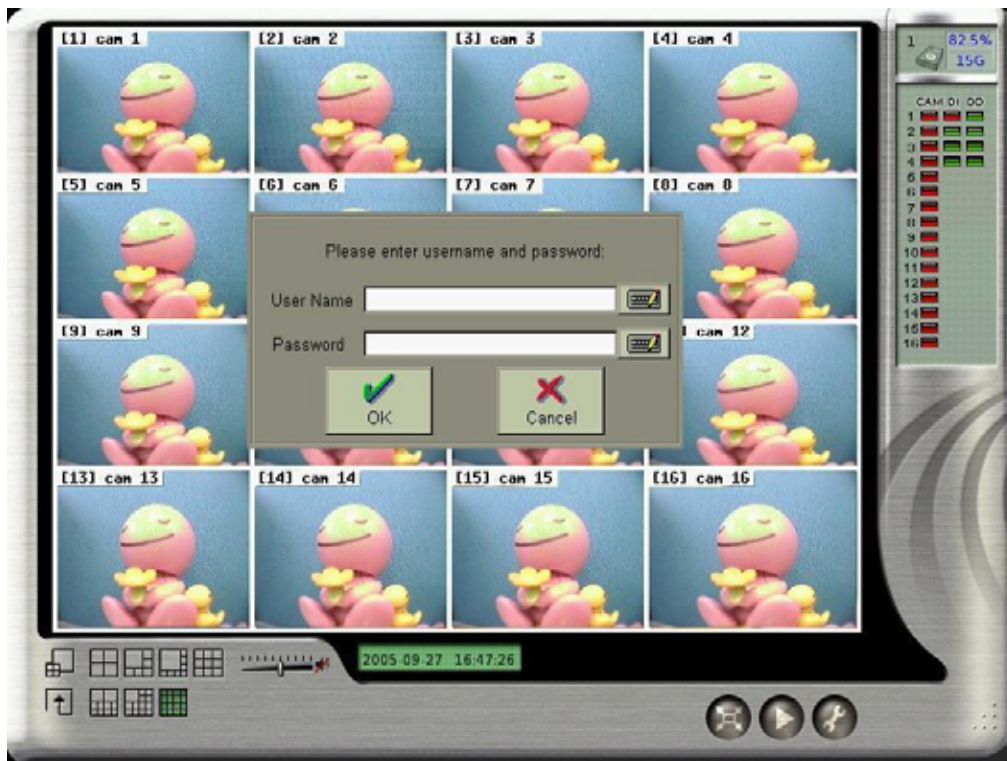
Color	Status
Green (●)	Device not activated
Red (●)	Device activated



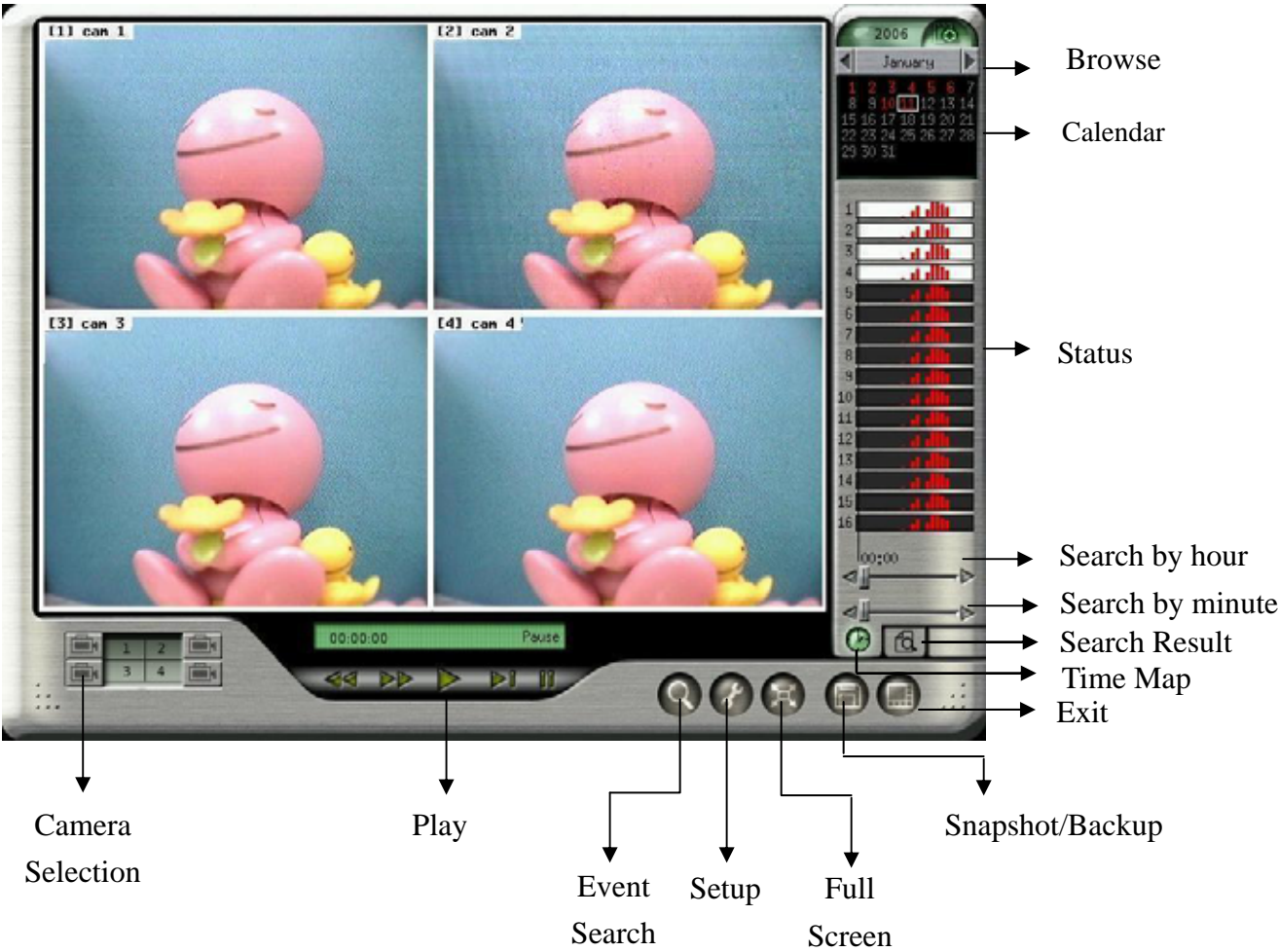
3.Playback




Click the playback icon on the main screen to enter playback mode. If “Playback Password Protection” function is enabled (See 3-1 Playback Password Setting), the system will prompt you to enter User name and Password to enter playback mode as following,



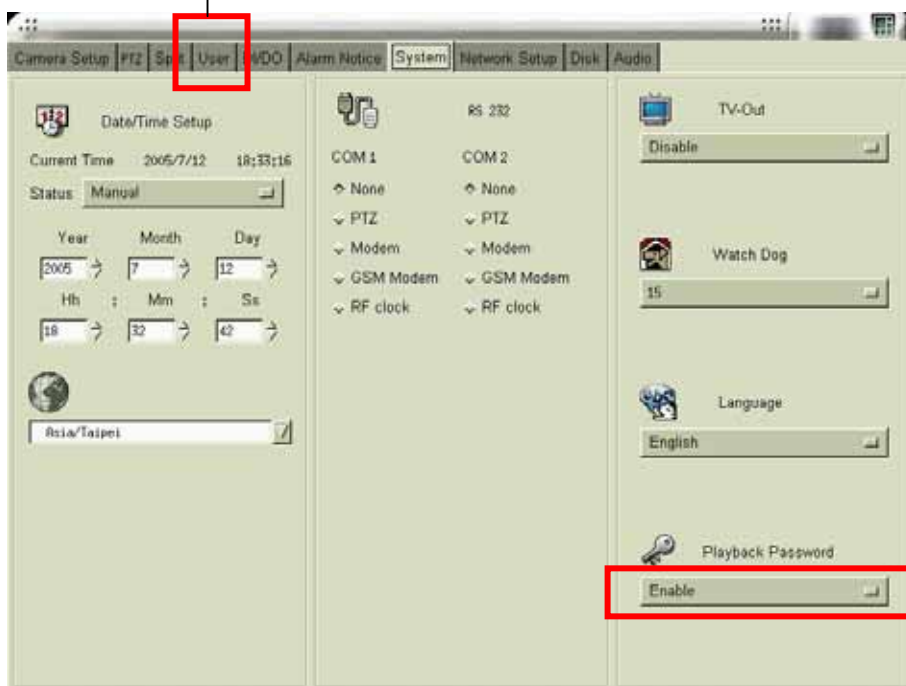
The controls of Playback function is as following,



3-1 Playback Password Setting

If you want to activate “Playback Password Protection” function, click  in the main menu to go the “System Setting” as following. Change the “Playback Password” from “Disable” to “Enable” mode.

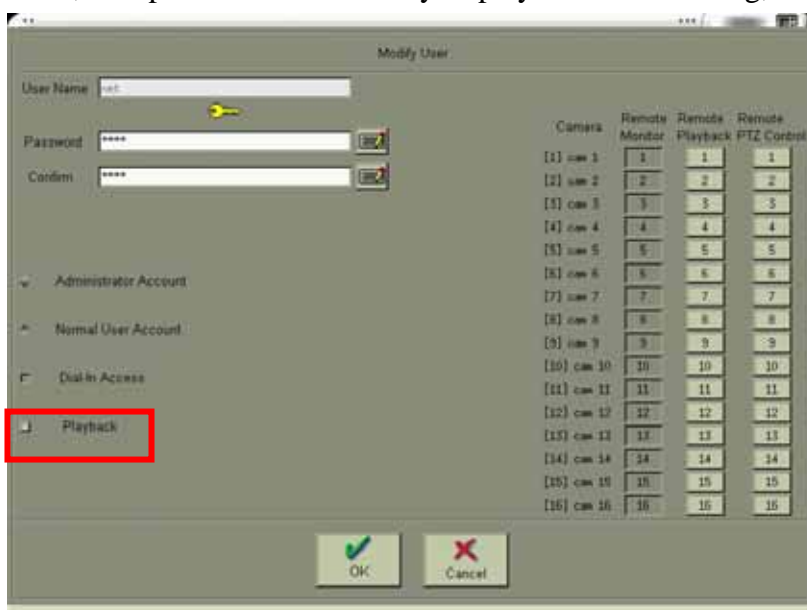
Set up User authority



The screenshot shows the 'System Setting' window. The 'User' menu item is highlighted with a red box. The 'Playback Password' option is also highlighted with a red box and set to 'Enable'. An arrow points from the 'Enable' button to the text 'Enable Playback Password'.

Enable Playback Password

Then, set up the “User” authority of playback as following,



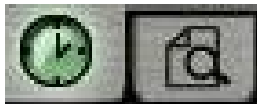
The screenshot shows the 'Modify User' dialog box. The 'Playback' checkbox is selected and highlighted with a red box. The dialog box also contains fields for 'User Name', 'Password', and 'Confirm', and a table of camera permissions.

Camera	Remote Monitor	Remote Playback	Remote PTZ Control
[1] cam 1	1	1	1
[2] cam 2	2	2	2
[3] cam 3	3	3	3
[4] cam 4	4	4	4
[5] cam 5	5	5	5
[6] cam 6	6	6	6
[7] cam 7	7	7	7
[8] cam 8	8	8	8
[9] cam 9	9	9	9
[10] cam 10	10	10	10
[11] cam 11	11	11	11
[12] cam 12	12	12	12
[13] cam 13	13	13	13
[14] cam 14	14	14	14
[15] cam 15	15	15	15
[16] cam 16	16	16	16

3-2 Search for Recorded Data

This software system provides two modes of “ Search for Recorded Data”. One is “ Search by time” and the other one is “Search by Event”.

3-2-1 Search by Time



↓
Time Map

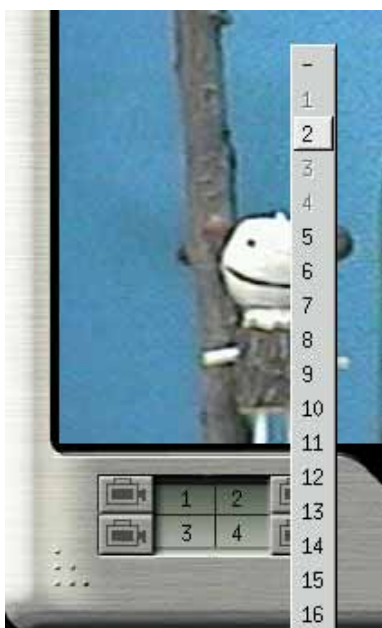
When you click the icon of “ Time Map” on the lower right corner of Playback screen, it will show three kinds of time parameters for users to search and jump to the recorded data by time directly including “ Calendar, Hour and Minute”.

First, click on the date of the calendar on the upper right corner of the screen and then select the “hour” and “minute” using the two bars on the lower right corner.



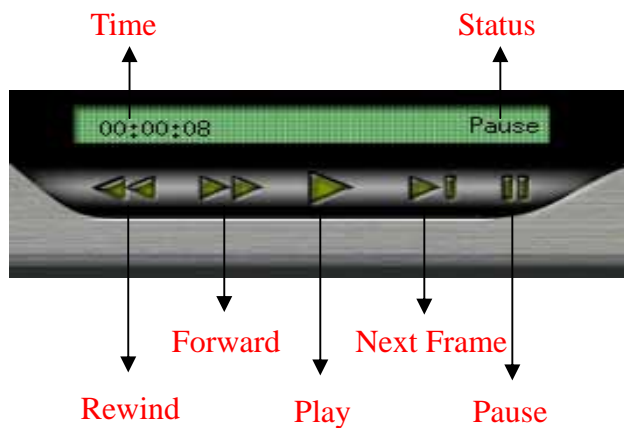
→ Hour bar

→ Minute bar



Next, select the cameras for playback using the buttons at the bottom of the screen. You can playback up to 4 cameras at the same time. When you click the camera button, camera numbers 1 to 16 will appear. Select the desired camera to playback. Choose “ - ” if no camera is to be played back on this screen. The color of the selected cameras on the right side of the screen will be in “light blue” background.

Click the Play button to start playback.




Note:

- You can 2x, 4x, 6x forward by clicking Forward button one more time.
- You can 2x, 6x rewind by clicking Rewind button one more time.
- Next Frame allows you to play picture by picture.

3-2-2 Search by Event



Event Search

Click the “Event Search” icon , it will show the “**Search Window**”. There are three kinds of event search modes, “**Time, System and Device**”.

Search Mode	Description
Time	Search all of the events within the time range you set up.
System	<p>*Search all of the System events within time range which you set up by marking the “Time Search” at the same time or</p> <p>*Search all of the System events without time boundary by disable the “Time Search”.</p>



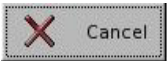
Device	<p>* Search all of the Device events within time range which you set up by marking the “ Time Search” at the same time or</p> <p>*Search all of the Device events without time boundary by disable the “ Time Search”.</p>
--------	--

The screenshot shows a software interface for searching events. At the top left, there is a 'Type' dropdown menu with options 'Time', 'System', and 'Device'. Below it is a 'Date' section with two sets of time pickers. The first set is for the start time, showing '2006', '1', '11', '0', '0', '0'. The second set is for the end time, showing '2006', '1', '11', '18', '50', '0'. Below the date pickers are three buttons: 'Reset' (with a circular arrow icon), 'Search' (with a magnifying glass icon), and 'Cancel' (with a red X icon). The 'Search' button is highlighted with a blue border.

- **Time Mode:**

Step 1: Select “ **Time**” mode from the Search type.

Step 2: Set up the time of **starting point** and **end point** including Year, Month, Day, Hour, Minute and Second.

Step 3: Click “ **Search**” button  to execute the “ Event Search”. Click “ **Reset**” button  to go back to Default time range. Click “**Cancel**” button  to stop the event search.

Type: Time

Date/Time

Year	Month	Day	Hh	Mm	Ss	Year	Month	Day	Hh	Mm	Ss
2006	1	11	0	0	0	2006	1	11	18	50	0

Reset Search Cancel

Step 4: Then, the system will open the **Search Result Window** and show the “ **Search Result** ” .

Search Result

Date	Time	Event	Motion record	Video Loss	Camera Enable	Camera Disable	DI Trigger	DI
2006/01/11	11:33:14	System						
2006/01/11	11:33:14	System						
2006/01/11	11:33:15	System						
2006/01/11	11:33:24	Device	2					
2006/01/11	11:38:18	System						
2006/01/11	11:38:53	System						
2006/01/11	11:38:53	System						
2006/01/11	11:38:54	Device			1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16			
2006/01/11	12:33:26	System						
2006/01/11	12:45:04	System						
2006/01/11	12:45:07	System						
2006/01/11	14:30:19	System						
2006/01/11	14:30:19	System						
2006/01/11	14:30:20	System						
2006/01/11	15:30:24	System						
2006/01/11	16:30:29	System						
2006/01/11	16:49:28	System						
2006/01/11	16:49:29	Device			1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16			
2006/01/11	16:52:29	System						
2006/01/11	17:01:39	Device		2, 16				
2006/01/11	17:01:40	Device		3, 4, 10, 13				
2006/01/11	17:01:41	Device		1, 12				
2006/01/11	17:01:42	Device		8				
2006/01/11	17:01:48	Device		1, 15				

Re-Search Play Close

In the Search Result Window of **Time Mode**, there will be 9 information columns for each event log including “ **Date**, **Time**, **Event**, **Type**, **Camera Motion**, **Camera Video Loss**, **Camera Enable**, **Camera Disable** and **Content**. The columns of **Date** and **Time** list the event time information. **Event**

column list " System " , " Camera " or " Device " event. **Type** includes " Information (🔵) " , " Warning(🔴) " , or " Error(🔴) " . **Camera Motion, Camera Video Loss, Camera Enable or Camera Disable** represents the camera with event. The **Content** column makes the description of System event.

It will show 24 event logs in one page each time and you can click one of the " Jump button



to go to the event page you want to see.



: Jump to the first page of event search result.




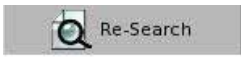
: Jump to the preview page of event search result.

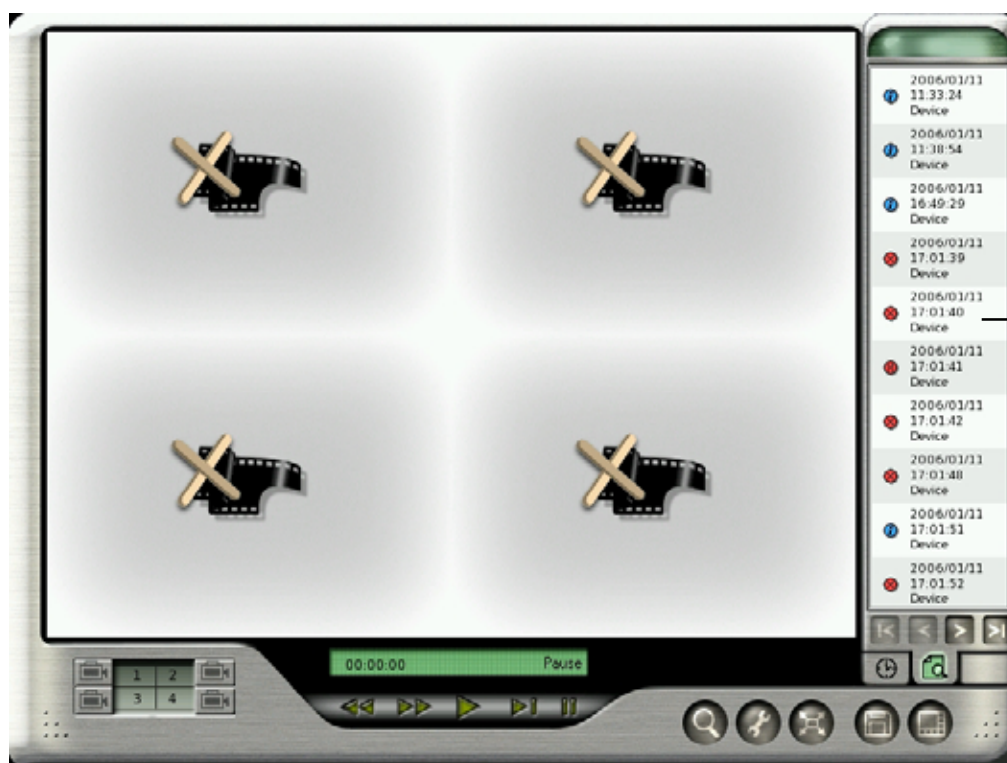


: Jump to the next page of event search result.



: Jump to the last page of event search result.

Step 5: Click  button. The system will jump to " Playback Window " as the following picture. The search result will be shown on the right side of " Playback Window " . Or click " Re-search "  button and the system will go back to Search Window.



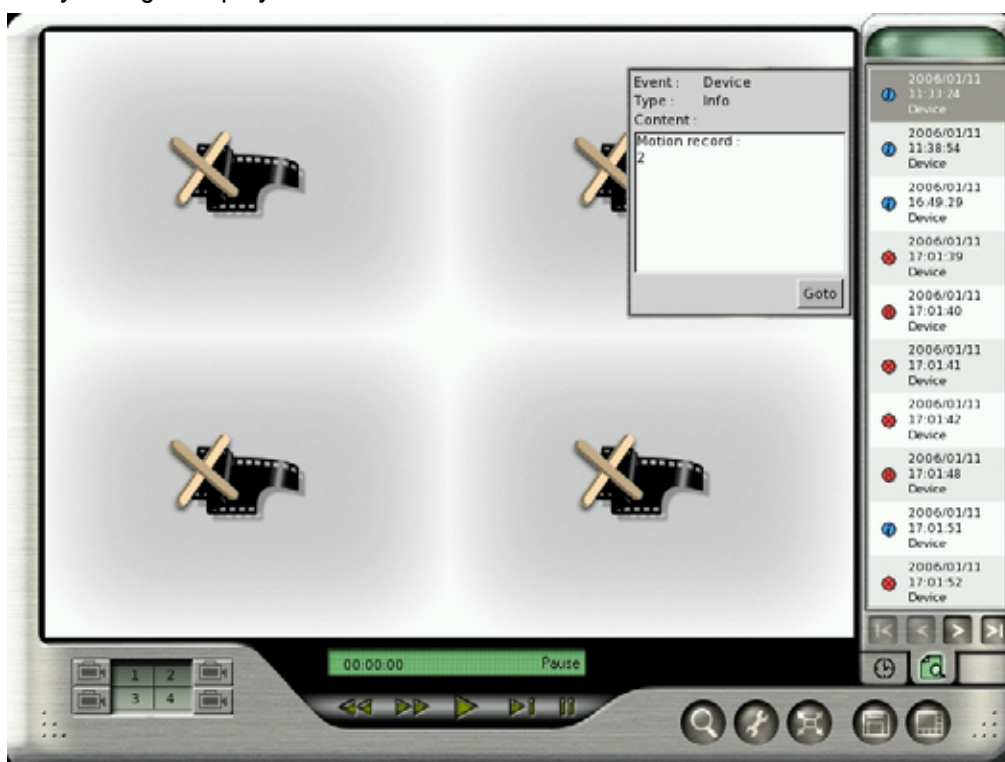
Search
Result

Step 6: Select one of the search logs. It will pop up a window on the left side of **Search result** to show the detail information of this log including **Event**, **Type** and detail **Content**. Click “GoTo” button and it will start to play the event video. This software version can provide four channels playback at the same time. If this event just happens in four channels (ex. 2nd, 3rd, 5th, 7th ch) at the same time, the four channel split will just playback these four channel videos. If this event happens in over four channels (ex. 2nd, 3rd, 5th, 7th 9th, 11th ch), you can decide which channel

video will be played in the split window by manually setting up the playback channel .

Otherwise, the system will decide the event playback channel priority according to the following rule:

- ✓ The first priority of playback channel will be the channel of which number is already in the preset playback channel. For example, Preset playback channel is 1st, **2nd**, **3rd**, 4th Ch. The event happens in **2nd**, **3rd**, 5th, 7th 9th, 11th Ch at the same time. Then, 2nd and 3rd channel will be the first priority to be played on the split window. The rest of two split windows will play the channel with small number. In this case 5th, and 7th channel will be played in the split channel too. However, 11th Channel will not be played in the split window except you can manually change the playback channel.



Note:

It will show 10 event logs in one page each time and you can click one of the “Jump button



to go to the event page you want to see.

- **System Mode:**

You can search the event by “ **System** ” mode and you can also add the “ **Time Search** ” condition to narrow the search range. By marking the various **System conditions**, you can decide the search range.

The screenshot shows a software interface for searching system events. At the top, there's a 'Type' dropdown menu set to 'System'. Below it is a 'Date/Time' section with a checked 'Time Search' checkbox. This section includes two sets of date and time pickers. The first set is for a start date (Year: 2006, Month: 11, Day: 00). The second set is for an end date and time (Year: 2006, Month: 11, Day: 18, Hour: 18, Minute: 53, Second: 00). Below the date pickers is a list of system events, each with a checkbox. The events are organized into several expandable/collapsible groups: 'System Active' (checked), 'Record' (checked, containing 'Recording start', 'Recording running start', 'Recording running stop', and 'Recording error'), 'Capture' (checked, containing 'Capture setup error', 'Capture sync error', 'Capture card error', 'Watchdog fail', and 'DIO mapping fail'), 'Timer' (checked, containing 'Update system time', 'Timer update error', and 'No RF clock device'), 'Other' (checked, containing 'Event log error' and 'System other message'), 'User Operation' (checked), and 'Startup' (checked). At the bottom of the interface are three buttons: 'Reset', 'Search', and 'Cancel'.

The following table lists all of the “ **System Events** ” .

Event Group	Rule
Record	Recording Start
	Recording Stop
	Recording running
	Recording exception
Capture	Capture setup error
	Capture sync error
	Capture card error
	Watchdog Fail
	DIO mapping Fail
Timer	Update time to RF clock
	Update time to RTC clock
	Timer update error
	No RF clock device

Other	Event log error
Startup	Enter play recorded video Mode
	Enter disk tool menu
Monitor	Enter setup mode
	Enter playback mode
	DVR online
	Current Timezone
	Detect camera count error
	System Shutdown: Disk error detected
Setup	System Setup change
	Max user count limit is 128
Playback	Enter monitor
	Enter backup
Storage	No disk found
	Disk error
	Recycle disk
Alarm	FTP alarm
	E-mail alarm
	SMS alarm
	Voice Dialer
Remote	Setup change by remote user
	Remote Setup Fail
	Remote Setup get Fail

Refer to the **Step 1 to Step 6 of Time Mode Search to play the event video**. The main different between System Search mode and Time Search mode is the **Step 4 “ the Search Result window ”**. In the Search Result Window of **System Mode**, there will be just 5 information columns for each event log including “ **Date, Time, Event, Type and Content** ”.

- **Device Mode:**

You can search the event by “ **Device** ” mode and you can also add the “ **Time Search** ” condition to narrow the search range. By marking the various **Device conditions**, you can decide the search range

Type:

Date/Time
☒ Time Search

Year: 2006 Month: 1 Day: 11 Hh: 0 Mm: 0 Ss: 0 ~ Year: 2006 Month: 1 Day: 11 Hh: 18 Mm: 54 Ss: 4

<input checked="" type="checkbox"/> Camera	<input checked="" type="checkbox"/> Motion record	<input checked="" type="checkbox"/> Video Loss	<input checked="" type="checkbox"/> Camera Enable	<input checked="" type="checkbox"/> Camera Disable
<input checked="" type="checkbox"/> 1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> 2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> 3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> 4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> 5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> 6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> 7	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> 8	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> 9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> 10	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> 11	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> 12	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> 13	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> 14	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> 15	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> 16	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> DI Trigger				
<input checked="" type="checkbox"/> 1				
<input checked="" type="checkbox"/> 2				
<input checked="" type="checkbox"/> 3				

Reset Search Cancel

The following table lists all of the “ **Device Type** ”


Device Event	Event Type
Camera	Camera Motion
	Camera Video Loss
	Camera Enable
	Camera Disable
DI	DI is activated or not.
DO	DO is activated or not.

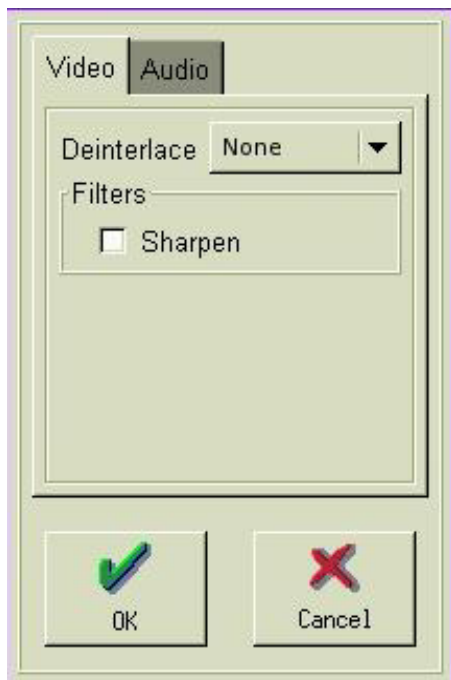
Refer to the **Step 1 to Step 6 of Time Mode Search** to play the event video.

3-3 Audio/Video Playback Configuration



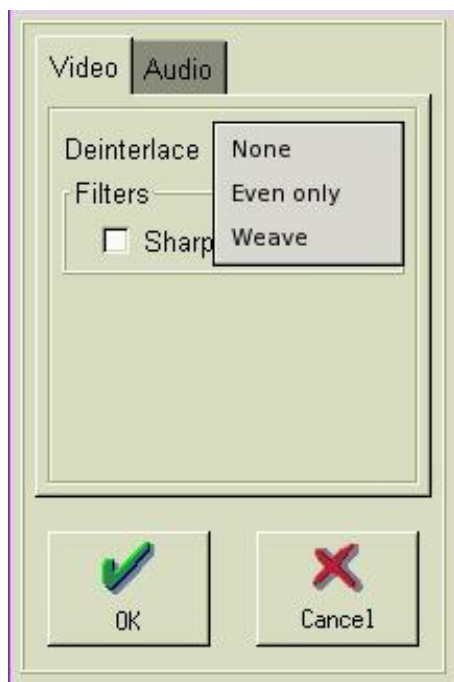
Audio/Video
Configuration

When you click audio/video configuration icon , it will show up the following dialog box. It provides you with the audio and video playback configuration.



3-3-1 Video Playback Configuration

In the Video configuration, we have two kinds of “**Playback Video Enhancement**” modes- “**De-interlace**” and “**Sharpen**” to provide you with the better playback video quality. You can enable these two modes at the same time. In De-interlace mode, you can select “**Even only**” or “**Weave.**” Each one has different enhancement on playback video quality. You can select the one you prefer to fit your quality requirement.



3-3-2 Audio Playback Configuration

In the Audio Configuration, it allows you to set up the channels you want to playback with audio in full screen.



Choose the audio channel (No.: 1~4) and volume (No.: 0~9) you would like to playback.
Then click “OK”, the selected single channel with audio will display in full screen.

Note:


- It just supports one audio channel.
-

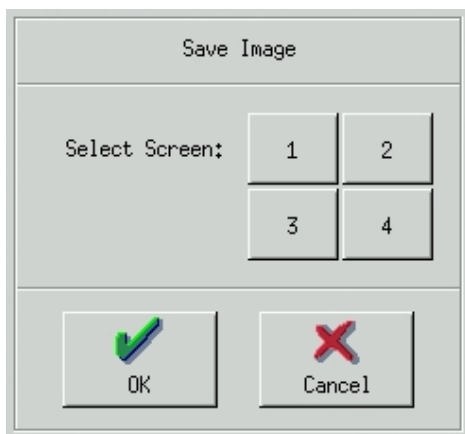
3-4 Snapshot/Backup



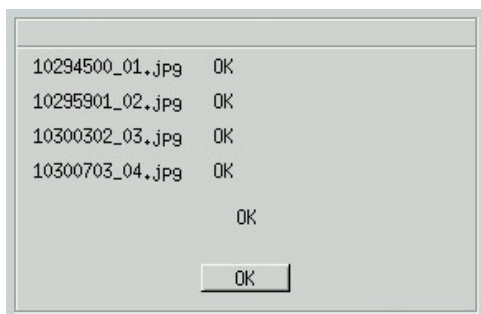
Snapshot/Backup

3-4-1 Snapshot and save to floppy


It is possible to save the selected single image to a floppy. Click the  button and select **Snapshot**. The following dialog will appear:

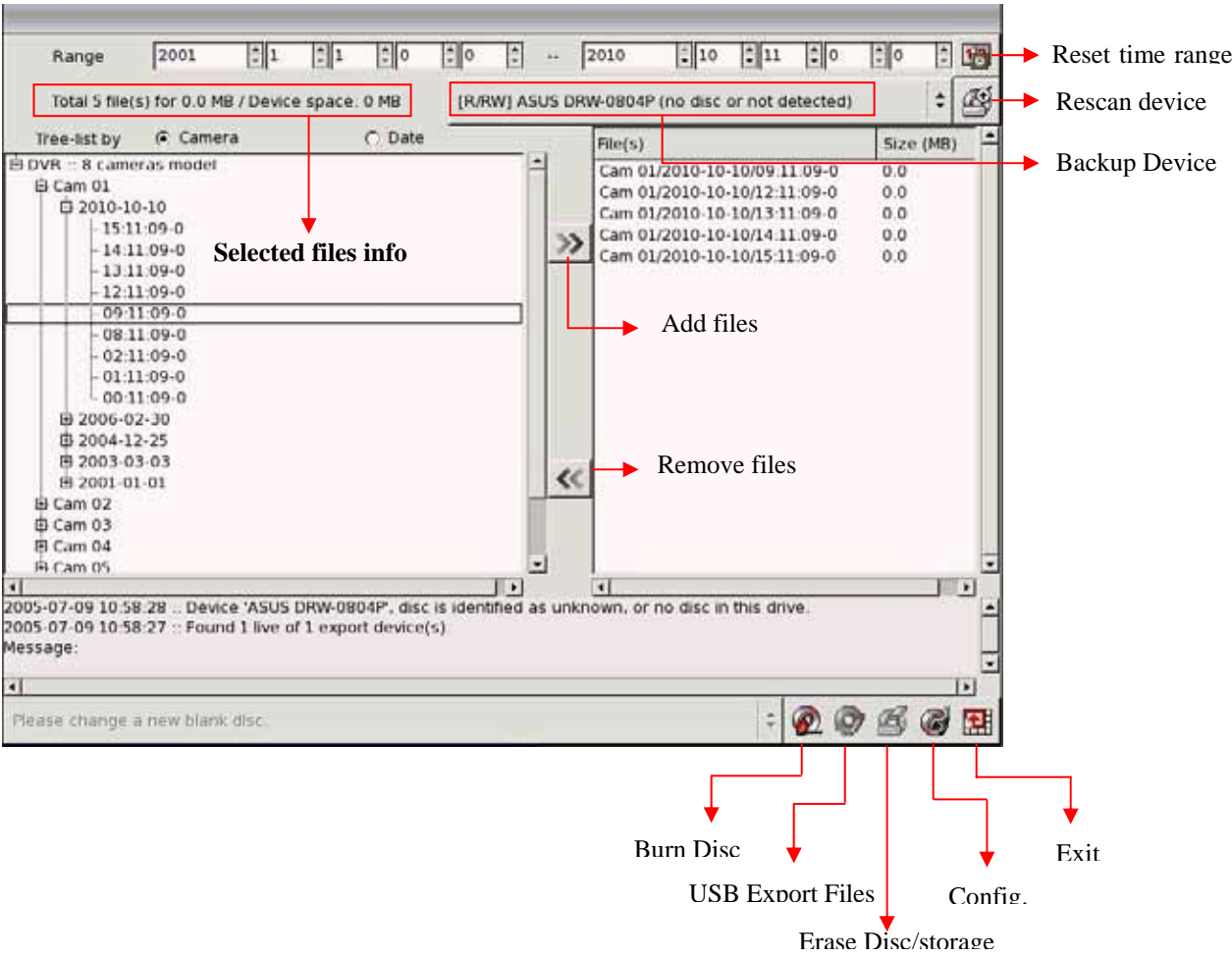


Choose the screens you would like to save to the floppy. If you would like to save single images of all the 4 screens as JPEGs, select all numbers and click “OK”.






3-4-2 Backing up Video Files

You can copy the video files from hard disk to burning device such as CD-R/W or DVD-R/W or USB external storage media, such as USB pen drive or USB Hard Disk. Click the  button and select **Backup** to see the following screen:








3-4-2-1 Backing Up Procedures

1. Before you start to back up the video files, make sure that the back up program has detected the IDE/USB burning devices or USB storages. If not, please check if the device is installed properly and click  to rescan the device. After that, the device still can not be detected, please verify if the device is ok.
2. When you put the disc to burning device or plug the USB storage device to the DVR, click the “**Backup Device**” or “**Rescan Device**” to get the device information. The row of “**Selected File Info**” in the upper left screen will show the device space for backing up.
3. **Select the files to back up:**
Expand the hard drive directories in the left of the screen. Drag the mouse to select the recording files for backup (by Year, Month, Date).
4. **Erase (Blank) the Disk:**
If you use the burning device such as CD-R/W, DVD+R/RW or DVD-R/W to back up the files, you need to check whether the disc is used. If yes, the icon  will lighten after you insert the disk to the recorder.
 - a. Click on  to start the erasing process.
 - b. After it is done, the Message area will display “Done”.




Note:

- If CD-R is used, you do not need to execute this process.
-

If the Backup device is USB storage and there are already files in it, the icon  will also lighten. You can decide if you want to click  to delete these files.

5. Click  to add these files to the right side of the screen for burning or copy to the burning device or USB storage. The total size of the selected files should not exceed 600MB.
6. You can browse the other directories (dates) to continue the file selection.
7. If the backup device is burning device and the blank disc in the burning device can be detected, the Burn Disc icon  will lighten when you Add the “Selected files” to the right column of the screen for backup. Click this Burn Disc icon  and the system will

start to convert the selected files into standard ISO 9660 format files (Make ISO), and burn the files to the disc.

8. If the backup device is USB storage and the device space is enough to back up the selected files, the Export Files icon  will lighten when you Add the “Selected files” to the right column of the screen for backup. Click this icon  and the system will start to copy the files to the storage.
9. If problems arise while backing up the files, it might be due to the reasons indicated below:
- The blank CD or DVD disk is in bad quality: Replace with a better quality disk.
 - The CD-RW or DVD+R/RW or DVD-R/RW has been used too many times: Replace with a new disk.
 - The burning device cannot process high-speed burning: Reduce the burning speed.
 - The blank disc does not support high-speed burning: Reduce the speed, or replace with high-speed compatible disk.
10. You can click Configure icon  to set up the “ Burn Disc, “ Export File” and “ Erase Disc/ Storage”.

Note:

- **Not support Pioneer DVD+R**
- **Not support Transcend USB Pen drive.**
- **USB storage devices support FAT16/FAT32 format only.**
- **There may be compatible issue between USB external hard drive and motherboard.**

4. System Settings



Click the icon on the main screen to go to the system settings page.

A login dialog box with a grey background. At the top, it says "Please enter username and password:". Below this are two input fields. The first is labeled "User Name" and the second is labeled "Password". To the right of each input field is a small keyboard icon. At the bottom of the dialog are two buttons: "OK" with a green checkmark icon and "Cancel" with a red X icon.

Click on the keyboard icon to enter the user name and password.

A virtual keyboard interface. It features a standard QWERTY layout of keys. To the right of the main keyboard is a numeric keypad with digits 1-9, 0, and a "Clear" button. Below the main keyboard is a "Backspace" button with a left-pointing arrow. At the bottom center is an "OK" button with a green checkmark icon.



To exit the System Settings, click on the upper right corner in the “System Settings” screen.

Note

- Preset user name: **admin**
- Preset password: **1111**

4-1 Camera Setup



1. Select the desired camera for setup.
2. **Camera Name:** Use the “keyboard figure” on the right of “Camera Name” field to enter the description for the camera.
3. **Camera Status** (Disable/Enable/Hide): If the channel is not connected to a camera, set “Disable”. If it is connected, set “Enable”. If you do not want the camera image to be showed on the main screen, set “Hide”.

Note:

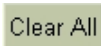
- If a camera is “hidden”, the video is still recorded in the hard disk.
-

4. **B/W Camera:** If “black&white” camera is used, please click the “B/W Camera” icon.
5. **Video Format** (NTSC/PAL/SECAM): The video format of 16 cameras must be the same. Therefore, if you change the video format of any camera, all the rest cameras will be changed to the same format automatically.
6. **Quality** (10/20/30/40/50/60/70/80/90/100): You can adjust the recording quality. The

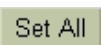
higher the number, the better the quality. However, the higher quality setting will consume more hard disk space.

7. **Sensitivity** (10/20/30/40/50/60/70/80/90/100): You can set the sensitivity of motion detection during recording. It is recommended to adjust the setting to 100 in order to prevent any data loss. However, in some special conditions, the system continues to record even when no motion has occurred. This will result in a considerable amount of useless data being recorded. In such a case, it is recommended to lower the sensitivity setting to avoid wasting hard disk
8. **Resolution** (320×240/640×480): You can adjust the recording resolution. The higher the number, the better the quality. However, the higher quality setting will consume more hard disk space.
9. **Frame Rate** (0.2/0.5/1/2/3/4/5/6/7/8/10/12/15/max): You can adjust the recording frame rate. The higher the number, the higher frame rate will be recorded. However, with higher frame rate, the hard disk space will be consumed faster.
10. **pre-Record** (0/1/2/3/4/5/6/7/8/9/10): The setting allows you to record a certain seconds before an alarm happens.
11. **post-Record** (0/1/2/3/4/5/8/10/15/20): The setting allows you to record a certain seconds after an alarm happens.
12. **Digital Signature** (Enable/Disable): The setting allows you to encrypt digital signature (watermark) to the video content.
13. **OSD** (On Screen Display) **Position**: you can select where the “time” and “camera name” will be displayed in the image in live view. There are four positions to choose from: Top Left, Top Right, Bottom Left and Bottom Right.
14. **Motion Sensor Setup**: This is used to set the motion sensor area.

14-1 Method One

- (1) Click 
- (2) Select “Set Detection Area” and use the mouse to drag an area to be detected.
- (3) You can set many detection areas by dragging mouse again.

14-2 Method Two

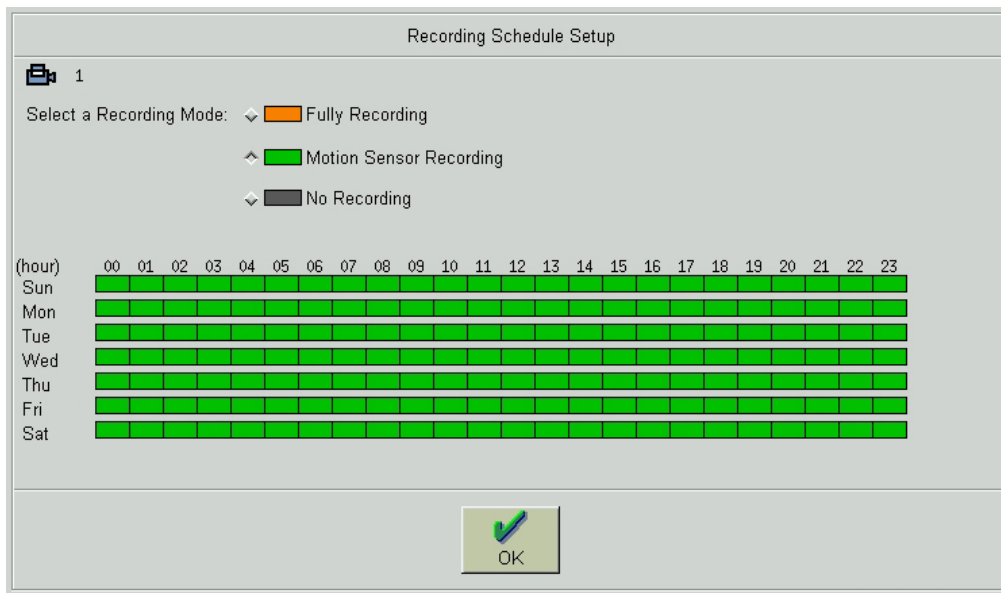
- (1) Click 
- (2) Select “Clear Detection Area” and use the mouse to drag a non-detection area.
- (3) Drag the mouse again to set more non-detection areas.

15. **Recording Schedule Setup**: Refer to the Recording Schedule Table below. There are 7 rows and 24 columns in the schedule table, which represents 7 days and 24 hours.

There are three recording modes:

- Full recording.

- Motion sensor recording
- No recording



Recording Schedule Setup

1

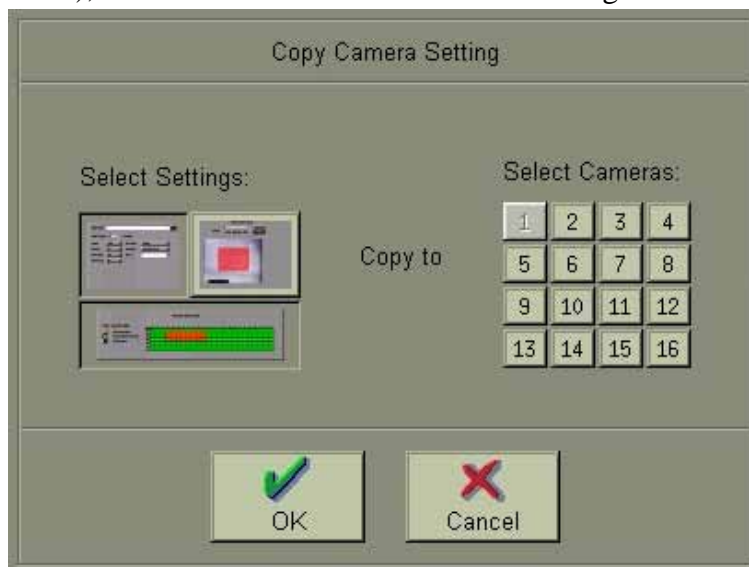
Select a Recording Mode: ☒ Fully Recording
☒ Motion Sensor Recording
☐ No Recording

(hour)	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Sun																								
Mon																								
Tue																								
Wed																								
Thu																								
Fri																								
Sat																								

OK

First choose the Recording Mode button located on the left of the schedule table, and then drag with the mouse an area for each recording mode on the table.

- Copy Camera Setting:** After finishing the camera setup for one camera, you can click the “Copy Camera Setting” button, located on the upper right of the “Camera Setup” screen, to copy the setting of this camera to other cameras. This saves time and effort. The following dialog will appear. Click the setting area you would like to copy (Refer to the three “areas” below), then click the cameras located on the right of the screen and click “OK”.



Copy Camera Setting

Select Settings:

Select Cameras:

Copy to

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16

OK Cancel

4-2 PTZ



To make the PTZ camera function correctly, please follow the instructions below:

1. Connect the PTZ to RS232 port (via RS485-RS232 converter).
2. Refer to Chapter 4-7-2 to assign “PTZ” to the RS232 port you connected.
3. Refer to the user manual of PTZ to setup the protocol, baud rate and ID.
4. Select Camera: please select the correct camera number which has PTZ function.
5. Status: set to “Enable”
6. Model, ID, and Baud Rate: set the ID the same as the PTZ camera.

You can control the PTZ camera using the control panel in this page.



: Focus near



: Focus far



: auto focus

Preset function:

1. Select preset point 1.
2. Move the PTZ camera to the position 1 using the panel.
3. Click “save”.

4. Select other preset points and follow the same procedure to set up.
5. Totally we support 128 preset points.

Auto-Pan function:

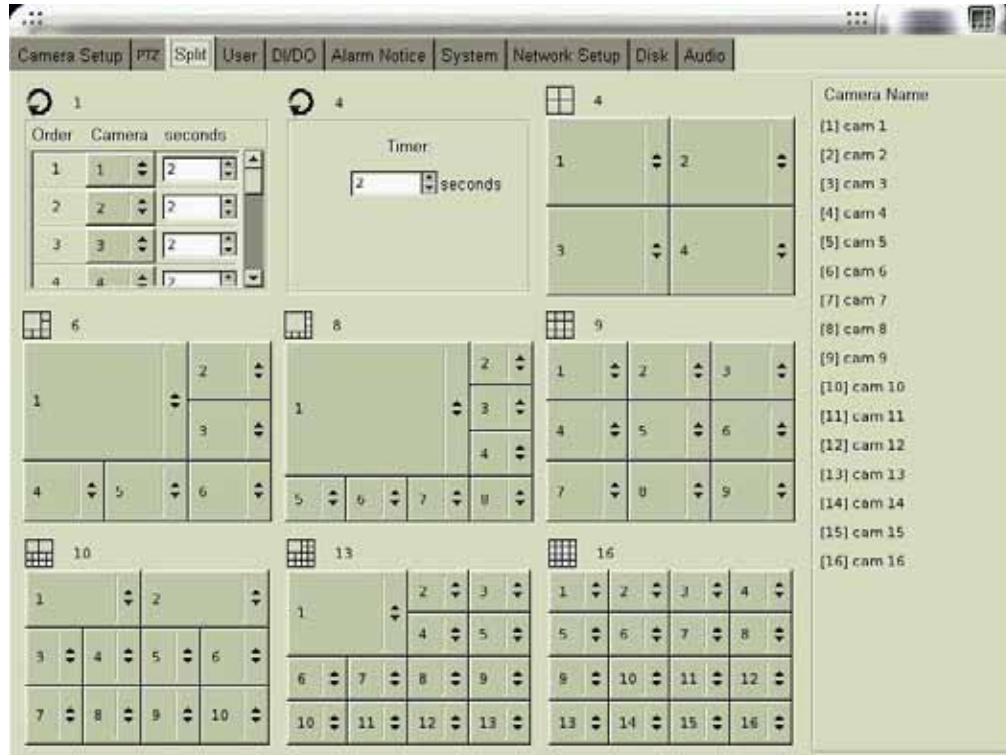
1. Click “Set Pan Start”
2. Move the PTZ camera, the PTZ will remember the path.
3. Click “Set Pan End”

Note:

- Preset and Auto-pan function is different from protocol to protocol. The above example is given using Pelco-D protocol for example.
-

4-3 View Setup

Clicking the “Split” tab will display the view setup screen as following.



1. There are 7 kinds of Display mode, 4 splits, 6 splits, 8 splits, 9 splits, 10 splits, 13 splits, and 16 splits.

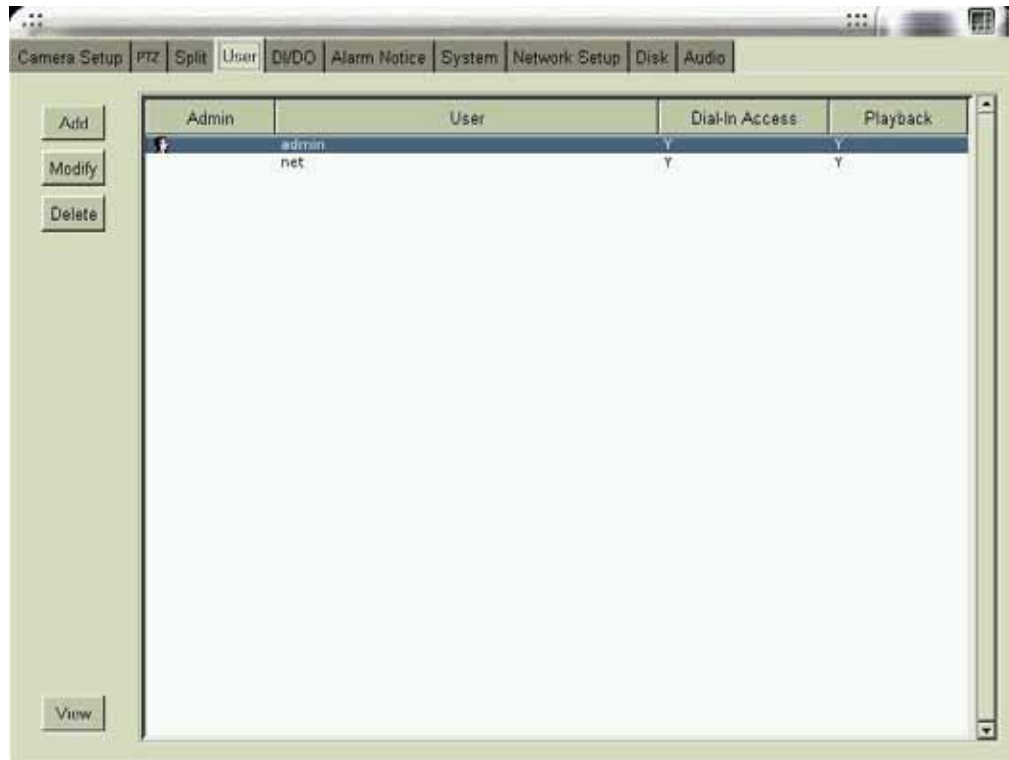
Click the “small block” on the split screen, then you can modify the camera shown on each split screen. An example for the description of the all cameras when doing the view setup is located on the right side of the table.

2. Sequencer Setting

There are 1 channel and 4 channel sequencer modes. For the one channel sequencer mode, you can set up the desired sequencer order and duration (up to 300 seconds). For the four channel sequencer mode, the display format is 4 split and you can set up its sequencer duration.

4-4 User Account Management

The **User Account Management** function allows different user to login the system using different user name. To start using this function, click on the **User** icon.



There are 2 system preset accounts. The user names and passwords for these two accounts are as follows.

- Username: “**admin**”; Password: “**1111**” is for the system management account. This account cannot be deleted.
- Username: “**net**”; Password: “**1111**” is for the normal user account. This account can be deleted.

To see more details of the account information, click **View** on the bottom left of this screen.

[Add User Account]:

Click “Add” icon to add new user accounts as screen below.

Camera	Remote Monitor	Remote Playback	Remote PTZ Control
[1] cam 1	1	1	1
[2] cam 2	2	2	2
[3] cam 3	3	3	3
[4] cam 4	4	4	4
[5] cam 5	5	5	5
[6] cam 6	6	6	6
[7] cam 7	7	7	7
[8] cam 8	8	8	8
[9] cam 9	9	9	9
[10] cam 10	10	10	10
[11] cam 11	11	11	11
[12] cam 12	12	12	12
[13] cam 13	13	13	13
[14] cam 14	14	14	14
[15] cam 15	15	15	15
[16] cam 16	16	16	16

- Enter the name and password for the new user.
- Administrator Account/Normal User Account: Only administrator account can enter the system setup menu to change the settings. Normal User accounts are used for remote login only.
- Dial-In Access: This option is to enable/disable the user to dial into the DVR, i.e., to access the system through modem.
- **Playback: Authorize user the function of playback.**
- Remote Monitor/Playback/PTZ Control: You can define the authorization of each user to use remote functions.

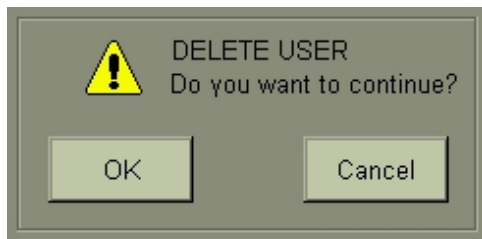
[Modify User Account]

Click “Modify” icon to modify the existing user account.

The operation is similar to that of the “Add User Account” above.

[Delete User Account]

Click “Delete” icon to delete the user account. A screen will display as follows.



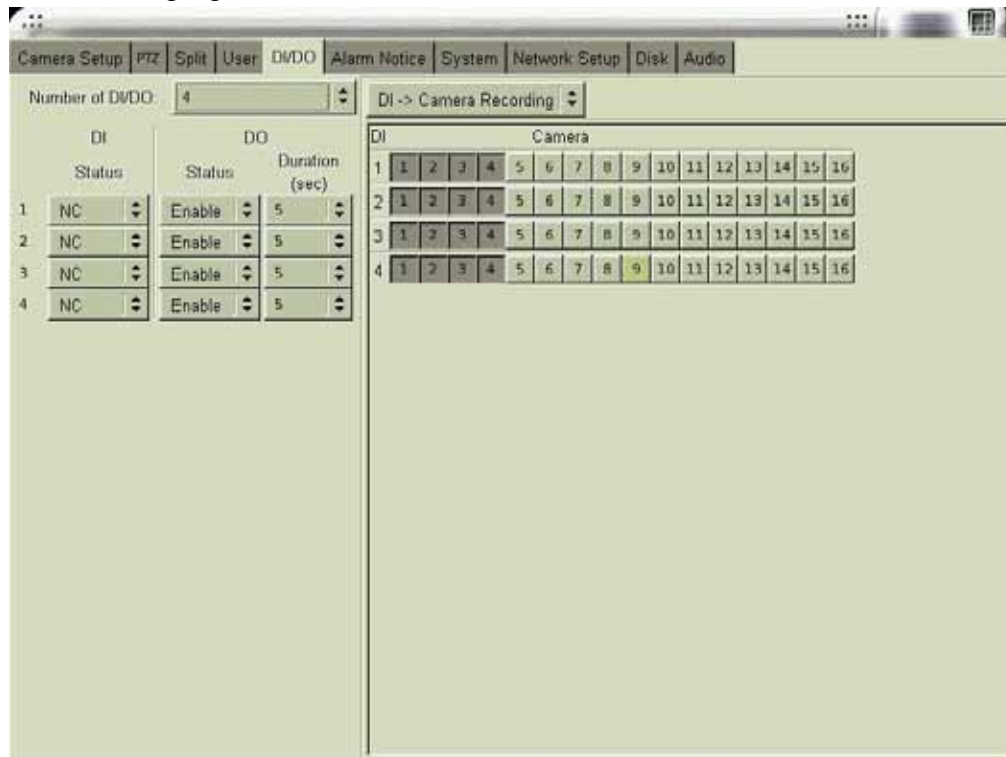
Click “OK” if you would like to delete this user account.

Note:

- The preset user “admin” cannot be deleted.
-

4-5 DI/DO

Click on the **DI/DO** icon and select the total number of DI/DO installed on your system to see the following figure:



[DI Status]

Choose Disable, NC, or NO according to your DI device (e.g., photo sensor).

- Disable: Disable the DI function.
- NC (normal closed): The signal loop is closed under normal conditions. When the loop becomes open, DI will be triggered until the loop becomes closed again. In other words, if the loop keeps on open for a period of time, DI will keep on triggering in that time interval.
- NO (normal open): The signal loop is open under normal conditions. When the loop becomes closed, DI will be triggered until the loop becomes open again. In other words, if the loop keeps on closed for a period of time, DI will keep on triggering in that time interval.

[DO Status]

- Disable: Disable the DO function.
- Enable: Enable the output signal when DO is triggered.
- Set the duration of DO signal. The available durations are 5, 10, 30, 60, 120, 300, 600,

1800 and 3600 seconds. If DO is triggered, in this time interval, DO will keep on triggering.

[Action]

There are 4 actions that are related to the DI/DO functions.

- **DI Camera Recording**

When DI is triggered, DVR can start to record the video of selected cameras. You can select the cameras to be recorded when DI is triggered by using the “DI/Camera array” shown below the setting. Each DI signal can trigger more than one camera recording.

- **Cam Motion DO**

When selected camera detects motion, selected DO can be triggered and start to send control signal to the external device (e.g., alarm) within the DO duration. The “Camera/DO array” below the setting allows you to relate the DO devices corresponding to each camera.

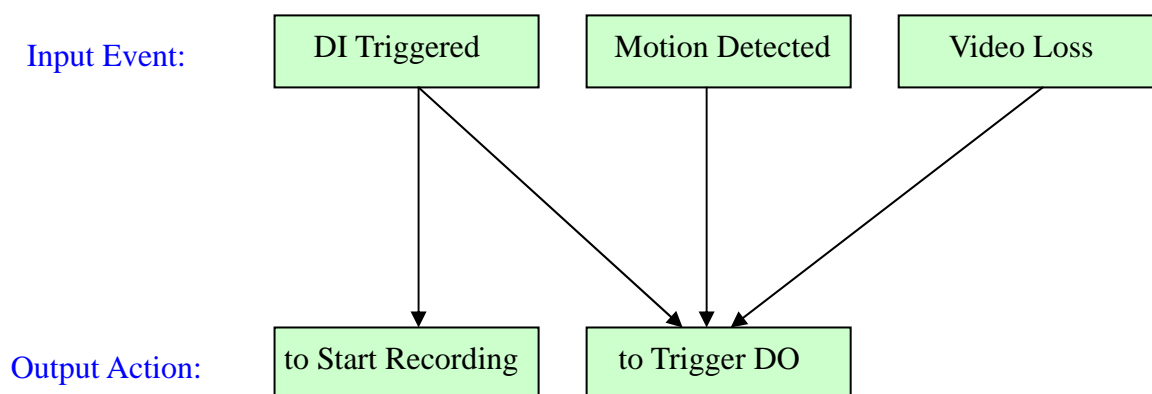
- **Cam V-Loss DO**

When selected camera video is lost, selected DO can be triggered and start to send control signal to the external device (e.g., alarm) within the DO duration. The “Camera/DO array” below the setting allows you to relate the DO devices corresponding to each camera.

- **DI DO**

When selected DI is triggered, selected DO can be triggered and start to send control signal to the external device (e.g., alarm) within the DO duration. The “DI/DO array” below the setting allows you to relate the DO devices corresponding to each DI.

- The following figure may help to understand the concept described above.



4-6 Alarm Notice

PLANET DVC products can send four types of alarm to your pre-defined **email addresses**, **FTP site**, or **mobile phone number** (via SMS). This section gives step-by-step instructions to send different alarms to each destination. We define four types of alarm sources as below.

dvr

Alarm Source	Definition
Motion Alarm	Motion is detected in selected cameras (despite the recording mode is full recording, motion sensor recording or no recording).
DI Alarm	Selected DI is triggered.
System Error Alarm	(1) Hard disk error, or (2) Camera lost signal.
System Warning Alarm	1. Hard disk is going to enter recycle mode (free space less than 4GB), or 2. Hard disk has being in recycle mode.

First, please click on the icon “Alarm Notice” to see the following figure:

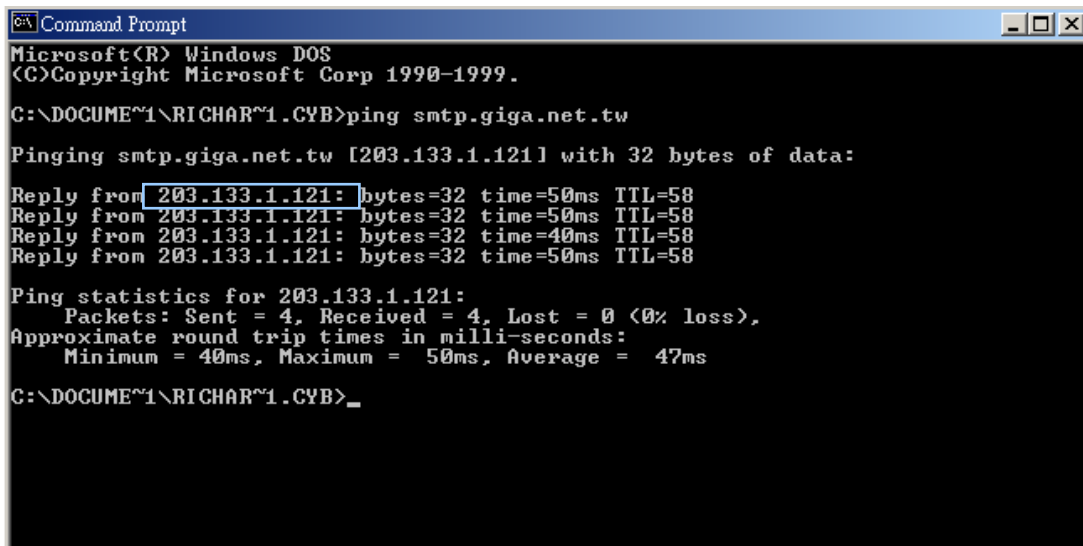
[Alarm to Email]

- (1) Make sure the DVR system connects to Internet.
- (2) Key in the IP address or the hostname of the mail server. If the mail server requires

user name and password to send emails, please click the icon “Authorization SMTP” to enter the user name and password.

Note:

- If you don't know the IP address of your mail server, you can ping the mail server to get the IP address as following figure.



```

C:\>Command Prompt
Microsoft(R) Windows DOS
(C)Copyright Microsoft Corp 1990-1999.

C:\DOCUMENTS\RICHA~1\CYB>ping smtp.giga.net.tw

Pinging smtp.giga.net.tw [203.133.1.121] with 32 bytes of data:

Reply from 203.133.1.121: bytes=32 time=50ms TTL=58
Reply from 203.133.1.121: bytes=32 time=50ms TTL=58
Reply from 203.133.1.121: bytes=32 time=40ms TTL=58
Reply from 203.133.1.121: bytes=32 time=50ms TTL=58

Ping statistics for 203.133.1.121:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 40ms, Maximum = 50ms, Average = 47ms

C:\DOCUMENTS\RICHA~1\CYB>_

```

- (3) Key in sender's full email address. It must be a valid email address.
- (4) Add Alarm Notice: Click the icon **Add** to see the follow figure.
- (5) Alarm Duration: The duration time can be from 1 minute to 1440 minutes (1 day).
When the “Alarm” happens, the DVR system will send the alarm notice one time during the duration and do it again in next duration until the “Alarm Source” disappears.
- (6) Select alarm **Source**. Please refer to the definition of each alarm source.
- (7) Action: Click the icon “**E-Mail**” and key in the email addresses which will receive the alarm notice. You can enter three email addresses to be notified for a single alarm.
- (8) Click “**OK**” when you have done the setting.
- (9) You can add another alarm notice by repeating the step (4) to (8).

Modify Alarm Notice

Alarm Number: 1

Duration: minutes

Motion Event

Select Cameras:

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16

DI Event

Select DI:

1	2	3	4
---	---	---	---

System Event


☐ System Error


☐ System Warning


Source:

Action: ☐ E-Mail ☐ FTP ☐ SMS


Email to:


1. 


2. 


3. 


SMS

1. 

2. 

3. 

 OK

 Cancel

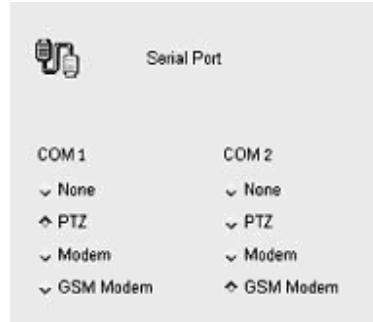
[Alarm to FTP Site]

- (1) Make sure the DVR system connects to Internet.
- (2) Key in the IP address of the FTP site.
- (3) Enter the directory you would like to store the alarm notice (logs and pictures).
- (4) Add Alarm Notice: Click the icon **Add** to see the above figure.
- (5) Alarm Duration: The duration time can be from 1 minute to 1440 minutes (1 day).
When the “Alarm” happens, the DVR system will send the alarm notice one time during the duration and do it again in next duration until the “Alarm Source” disappears.
- (6) Select alarm **Source**. Please refer to the definition of each alarm source.
- (7) Action: Click the icon “**FTP**”.
- (8) You can add another alarm notice by repeating the step (4) to (7).

[Alarm to SMS]

This function requires an external GSM modem to send messages to mobile phones via SMS (Short Message Service).

- (1) Please refer to your GSM modem user manual for the physical connections.
- (2) Go to **Serial Port** setting in the **System** sub-menu. Choose **GSM Modem** on the COM port that connects to the GSM modem.
- (3) Back to this **Alarm Notice** sub-menu, and set the **Baud Rate** to be 9600 baud per second. (Note: If you fail to send SMS successfully, you may reduce the baud rate to 4800 or 2400 bps and try again.)
- (4) Key in the **Subject** of the alarm message (for example, DVR Alarm).
- (5) Add Alarm Notice: Click the icon **Add**.
- (6) Alarm Duration: The duration time can be from 1 minute to 1440 minutes (1 day). When the “Alarm” happens, the DVR system will send the alarm notice one time during the duration and do it again in next duration until the “Alarm Source” disappears.
- (7) Select alarm **Source**. Please refer to the definition of each alarm source.
- (8) **Action**: Click the icon “**SMS**” to enter the mobile phone number. You can enter three mobile phone numbers to be notified for a single alarm.
- (9) Click “**OK**” when you have done the setting.
- (10) You can add another alarm notice by repeating the step (5) to (9).

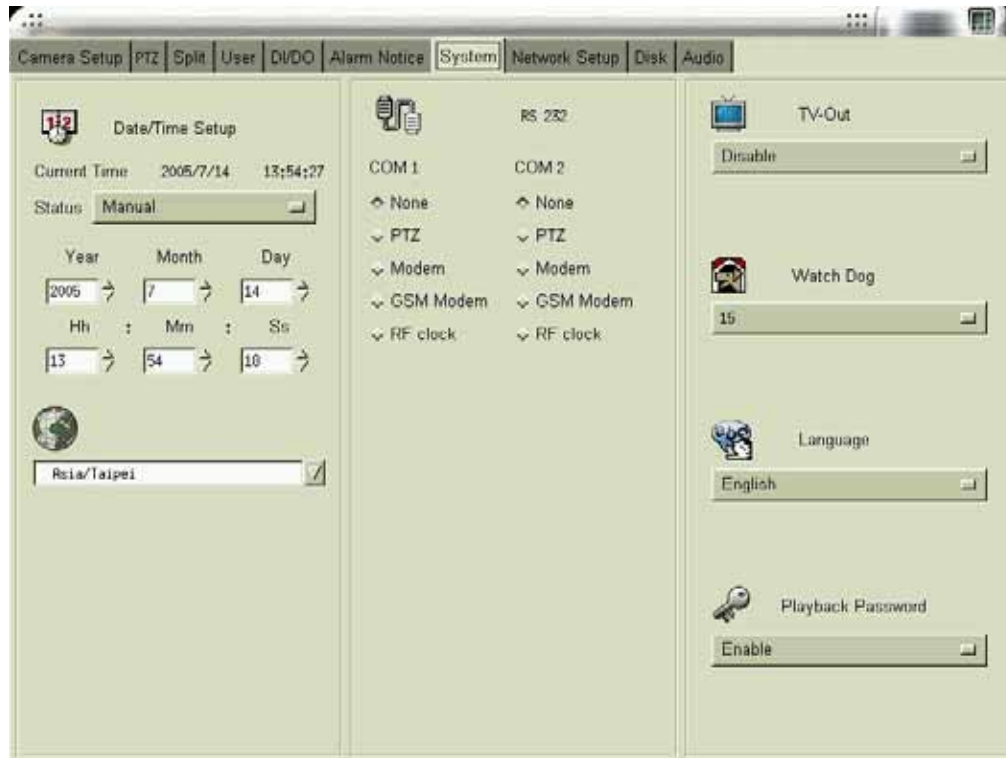


Note:

- You can send the same alarm notice via email, FTP, and SMS at the same time. You can also modify or delete your previous alarm notice setting. It is very similar to add a new alarm notice.

4-7 System

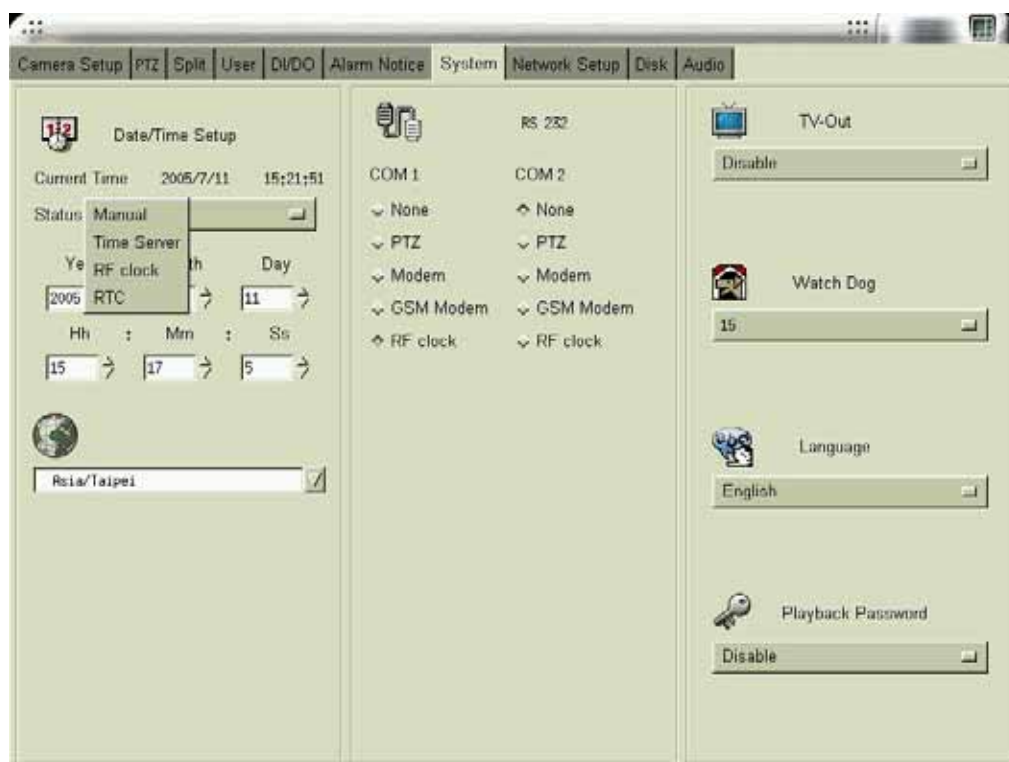
Click “System” tab for the settings: “Date/Time”, “RS-232”, “TV-Out”, “Watch Dog”, “Language”, and “Playback Password”.



4-7-1 Time Synchronization

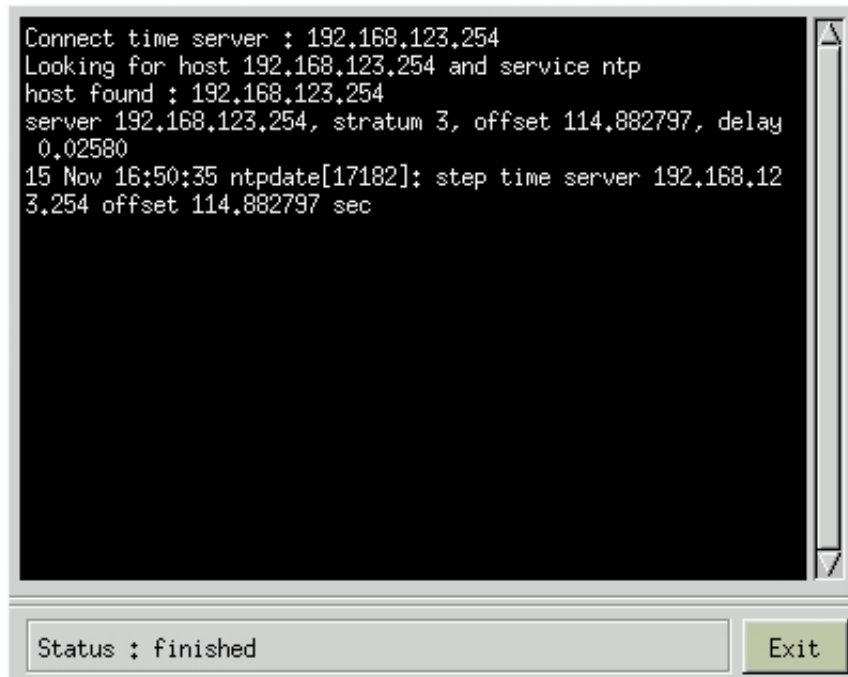
There are four kinds of methods to synchronize DVR's time.

Type	Description
1. Manual	Set up time manually
2. Time Server	Synchronize DVR time with Time Server
3. RF Clock	Synchronize DVR time with RF Clock
4. RTC	Synchronize DVR time with Real Time Clock(RTC)



When you select “Time Server” Synchronization, enter the IP address or hostname of the Time Server.

You can test the Time Server function by clicking “Time Server test”.



When you select “ RF Clock” Synchronization, you can click “ Test” button to do the “RF clock test”. Then, the DVR will issue a command to RF clock to get Time information and display it on the screen. RF Clock can be connected to the DVR through RS232 port.

Note:

1. Configuring Time Synchronization will reboot DVR.
2. When you synchronize DVR time by RF Clock, the selection of RS232 COM port(COM 1 or COM 2) in System configuration must be the same as the physical connection.

4-7-2 Other Functions

[RS 232]

This setting is for you to configure the RS232 port. Select the correct device that connects to your system to make its function work.

[TV Out]

PLANET DVC products support the VGA card with TV-out function. **With this function, you can export DVR screen to TV Wall.** You can click the icon and choose “Disable”, “NTSC-J”, “NTSC-M”, “PAL-B”, “PAL-D”, “PAL-G”, “PAL-H”, “PAL-I”, “PAL-M”, PAL-N” based on the TV-out function requirement.

[Watch Dog]

Watch Dog is a hardware device to monitor the system status. If the system fails to response, Watch Dog will send a reset signal to the motherboard to reboot the system. To enable Watch Dog function, please select available durations 15,20, 25... or 60 seconds. It requires **the first capture card** to have a physical connection to the reset pin of the motherboard.

[Language]

Supports 8 display languages, i.e., English, French, Germany, Japanese, Polish, Portuguese, Spanish, and Traditional Chinese.

[Playback Password]

You can enable this function so that the system requires password in order to see playback.

4-8 Network Setup

Click “Network Setup” tab to set up the network configurations as follows. Enable the “Static IP” and enter the IP address, NetMask, and Gateway in the fields.

The screenshot shows the 'Network Setup' configuration window. The 'Network Setup' tab is selected, displaying fields for IP address, NetMask, and Gateway. The 'DNS' section is also visible, showing 'Static IP' status and fields for Provider, Domain, Host Name, User Name, and Password. The 'Remote Control' section includes fields for Network Port, Remote Monitor, and Remote Setup. The 'Network Share' section at the bottom shows fields for PC Name, Workgroup, User Name, and Password, along with a camera selection grid.

Note: If you use another network port (like port 81) instead of default port 80, when you start the remote viewing, please remember to add the port number followed by the IP address and the “<http://>” in front of the IP address. For example: <http://142.173.62.171:81>. If you use port 80, you could just click the IP address directly.

[DNS]

An internet service that translates domain name into IP address . For example , the domain name www.example.com can translate into 198.105.232.4.

[DDNS]

The Dynamic DNS service allows you to alias a dynamic IP address to a static hostname, allowing your computer to be more easily accessed from various location on the Internet.

We support free DDNS account and customer pay account. To use this service, for free account, you must apply an account from several free Web servers such as <http://DynDNS.org>

[DHCP]

A protocol for assigning dynamic IP address to devices on a network. With dynamic addressing, a device can have a different IP address every time it connects to the network .

4-8-1 Remote Monitor

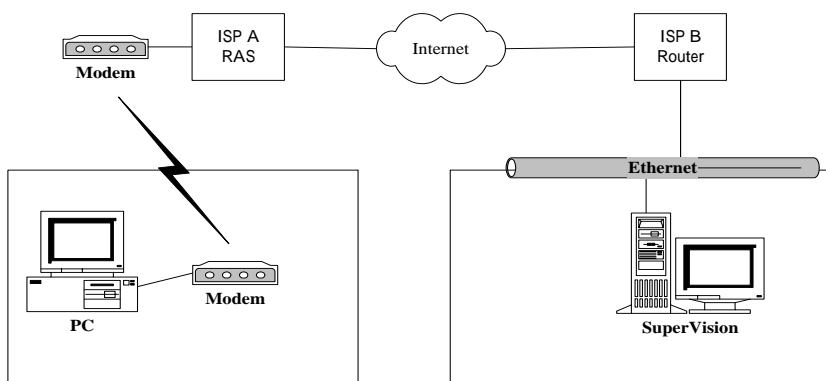
[JPEG]

If you set this function to be JPEG, DVR will encode one JPEG picture per channel per second for remote access. The remote PC needs to install Java Virtual Machine.

[MPEG-4]

If you set this function to be MPEG-4, DVR will encode about 30 pictures per system per second for remote access. The remote PC needs to install “MPEG4 player”, which can be download from the DVR.

4-8-2、 Remote Monitor via Internet by a modem



[DVR site]

Before starting the remote monitoring function, users need to apply for a fixed line (leased line or ADSL), and get the fixed IP address from the ISP (Internet Service Provider). The framework to perform this feature is depicted in the above figure. Moreover, please follow the procedure described in section 4-8 “Network Setup” to setup the network configuration. Remember to check that the fixed line(usually RJ45 cable) has connected to the DVR system correctly.

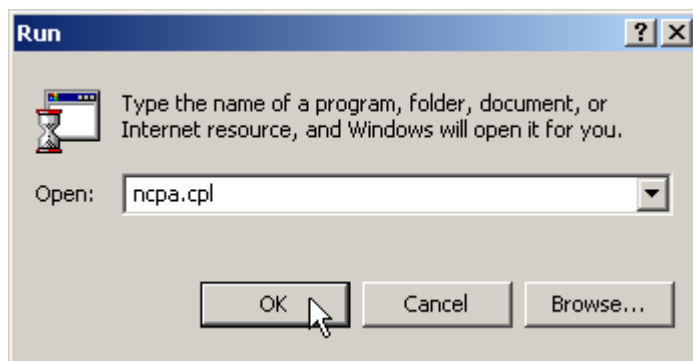
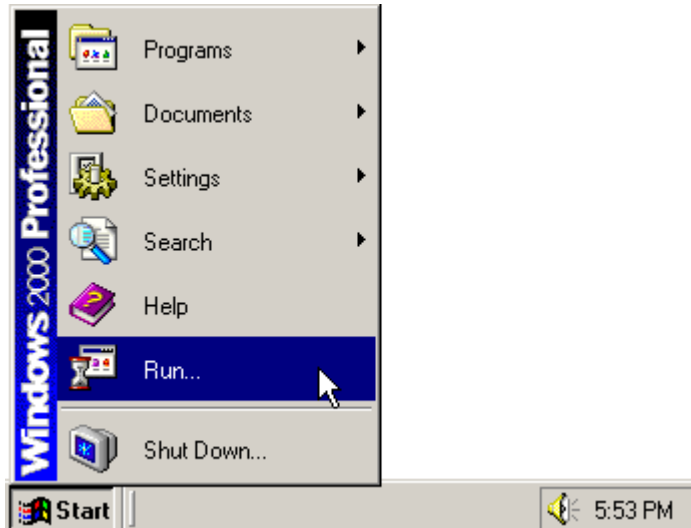
[Remote user site]

Please refer the following procedure (which is extracted from documents provided by MicroSoft^M Inc. to finish the setting of user site where a window 2000 system is installed.

- **Windows 2000 Dial-Up Guide**

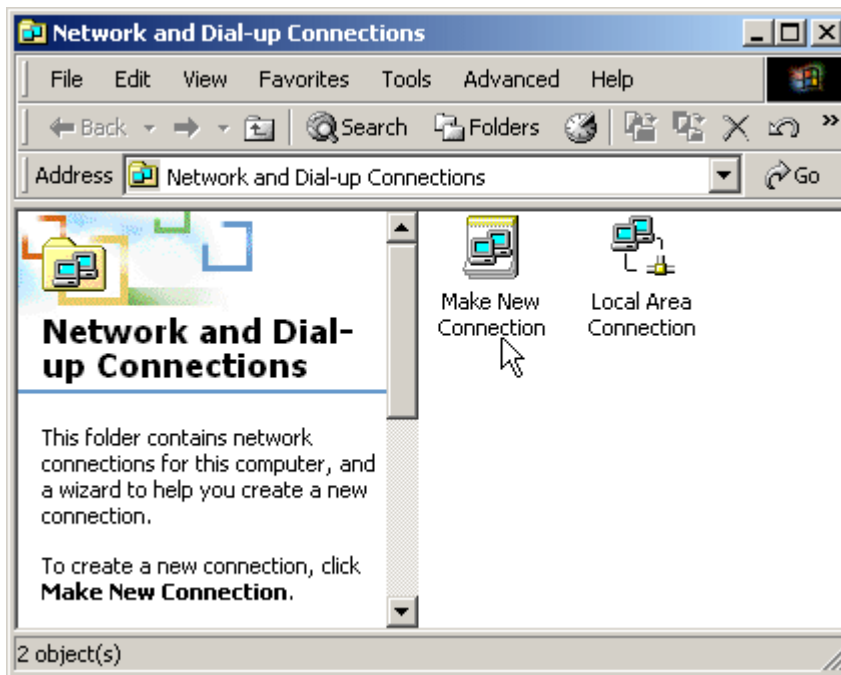
✓ **Step 1**

Click **Start** on your Windows taskbar, select **Run**. Type **ncpa.cpl** in the Open field then click **OK** to begin.



✓ **Step 2**

In the Network and Dial-Up Connections window, open **Make New Connection** to start the Network Connection Wizard.



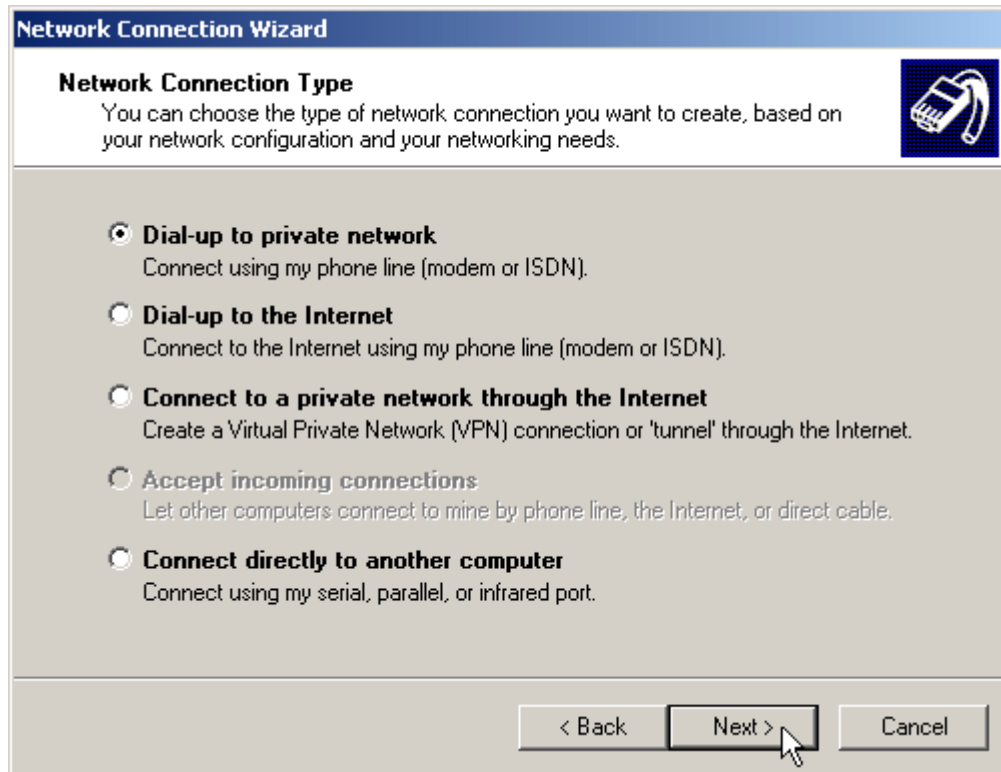
✓ **Step 3**

In the Welcome to the Network Connection Wizard window, click **Next**.



✓ **Step 4**

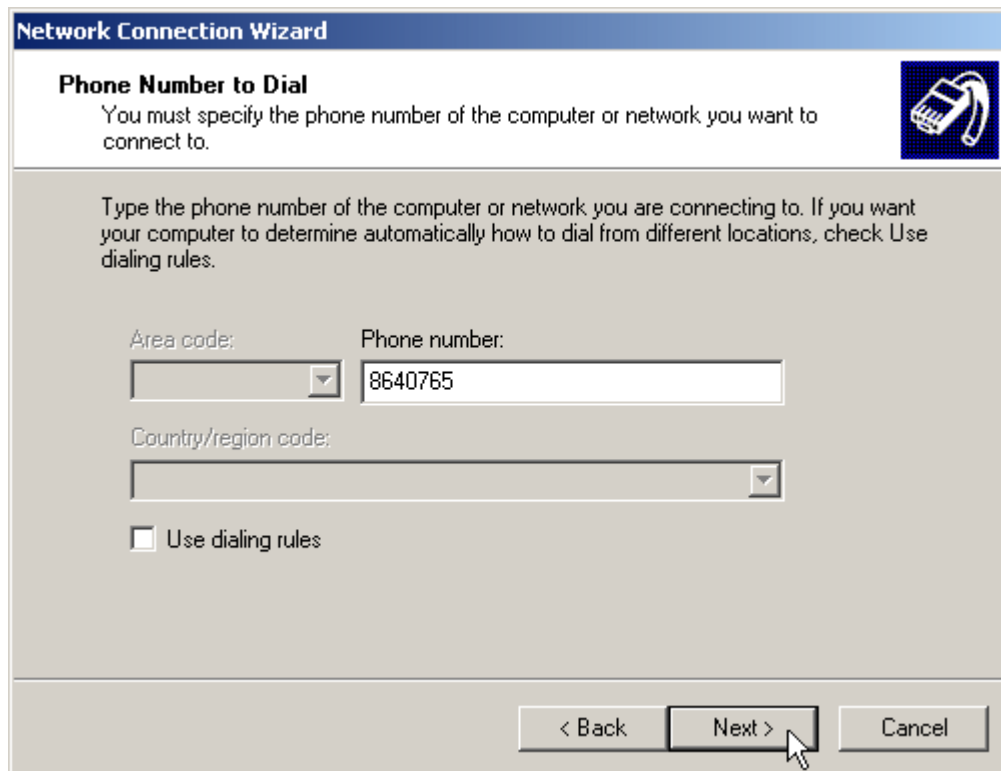
The New Connection Type window will have several selections. Choose **Dial-Up to private network**, then click **Next**.



✓ **Step 5**

For the Phone Number to Dial window, first choose a local service number from the following Web sites...

Please type in the number you have chosen and click **Next** to continue.



Network Connection Wizard

Phone Number to Dial

You must specify the phone number of the computer or network you want to connect to.

Type the phone number of the computer or network you are connecting to. If you want your computer to determine automatically how to dial from different locations, check Use dialing rules.

Area code: Phone number:

Country/region code:

☐ Use dialing rules

< Back Next > Cancel

✓ **Step 6**

In the Completing the Network Connection Wizard window, check the box labeled **Add a shortcut to my desktop**, then click **Finish** to close the wizard, and therefore, start the Connect window.



Network Connection Wizard

Completing the Network Connection Wizard

Type the name you want to use for this connection:

To create this connection and save it in the Network and Dial-up Connections folder, click Finish.

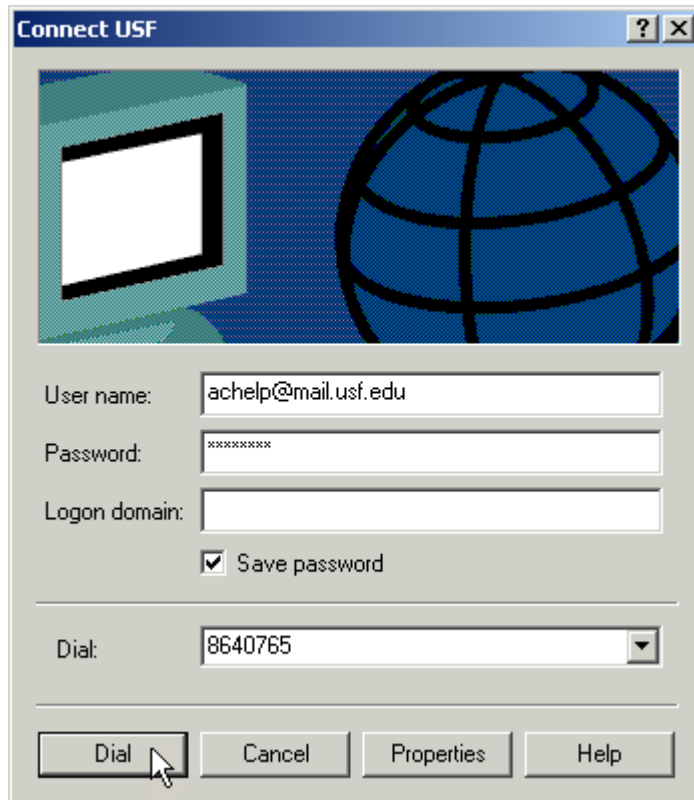
To edit this connection in the Network and Dial-up Connections folder, select it, click File, and then click Properties.

☒ Add a shortcut to my desktop

< Back Finish Cancel

✓ Step 7

Before dialing, the Connect window has several text fields to fill. Your **User name** will be your entire official USF e-mail address and the **Password** will be the password to that e-mail address, respectively. In addition, you may check the **Save password** box and/or customize the phone number (to disable call-waiting or other features) if you prefer.



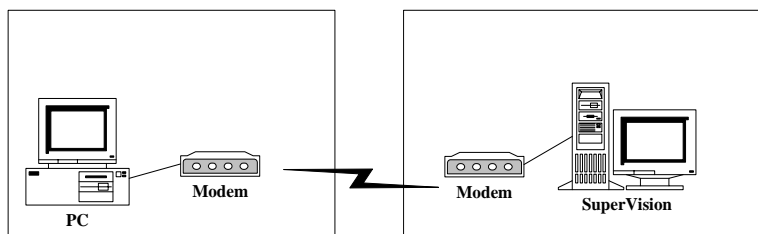
✓ Step 8

Your connection setup is now complete! If you have not payed for USFBasic Dial-up yet, please do so at the [iConnect Marketplace](#). Qualified faculty must register through the [Faculty Modem Pool Eligibility page](#). Both Web addresses are respectively listed below for your convenience.

After successful connect, the user ' s PC will be assigned an IP Address from the RAS (Remote Access Server) of ISP.

Users can open the Web Browser now, enter DVC PRODUCT0 IP Address (Refer to 4-8), and wait for several seconds (time for loading program) to start remote monitoring function.

4-8-3、 Remote Monitor when DVC is connected to the Internet by a modem



Similar to dialing up to ISP (Internet Service Provider) for connecting to internet described in the previous section, direct dial-in access is another way to let users remotely connecting to DVC series products which is equipped with a modem device. The above figure depicts the framework of this feature.

Additionally, the only slightly difference between these two methods is that direct dial-in access uses DVC series products to replace the function provided by ISP RAS (Remote Access Server) to perform the procedure of connection.

[DVR site]

From the DVR site, please follow the steps below to finish the setting.

1. Login the setup page of the DVR system as an administrator, and then setup the network functions you required on “Network Setup” page, for example, enable remote monitoring, enable remote setup, ..etc.
2. Prepare a user account which has the permission of dial-in access. Or the default user “admin” has the permission already. Later on, from the remote site, you need this account to login the DVR system once the dial-in access is finished.
3. Check the BIOS setting of motherboard to make sure that the setting of onboard Serial Port 1” (Port A) is enabled (or Auto or 3F8).
4. Connect the modem to the COM1 interface of the DVR system.
5. Prepare a regular telephone line (PSTN), and then correctly connect the modem to the telephone line.
6. Remember to power on the modem and check if the status of modem is correct before power on the DVR system.

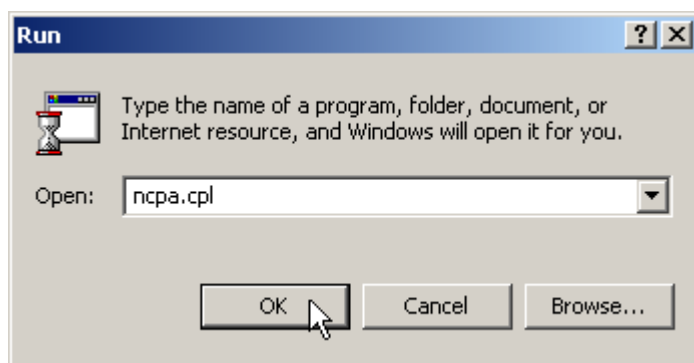
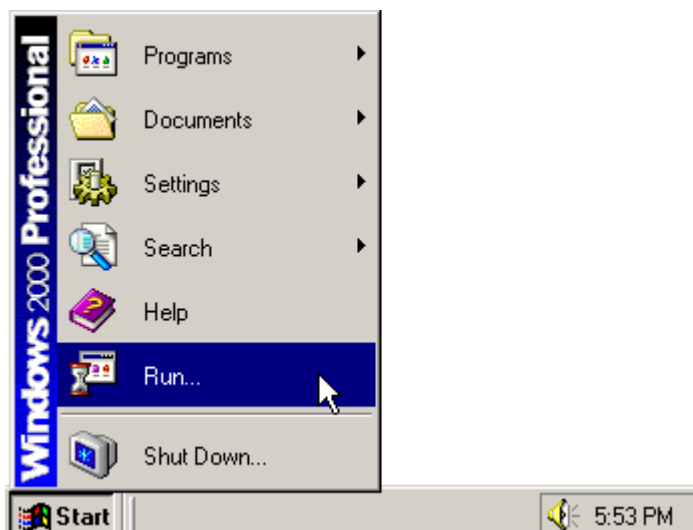
[Remote user site]

Please refer the following procedure (, which is extracted from documents provided by MicroSoft^M Inc. to finish the setting of user site where a window 2000 system is installed.

- **Windows 2000 Dial-Up Guide**

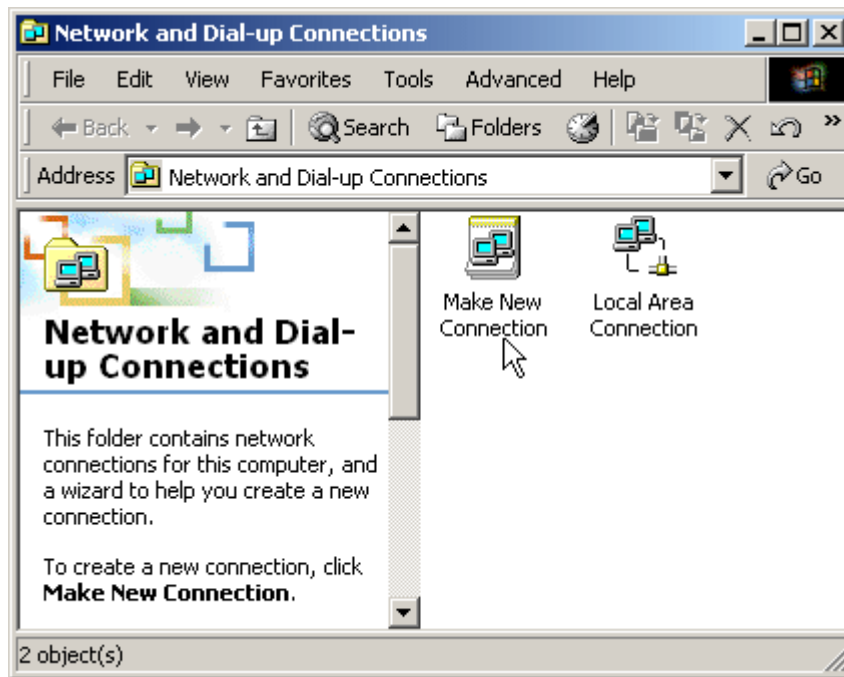
- ✓ **Step 1**

Click **Start** on your Windows taskbar, select **Run**. Type **ncpa.cpl** in the Open field then click **OK** to begin.



- ✓ **Step 2**

In the Network and Dial-Up Connections window, open **Make New Connection** to start the Network Connection Wizard.



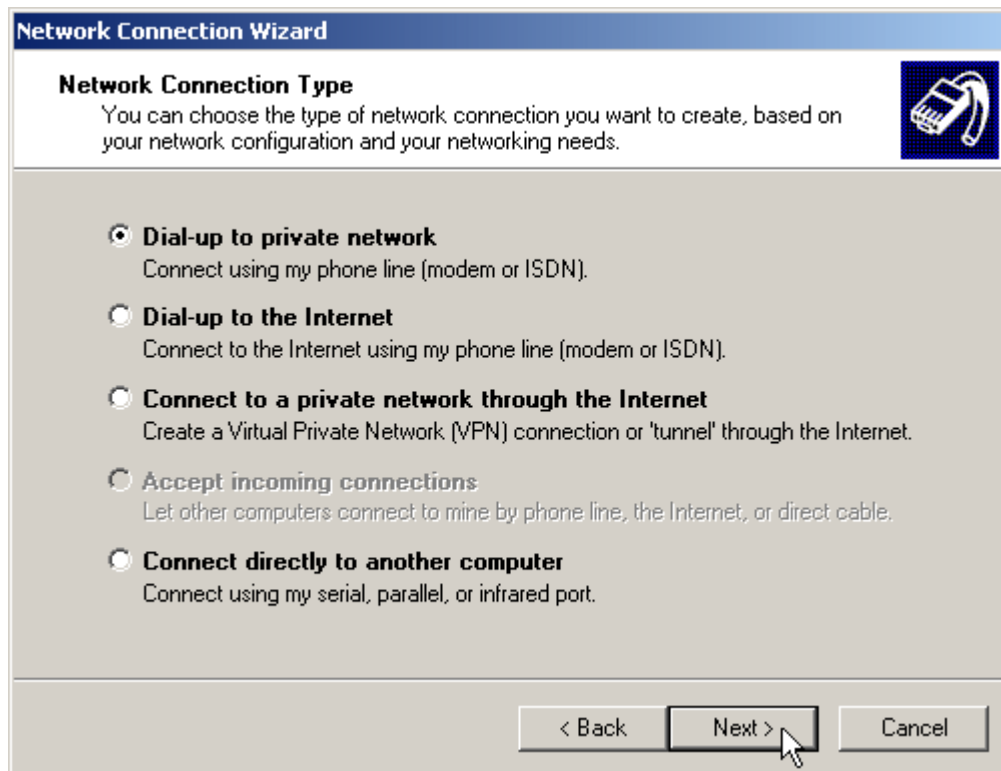
✓ **Step 3**

In the Welcome to the Network Connection Wizard window, click **Next**.



✓ **Step 4**

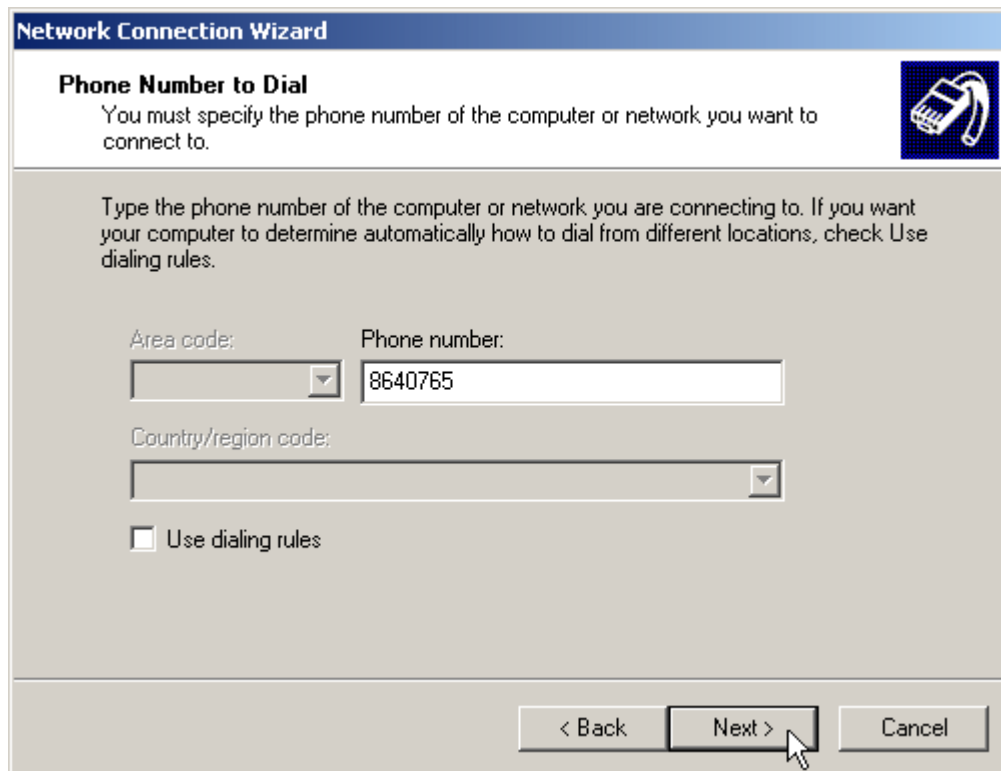
The New Connection Type window will have several selections. Choose **Dial-Up to private network**, then click **Next**.



✓ **Step 5**

For the Phone Number to Dial window, first choose a local service number from the following Web sites...

Please type in the number you have chosen and click **Next** to continue.



Network Connection Wizard

Phone Number to Dial

You must specify the phone number of the computer or network you want to connect to.

Type the phone number of the computer or network you are connecting to. If you want your computer to determine automatically how to dial from different locations, check Use dialing rules.

Area code: Phone number:

Country/region code:

☐ Use dialing rules

< Back Next > Cancel

✓ **Step 6**

In the Completing the Network Connection Wizard window, check the box labeled **Add a shortcut to my desktop**, then click **Finish** to close the wizard, and therefore, start the Connect window.



Network Connection Wizard

Completing the Network Connection Wizard

Type the name you want to use for this connection:

To create this connection and save it in the Network and Dial-up Connections folder, click Finish.

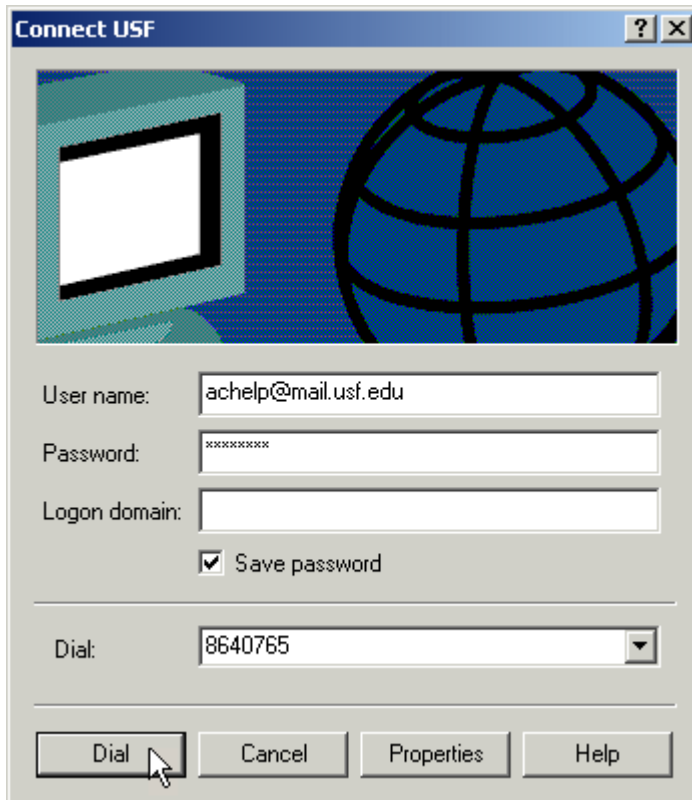
To edit this connection in the Network and Dial-up Connections folder, select it, click File, and then click Properties.

☒ Add a shortcut to my desktop

< Back Finish Cancel

✓ Step 7

Before dialing, the Connect window has several text fields to fill. Your **User name** will be your entire official USF e-mail address and the **Password** will be the password to that e-mail address, respectively. In addition, you may check the **Save password** box and/or customize the phone number (to disable call-waiting or other features) if you prefer.



✓ Step 8

Your connection setup is now complete! If you have not payed for USFBasic Dial-up yet, please do so at the [iConnect Marketplace](#). Qualified faculty must register through the [Faculty Modem Pool Eligibility page](#). Both Web addresses are respectively listed below for your convenience.

Users can open the Web Browser now, enter DVC product IP address (see [Note](#)), and wait for several seconds (time for loading program) to start remote monitoring function.

Note

After successful connecting to the modem, the PC will be assigned an IP Address, which is the successor number of DVC's IP Address. For example, if the IP address of DVC products is 140.113.17.154, then 140.113.17.155 will be assigned to the PC. Therefore, you need to use this IP address in IE browser in order to connect to the DVR system.

4-8-4 Remote Setup

Remote Setup allows you to configure most functions of the DVR via another PC remotely. Please refer to chapter 5-6 for remote operation.

4-8-5 Network Share

This function allows you to find the DVR in the network and copy the recorded files to your PC remotely.

- 1** Enable "Network Share Status".
- 2** Give a name for this DVR for identification in the network.
- 3** Enter the Workgroup.
- 4** Give a password for remote access of the files.
- 5** Click on the camera numbers to be shared in the network.

Please refer to chapter 5-7 for remote operation.

4-9 Disk

This function allows you to check disk status easily and precisely through pressing the S.M.A.R.T



4-10 Audio

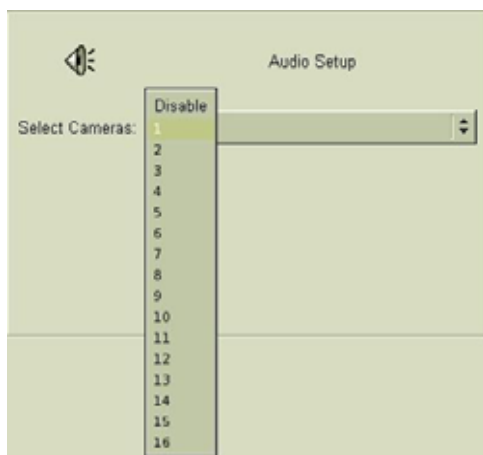
Click on the icon “**Audio**” to set up the audio channel settings as following.



[Select Camera]

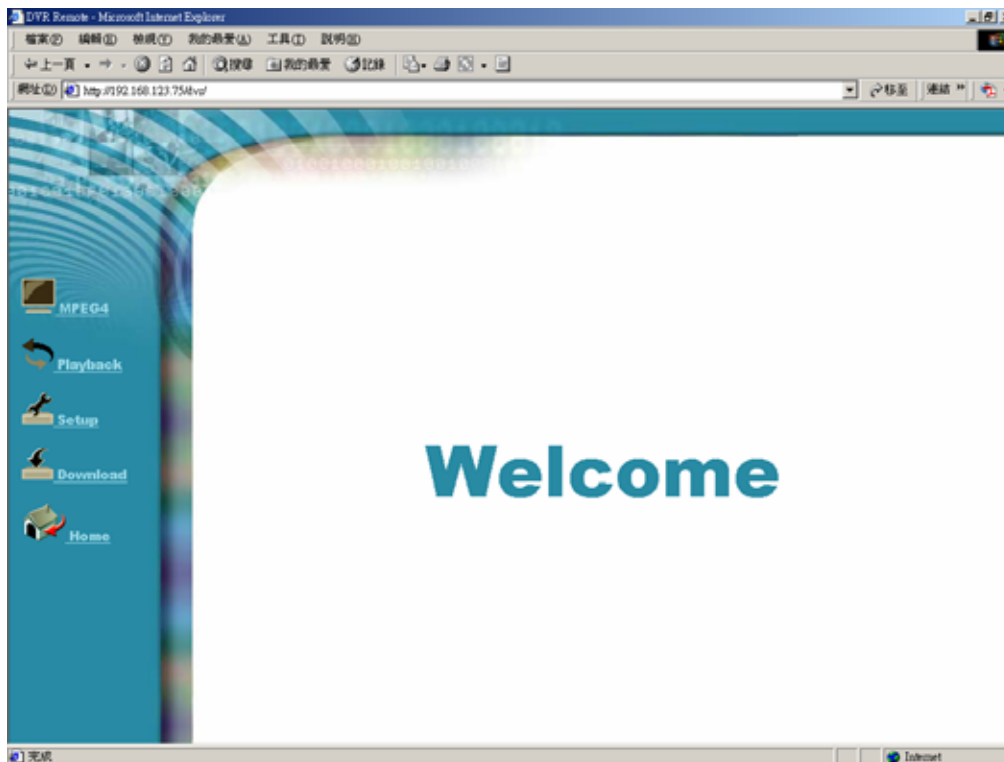
You can select camera number from the monitor screen which you want to add audio function. It means that if it connects a capture card of 4 channels, the No. you can select is from 1 to 4. Likewise, if you connect the capture card up to 16 channels, the No. you can select is from 1 to 16. Please refer to the below Fig.

Be sure to note that it only can select one channel to add audio function for each time. And the microphone is connect to the mainboard built-in sound card as well.



5. Remote Operation

The DVC products allow you to monitor and control the system via network. Open an IE browser on the remote PC and enter the IP address of the DVR to see the screens below:



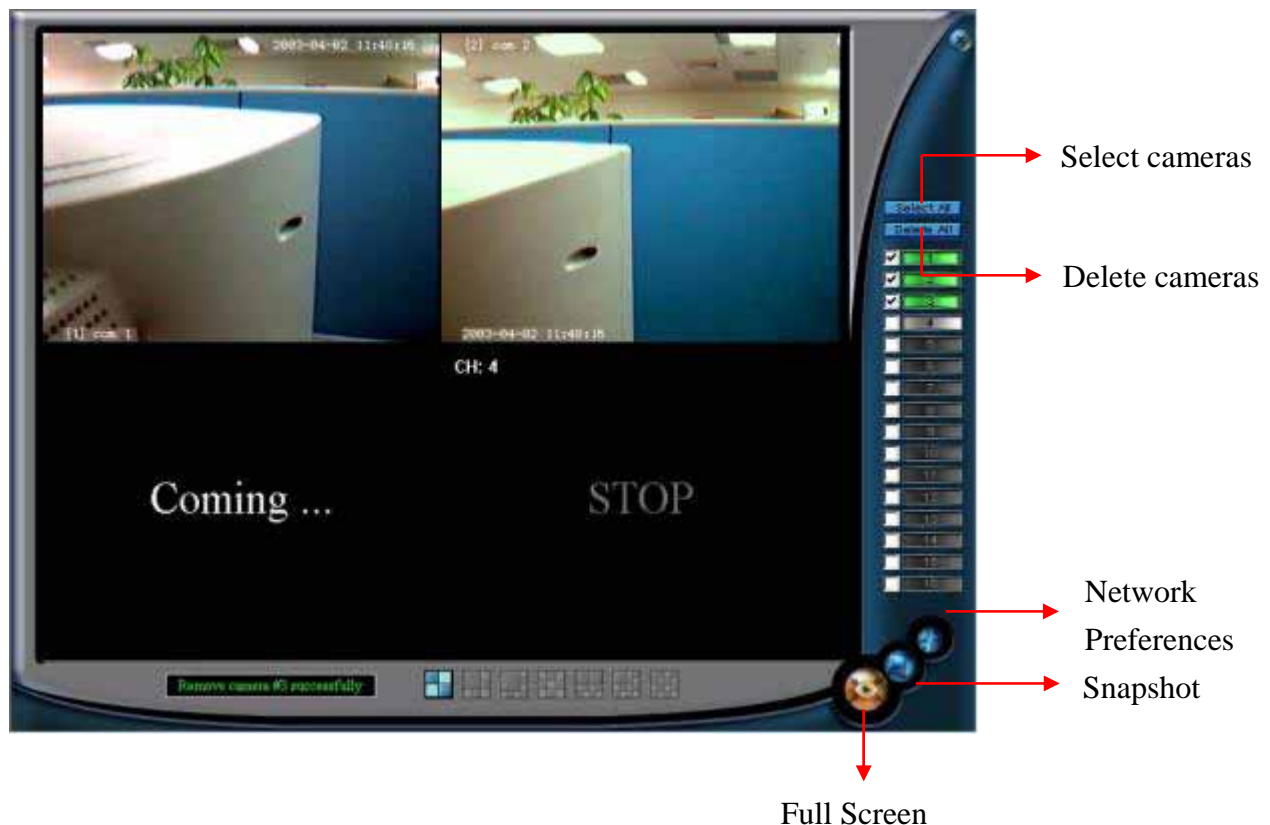
5-1 Download Player

The remote PC needs to install the MPEG-4 player in order to monitor, playback, and control the DVR. The player can be downloaded from the DVR directly.

Click the “Download” icon and follow the instructions to install the player. After install the player, you should restart you PC to make the player work correctly.


5-2 Remote Monitor via MPEG4

Click the **MPEG4** icon to see the following figure.

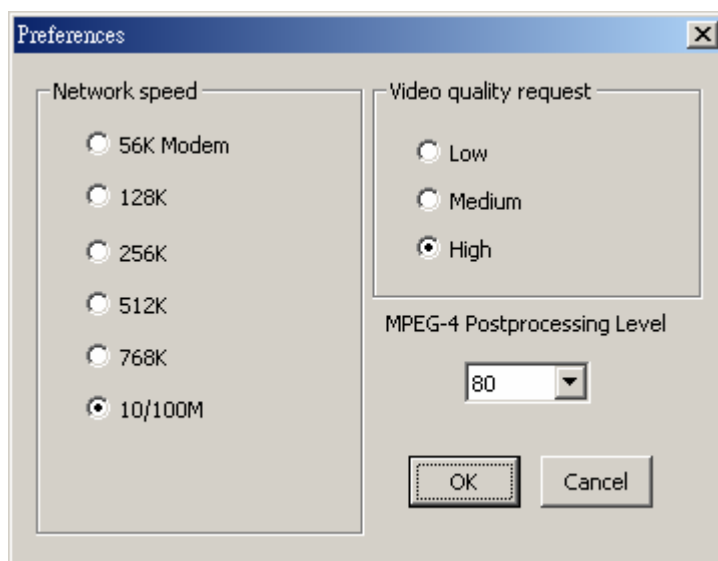




- Select the cameras to be displayed on the right of the screen.
- Click on the corresponding icons on the bottom of the screen to view difference display mode.



- Click the  icon (Network Preferences) on the lower right of the screen to select the suitable network setting based on the actual environment. It will pop up a screen as

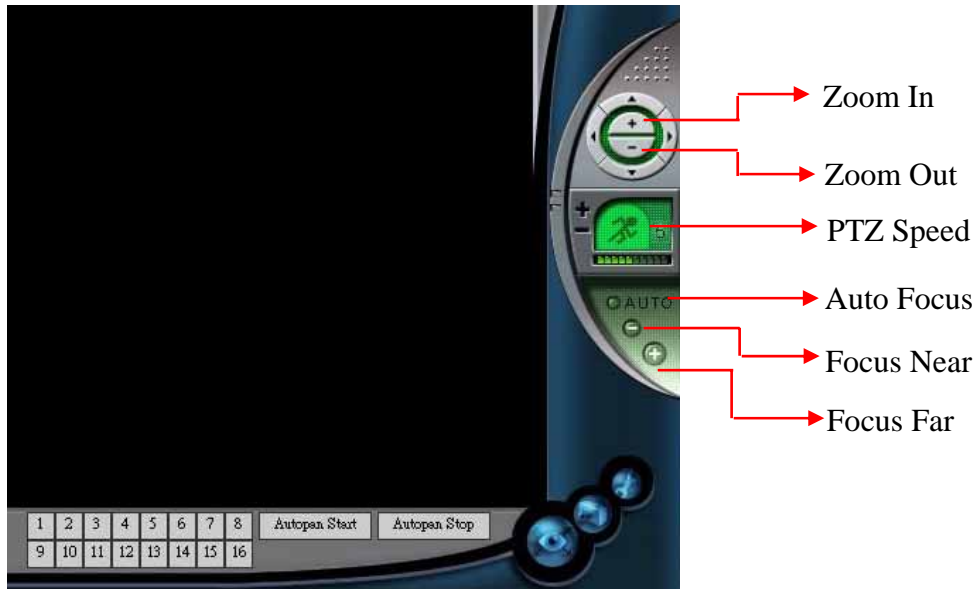
follows.



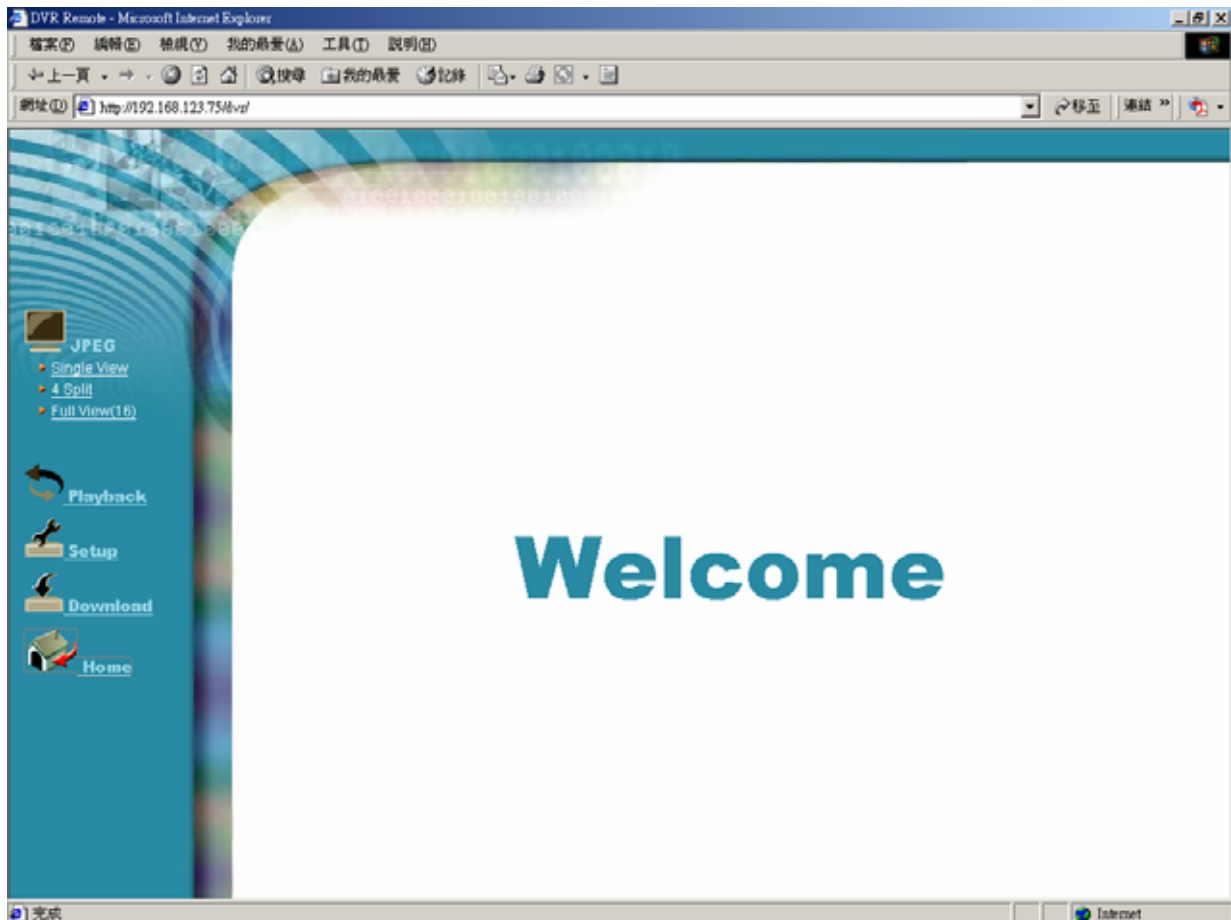
- You can click the icon  (Full Screen) to enlarge the monitoring screen display. If you click it again, it will be back to the normal monitoring screen.
- You can select one of the pictures and click the icon  (Snapshot) to save as a JPEG file.



- If you want to operate the PTZ function, click on the camera screen directly. The screen will enlarge and a PTZ control panel will appear on the right as below.



5-3 Remote Monitor via JPEG



- (1) Click **Single View**, **4 Split** or **16 Split**.
- (2) Select camera(s).
- (3) Start to monitor.

Note

- Administrator must enable the JPEG remote monitor function first.
 - The remote PC must have Java VM installed to see the pictures.
-

5-4 Remote Playback

Click the **Playback** icon to see the following figure.



- (1) Select a date on the calendar.
- (2) Select a Camera.
- (3) Select a recording duration.
- (4) Click on the Playback icon to start playback.
- (5) You can select various playback speeds or drag the time bar directly.



Speed (-): To reduce the playback speed.



Speed (+): To increase the playback speed.



Playback



Previous 1 min: To rewind 1 minute.



Next 1 min: To forward 1 minute.



Pause



Stop



Save video clips



Save JPEG files



Enlarge to full screen



Adjust video size

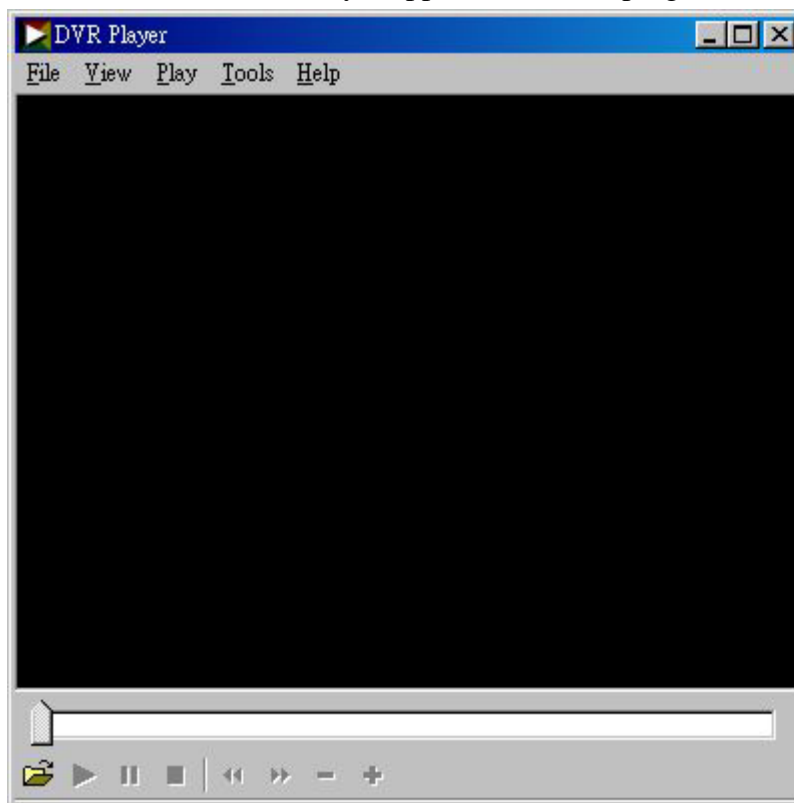
5-5 DVR Player


The DVR Player is used in three applications:

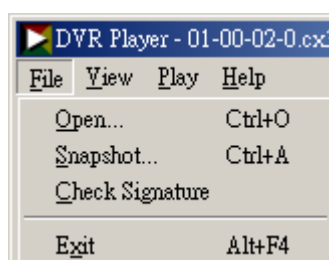
1. To watch the video clip downloaded from the DVR;
2. To watch the video clip burned on the CD-R/RW;
3. To verify the Digital Signature of the video clip.



You can find the DVR Player application in the program files.



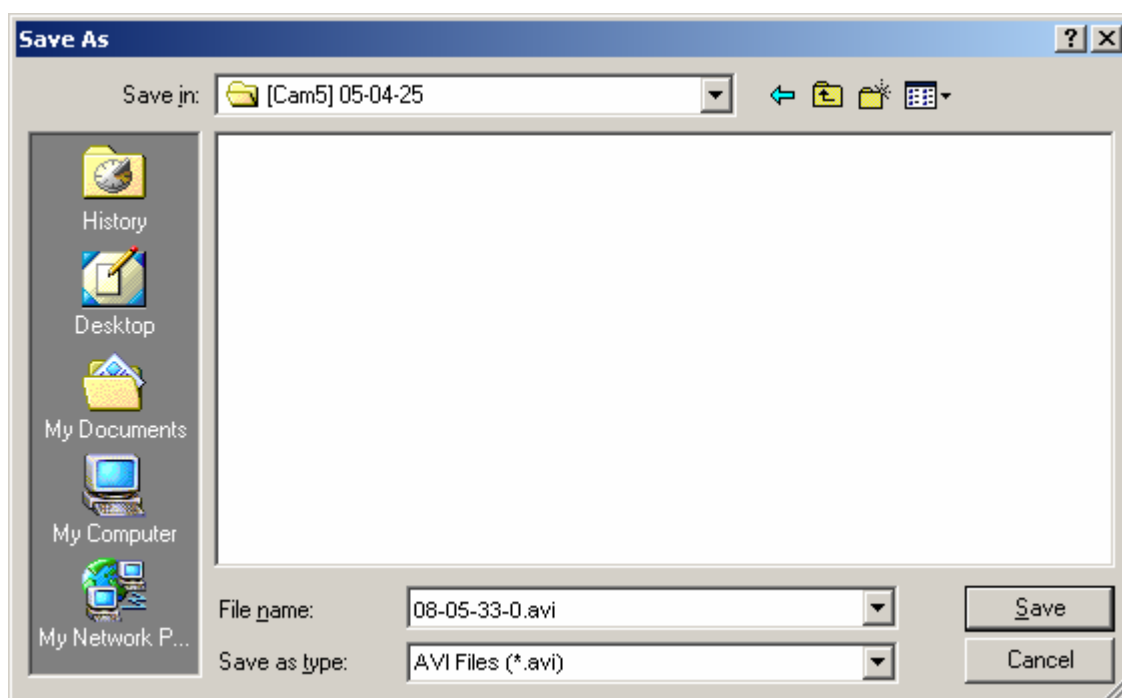
- Click on the icon  on bottom right to select a video clip.
- You can check the digital signature in File -> Check Signature.



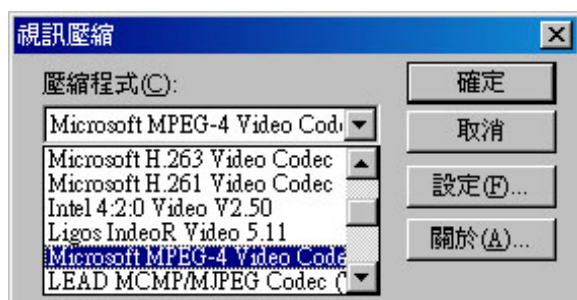
- **AVI Format Export:**

This function provides you to transform the download files from CX3 format to AVI format.

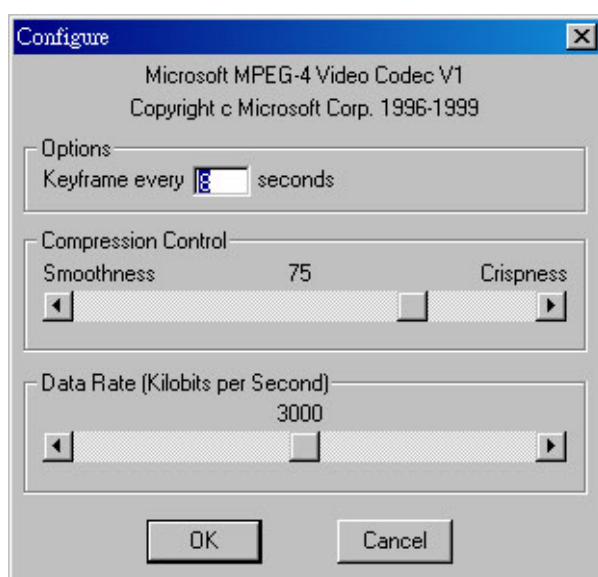
- a. Open a download file.
- b. In the “Tools” bar, select “ **Convert to AVI**” and then select the path you want to save the AVI file and key in the AVI file name.



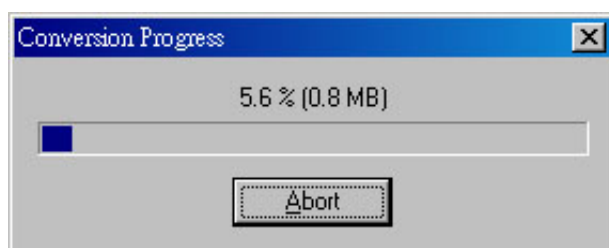
- c. Select the transforming format. Here we choose Microsoft MPEG 4 Video Codec.



- d. Select transforming parameters and it will influence the file's quality and size.



- e. Enter “OK” and then it will show the transforming status.



Note:

- The codec you choose are not all workable but it will prompt a warning message if it is not workable.
 - The time of transforming format will depend on the file size and the codec you choose.
-

5-6 DVR Remote Setup

Click on the Remote Setup to see the screen below.

DVR Remote Setup - Microsoft Internet Explorer

Camera Setup

User

DIDO

Alarm Notice

System

Save To DVR

Exit

Select Camera

8

Camera Name

cam 8

Camera Status

Enable

Sensitivity

100

Resolution

640 X 240

pre-Record

0

Format

NTSC

post-Record

0

Quality

100

Digital Signature

Disable

Frame Rate

0.2

OSD Position

Time

Bottom Left

Camera Name

Top Left

181 cam 8

11/22/2004 15:30:28

Motion Sensor Setup

Set Detection Area

Clear Detection Area

Set All

Clear All

Copy Camera Setting

11/22/2004 15:30:28

11/22/2004 15:30:28

Select Recording Mode:

Fully Recording

Motion Sensor Recording

No Recording

hour

00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23

Sun

Mon

Tue

Wed

Thu

Fri

Sat

The operation is very similar to the “System Settings” in Chapter 4.
Adjust the settings and click “Save To DVR” icon on the upper right to take effect.

5-7 DVR Remote Backup

If the Network Share function is enabled, you can copy the video data of the DVR to any Windows PC in the same network.



- (1) Search computer in the network by the DVR name or IP address.
- (2) Enter the username: **dvrbackup** and password you set in chapter 4-8-3.
- (3) Copy the files to hard disk or storage for backup.



6.Appendix

A. Compatible PC Hardware

- Approval Motherboard List

BrandName	Model	Chipset	# of PCI slot	on-board LAN
ASUS	P4P800-VM-TAY	Intel865G	3	Support
ASUS	P4P800S	Intel848P	5	Support
ASUS	P4P800-SE	Intel865PE	5	Support
ASUS	P4P800-X	Intel865PE	4	Support
ASUS	P5P800-SE	Intel865PE	4	Support
GIGABYTE	GA-8I845GE-RZ	Intel845GE	5	Support
GIGABYTE	GA-8I84E	Intel848P	5	Support
GIGABYTE	GA-8I848P-L	Intel848P	5	Support
GIGABYTE	GA-8I848P-G	Intel848P	5	Support
GIGABYTE	GA-8I848E	Intel848P	5	Support
GIGABYTE	GA-8IG1000 MK	Intel865G	5	Support
GIGABYTE	GA-8IG1000 Pro-G	Intel865G	3	Support
GIGABYTE	GA-8IPE1000-L	Intel865PE	5	Support
GIGABYTE	GA-8IPE1000-L GT	Intel865PE	5	Support
GIGABYTE	GA-8IPE1000 Pro	Intel865PE	5	Support
GIGABYTE	GA-8IPE1000 Pro2	Intel865PE	5	Support
GIGABYTE	GA-8IPE1000-G	Intel865PE	5	Support
GIGABYTE	GA-8IPE1000	Intel865PE	5	Support
SuperMicro	P4SPE	Intel865PE	5	Support
SuperMicro	P4SPE	Intel865PE	5	Support
SuperMicro	P4SPA+	Intel865G	5	Support
ECS	ESC 865PE	Intel865PE	5	Support

- **Minimum Hardware Requirements:**

	DVC-800/DVC-400C				DVC-400			
Channels	4	8	12	16	4	8	12	16
Chipset	Intel 845E, 848P, 865PE				Intel 848P, 865PE, 865G			
VGA Card	NVIDIA(required) - GeForce MX400, MX4000, FX5500				NVIDIA(required) - GeForce MX400, MX4000, FX5500			
RAM	256M		512M		256M		512M	
CPU	Celeron 2.0G		P4 2.4G		Celeron 2.0G	P4 2.4G		P4 2.8G

- **Network Interface Chip**

Realtek 8139C, 8100B
 Kinnereth-R
 Intel 82562EZ
 Marvell 8001
 Intel 82547EI

- **ATA Extension Card**

Promise Ultra 100 TX2
 Promise Ultra 133 TX2
 HighPoint Rocket 133

- **SCSI Card**

Adaptec 29160, 39160
 Tekram: DC-390U, DC-390U2D, DC-390U2B, DC-390U2WE, DC390
 ACARD

- **RAID0/1 support**

ACS 7500

- **RAID0/5 support**

ACS 7630

- **DVD Burner**

DVR Burner	Disk Type Support	Remarks
Pioneer	*DVD+RW *DVD-R *DVD-RW	Not support Pioneer DVD+R
Asus	*DVD+R *DVD+RW *DVD-R *DVD-RW	

B. Main Menu

Every time you start the DVR, you shall see the Main Menu for advanced system functions.



- **Start DVR:** To start the DVR normally.
- **Play Recorded Video:** Playback only. Be sure to enter admin user password first when you want to enter the Play Recorded Video icon. This option is used to playback a hard disk without rewriting it with new recording contents.
- **Disk Tools:** Be sure to enter admin user password first when you want to enter the Disk Tools icon.

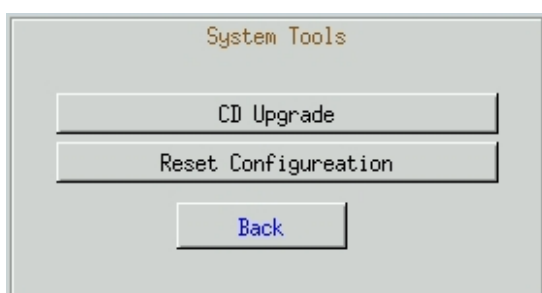


S.M.A.R.T Diagnostic: To examine the internal record of the hard disk.

Disk Scan: To check the hard disk status using Linux tools.

Disk Manager: To assign cameras to hard disks or to format hard disk.

- **System Tools:**



CD Upgrade: To upgrade the software using upgrading CD.

Reset Configuration: To reset all the settings to factory default.

C. FAQ

1. **Q:** I have set the recording mode as motion sensor recording. But why the DVR still records a lot of video that has no motion at all?

A:

- (1) The digital recording system is very sensitive. It can detect the tiniest motion that human eyes cannot perceive. You can lower the sensitivity setting in camera setup menu.
- (2) Flickering fluorescent lights (when traditional 120 Hz ballast are used) or TV (or computer) screen can be the motion source. In this case, adjust the motion detection area so that these flicking sources will not be detected. It is recommended not to align the camera directly at fluorescent lights, TV, or computer screens. The use of better-quality fluorescent lights (with electronic ballast), monitors, and the cameras can be considered.
- (3) When cameras are installed, please make sure the quality of cables, connections, and workmanship. Sometimes interference could cause the image unstable. Avoid placing the system close to a compressor (fridge), or to a motor (washing machine) that might cause magnetic interference.

2. **Q:** What will happen if there is a power outage (cut)? Do I have to do anything?

A: If a power outage occurs, the last file will not be closed properly. Therefore, up to 10 minutes of data might be lost. It is recommend connecting the system to an Uninterruptible Power Supply (UPS). This will help to avoid shortening the system life span and partial data loss caused by the instability of power supply.

When the power returns, the system will automatically re-boot, restore data and go back to the normal operation in approx. 1 minute.

3. **Q:** Why the remote monitor not working?

A:

- (1) Using the windows command PING to check if the network connection is ok.
- (2) Turn of proxy setting off.
- (3) Make sure you have Java VM installed (in JPEG mode) or Player installed (in

MPEG4 mode).

- (4) Check security setting in IE browser is not too restricted. The active X option must be enabled.

4. Q: How to check the log file of the DVR?

A: The log file can be seen from remote PC using IE browser. Suppose the DVR IP address is 192.168.123.12, type <http://192.168.123.12/log/dvrlog.php> on a remote PC to see the log.

5. Q: How to capture the snapshot of the whole screen?

A: It can be done from remote PC using IE browser. Suppose the DVR IP address is 192.168.123.12, type <http://192.168.123.12/rmapi/misc/screen-snapshot> on a remote PC to see the picture.

D. Internet Connection

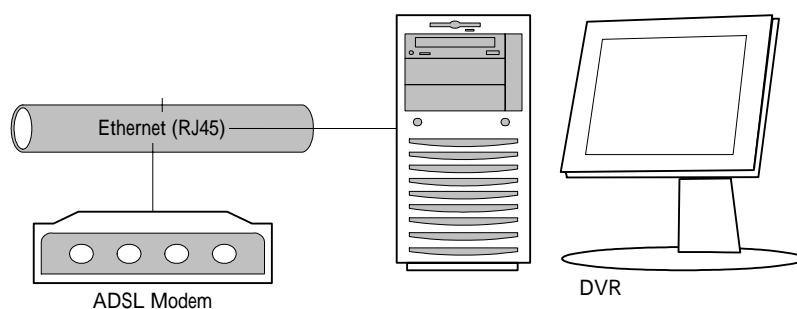
D-1: IP address is used by one DVR only

Assume the static IP address you get from ISP is 211.23.87.163.

When

- (1) The IP address is not used by any other devices, and
- (2) ISP does not require user name and password to connect,

You can connect like the following figure:



In this case, just follow the instructions in section 3-6-7 and section 4-2 to make the DVR on Internet.

User from Internet can use <http://211.23.87.163> to connect to the DVR.

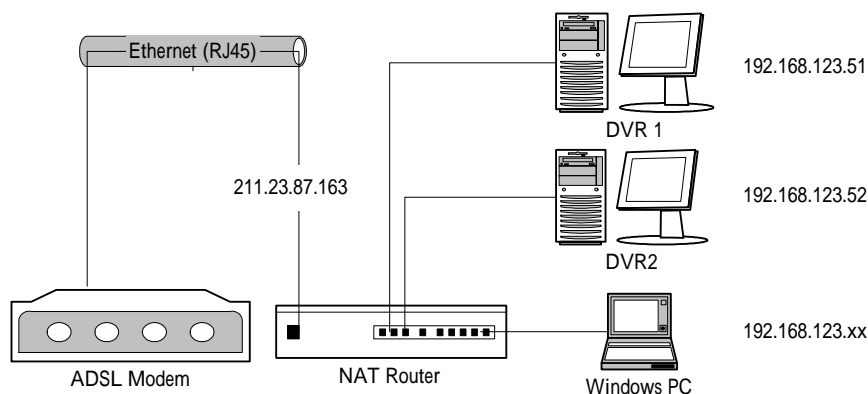
D-2: IP address is shared by more than one devices

Assume the static IP address you get from ISP is 211.23.87.163.

When

- (1) The IP address is shared by more than one devices, or
- (2) ISP requires user name and password to connect,

You can connect like the following figure:



In this case, you will need an NAT router to connect to the high-speed modem. Please refer to the user manual of your NAT router to translate DVR1 (192.168.123.51 port 80) to a port of 211.23.87.163, for example, port 8001. Similarly, translate DVR2 (192.168.123.52 port 80) to another port of 211.23.87.163, say, port 8002. You also need to set the user name and password on this router in order to successfully connect to ISP. Follow the instructions in section 3-6-7 to set the IP address of DVR1 as 192.168.123.51.

Users from Internet can now use <http://211.23.87.163:8001> to connect to DVR1 and use <http://211.23.87.163:8002> to connect to DVR2.

E. Maintenance

Avoid placing the system in a high temperature or a high humidity environment and also keep away from the place with frequent vibrations. Operate the system under stable voltage. If possible, operate the system with a UPS (Uninterruptible Power Supply)

F. Customer Service

Please contact your supplier for service when you have problems with your goods.

Should you have any questions regarding *DVC products* kits, welcome to visit our customer service department at: <http://www.PLANET.com.tw/>.