



FCS-1010

Surveillance Software

USER MANUAL

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Chapter 1 Installation

1.1 Hardware System Requirement

Before you start to install this application software, the hardware of the system requirement shall be checked at first.

1.1.1 Recommended and minimum requirement for the hardware system

The system requirement recommended for this application is as follows.

OS:	MS Windows 98SE/ME/2000/XP (2000/XP recommended)
CPU:	Intel 2.0 GHz Pentium IV or above
SDRAM:	256 MB SDRAM
Hard disk:	40 GB
Display Chip:	nVidia, GeForce series with 32 MB Display memory ATI Radeon series with 32 MB Display memory

Table 1-1 the recommended system requirement

1.1.2 Notes for the hardware system

There are some notes for you to install the application software on the hardware system described above. Please check the following in order to ensure that all functions will work well.

ATTENTION:

This application software only supports Intel Pentium IV or the series above

currently.

It is highly recommended to run this application software on Win2000 to avoid any possible functional limitation.

Please turn off all the power management and screen saver function to avoid the hang-up of the whole system.

1.2 Software Installation

This software can be installed according to the following steps:

STEP 1: Put the installation disk into your CD-ROM, and it shall run automatically. If it does not, open “My Computer” and double click on CD-ROM icon. Then click “Surveillance software”. The following screen should pop up.



Figure 1-1 Surveillance Software installer window

STEP 2: There are some information in this page, including this manual, product information and the surveillance system roadmap. Click “Install” among the upper buttons to launch install shield. After that, you will start the process of the invoked InstallShield Wizard shown in Figure 1-2.

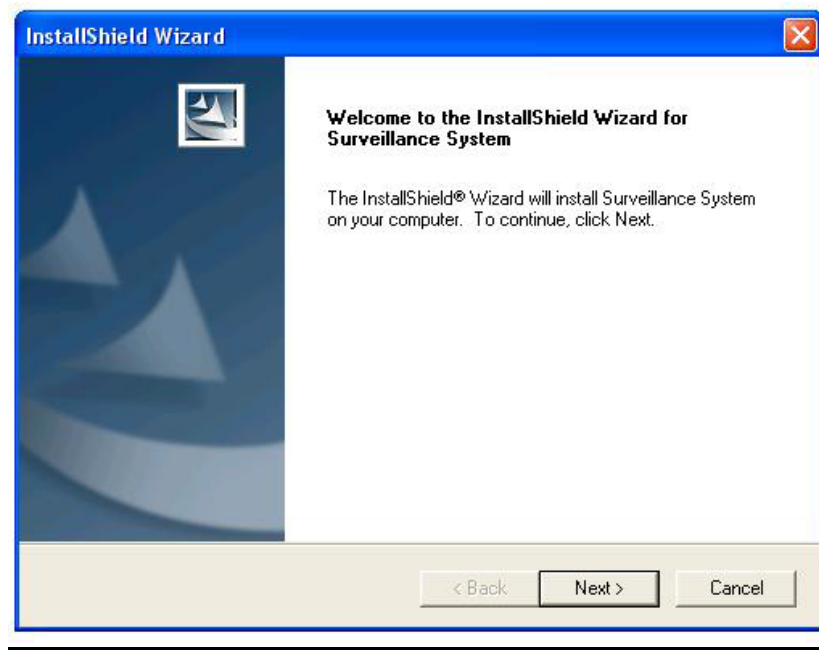


Figure 1-2 Welcome page for SURVEILLANCE SOFTWARE

STEP 3: Click “Next”, the “License Agreement” window will show up like Figure 1-3. This window shows you the license agreement for SURVEILLANCE SOFTWARE.

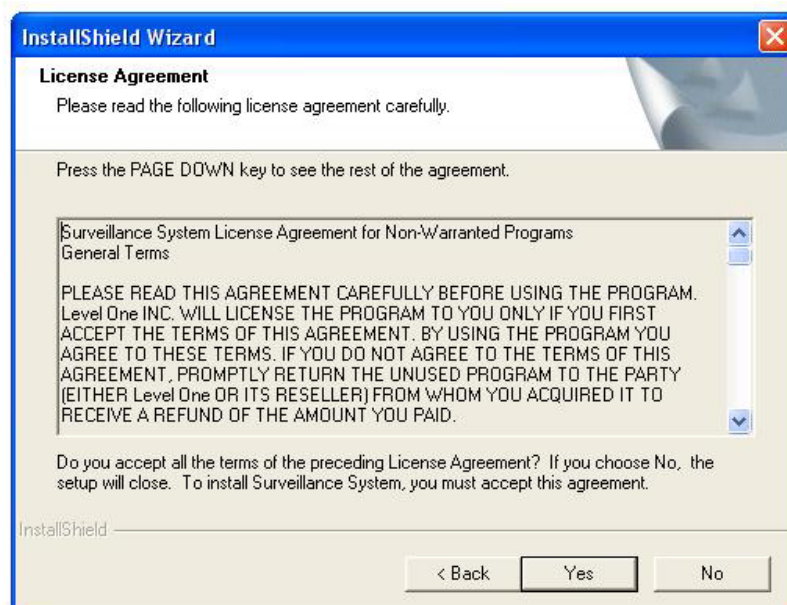


Figure 1-4 License Agreement for Surveillance Software

STEP 4: Click “Next”, the “User information” window will show up like Figure 1-5. This window will prompt you to enter the user name and company name.

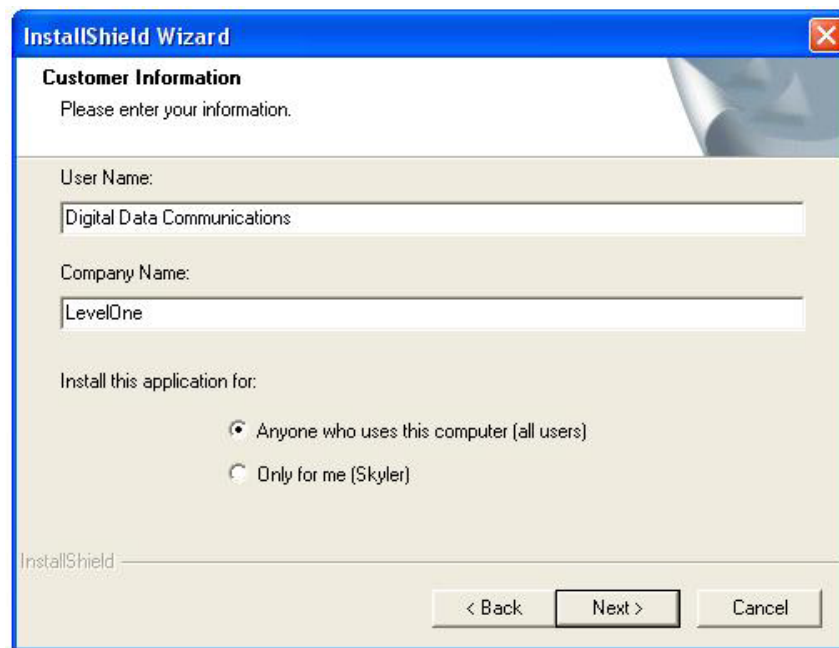
The image shows a Windows-style dialog box titled "InstallShield Wizard". The main heading is "Customer Information" with a subtext "Please enter your information." Below this, there are two text input fields. The first is labeled "User Name:" and contains the text "Digital Data Communications". The second is labeled "Company Name:" and contains the text "LevelOne". Below these fields, there is a section titled "Install this application for:" with two radio button options. The first option, "Anyone who uses this computer (all users)", is selected. The second option is "Only for me (Skyler)". At the bottom of the window, there is a status bar with the text "InstallShield" and three buttons: "< Back", "Next >", and "Cancel".

Figure 1-5 User information

STEP 5: You have to setup the administrator’s password. Input password and confirm password shown in Figure 1-6. And then click “Next” to continue.

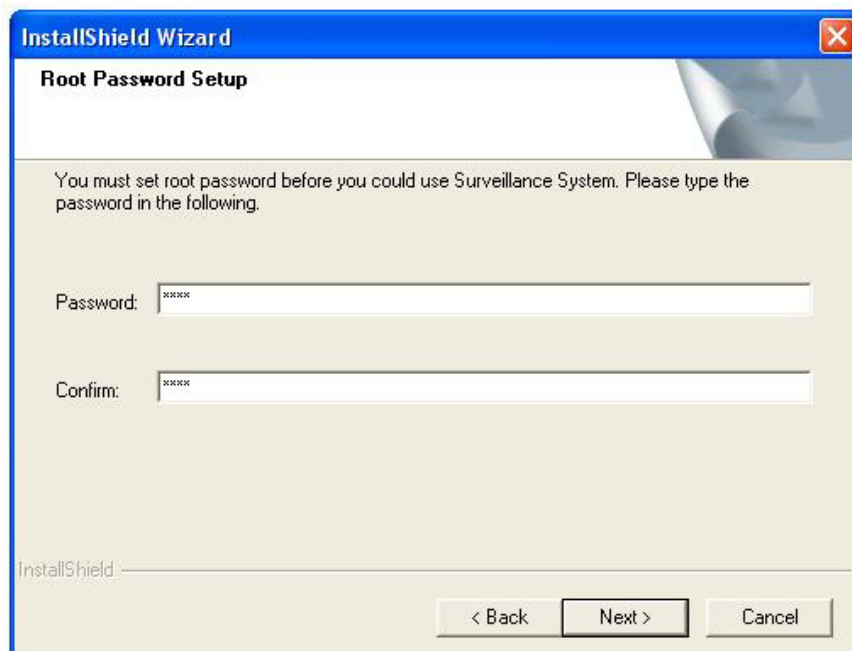
The image shows a Windows-style dialog box titled "InstallShield Wizard". The main heading is "Root Password Setup" with a subtext "You must set root password before you could use Surveillance System. Please type the password in the following." Below this, there are two text input fields. The first is labeled "Password:" and contains several "x" characters. The second is labeled "Confirm:" and also contains several "x" characters. At the bottom of the window, there is a status bar with the text "InstallShield" and three buttons: "< Back", "Next >", and "Cancel".

Figure 1-6 Confirm password

STEP 6: Select the installation directory for this application software and click “Next”, which is shown in Figure 1-7. Also you can change the installation directory instead of the default one by click “Browse...”

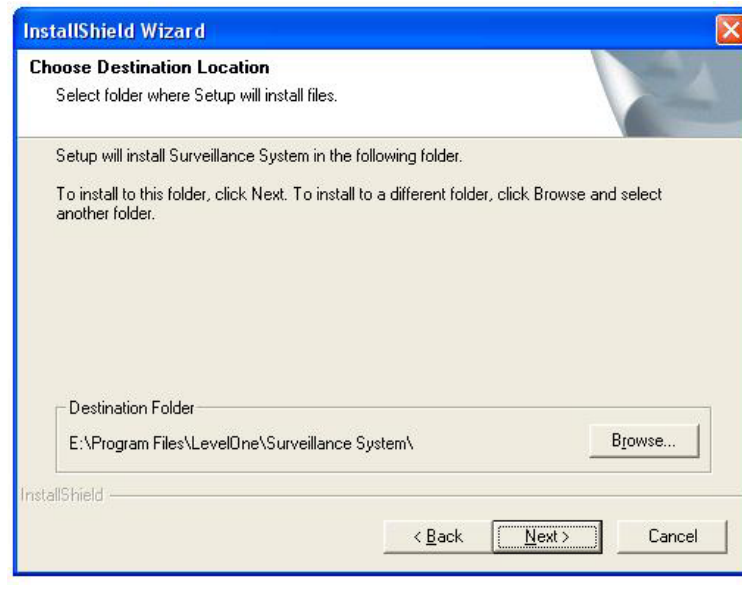


Figure 1-7 Destination location for installation

STEP 7: Select a program folder to install the application software and then click “Next”, which is shown in Figure 1-8.



Figure 1-8 Select program folder

STEP 8: After checking all the setup information shown in Figure 1-9, click “Next” to start the installation of the application software as your request.



Figure 1-9 Check setup information

STEP 9: Click “Finish”, shown in Figure 1-10, to finish installation, and now the program is installed in your computer.



Figure 1-10 Finish the installation

1.3 First Startup

After you have finished the installation, one of the IE settings need to be changed before you start to run the monitor program. Please enable the mechanism for submitting nonencrypted form data in the path “Start->Settings->control Panel->Internet Options->Security->Custom Level...\Setting:”. Also, you can find the path from IE browser which is depicted as follows. You can follow the instructions to complete this setting, which is shown in Figure 1-11.

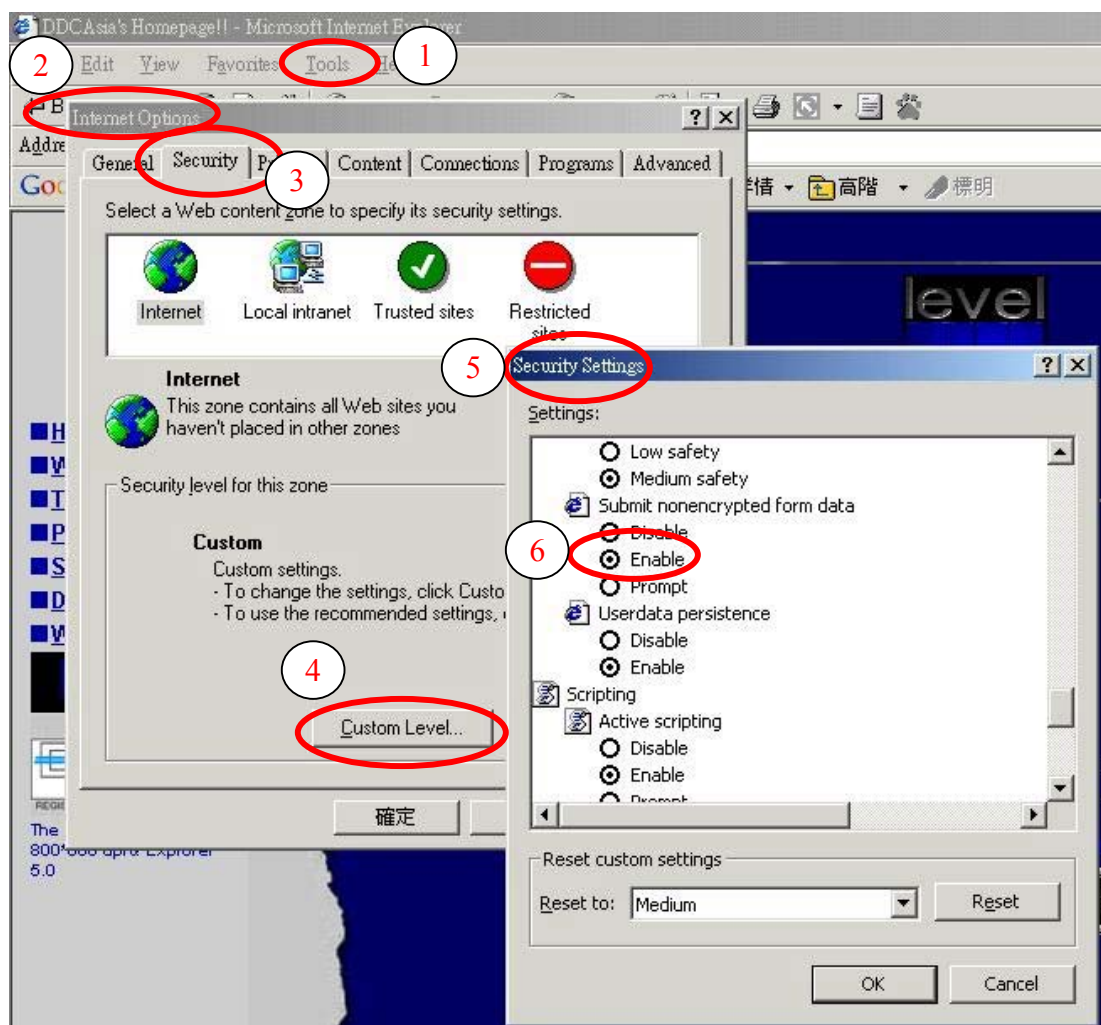


Figure 1-11 Enable submitting non-encrypted form data

After this setting is done, you can start to invoke the monitor program.

Chapter 2 Launcher

Launcher is a controller program that allows users to invoke Monitor or Playback quickly. It also realizes the possibility to start recording before user login.

2.1 Security for Launcher

When starts Launcher there is no need to pass username/password check. This enables the auto-run requirement for Launcher. But when users want to click on the icon of Launcher on system tray, Launcher will popup a username/password dialog for the first time menu popup or when Launcher is locked. If users fail to pass the authentication check, no menu will show up.

After passing identification and authentication, users are freely to use all the functions. If users want to leave the computer, it is possible to lock the Launcher for security reason. When Launcher is locked, it is back to the situation as startup, user needs to pass the identification and authentication again to see the popup menu. All the sticky notes on desktop will also not show the menu when Launcher is locked.

Below is the login window:

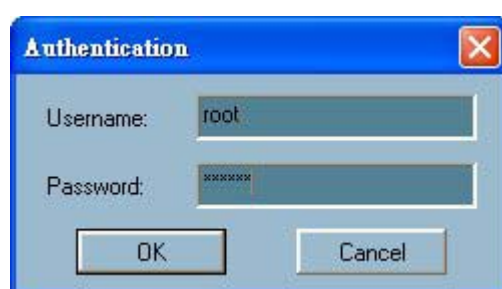


Figure 2-1 Login dialog

The default Username is "root". Password is the one you entered while installing Surveillance Software.

When Launcher is locked, the unlock window is like this:



Figure 2-2 Unlock dialog

The input area of the dialog will be grayed (disabled) for 60 seconds after 3 sequential failures.

2.2 User Interface

Below is the user interface for Launcher:

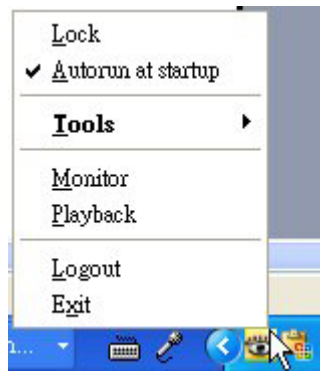


Figure 2-3 Popup menu

The main user interface for Launcher is an icon on system tray, and the popup menu shown when click mouse right button. The menu items are listed below:

1. Lock Launcher – When this item is selected, Launcher will enter lock mode. In lock mode, whenever users want to invoke the menu, a dialog asking for ID and password would appear. The interface for this dialog is covered in previous section.
2. Tools – Contains many utilities, current only change password is implemented.

The change password dialog is like this:



Figure 2-4 Change password dialog

3. Autorun at Startup – To make Launcher auto startup right after Windows boot up or not.
4. Monitor – Start up Monitor. If Monitor has already been running, move the focus to it. Monitor is put in the same path as Launcher is. That's the way Launcher find where Monitor.
5. Playback – Start up Playback. If Playback has already been running, move the focus to it. Playback is put in the same path as Launcher is. That's the way Launcher find where Playback.
6. Exit – End Launcher. If users choose this option, Launcher needs to show a message box to confirm if users really want to exit, and warn users that exit Launcher will also close Monitor and Playback.

Chapter 3 Monitor

3.1 Features of Monitor Tool

In this section, we will depict all features of the monitor tool in this software.

3.1.1 Traditional Surveillance Features

The traditional surveillance features include the features as follows.

- ✓ Real-time monitor
- ✓ PTZ control
- ✓ Recording

3.1.2 Special Features

In our digital surveillance system, we support not only the features as above but also the following features, which make the system to be more powerful and convenient.

- ✓ Simultaneous real-time monitoring and recording audio and video
- ✓ High quality video up to full screen display
- ✓ High compression ratio
- ✓ Maximum to 16 cameras with different monitor layouts
- ✓ Smart playback
- ✓ Triggered event browsing with 9 preview video windows
- ✓ Fast database searching
- ✓ Auto alarm in different ways
- ✓ Account-password protection
- ✓ Different recording modes: Event-driven, Scheduled and manual recording for each camera
- ✓ Intelligent database index modes: indexing by sharp time tag, a time interval and motion detected events.
- ✓ Just-in-time snapshot
- ✓ AVI export
- ✓ Motion detection with 3 alert windows for each camera

3.2 Application Layout and Functionalities

This section demonstrates a global view of the monitor tool, shown in Figure 3-1, we'll introduce the components of the monitor tool in details in the following sections.

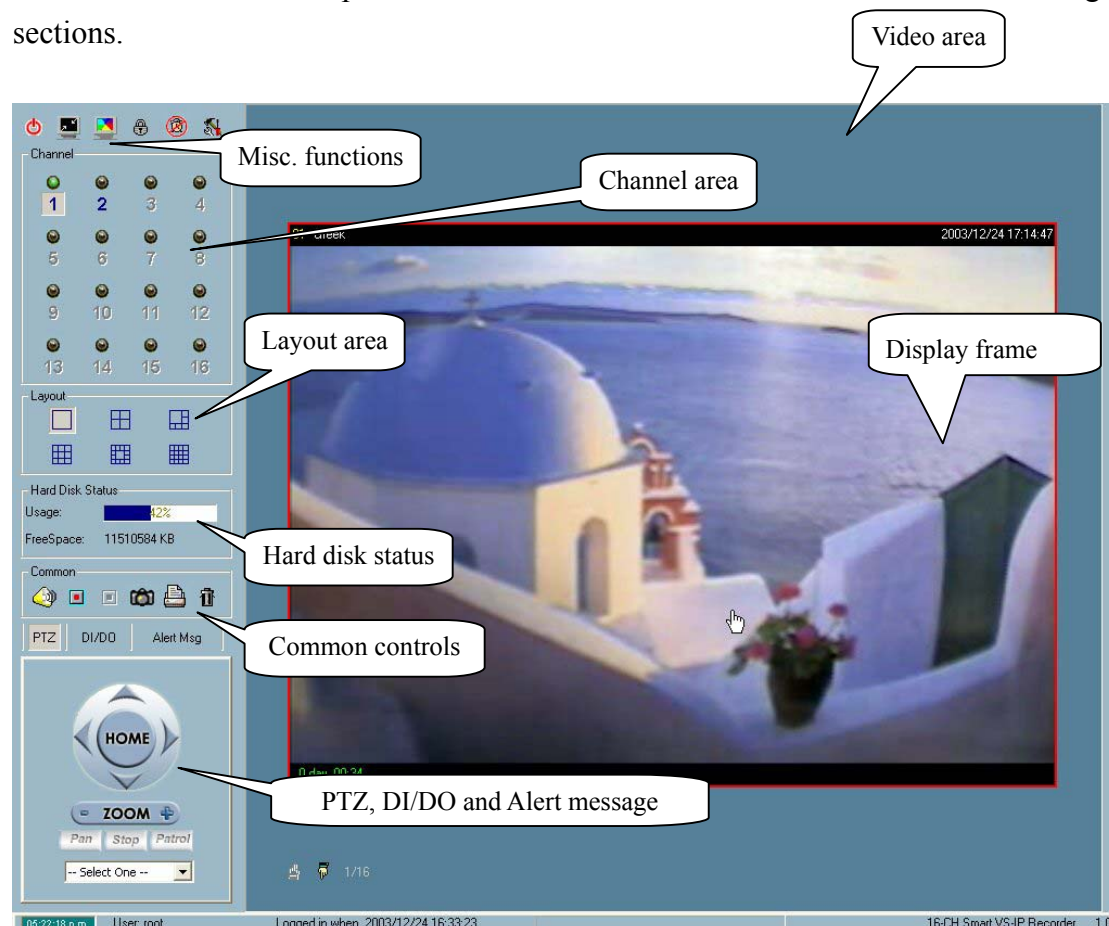


Figure 3-1 Overview of the monitor tool

There are several parts in the monitor tool:

✓ Misc. functions:

These include application exit, minimization, full screen display, lock, stop alert, and configuration menu for camera configurations, global settings, scheduler settings, video/audio database backup and the user information of this application software. The tips about these operations are provided on-line when you move the mouse cursor over them.

-
- ✓ Channel area
This area displays the status of each video channel. The information indicates the status of connection, recording, selection, and alert-event triggered.
 - ✓ Video area
In this area, you can see the video of the selected channel in the display frame. The number of the display frames in the video area depends on the layout chosen by the user. Also you can do some convenient controls for the video display on it.
 - ✓ Layout area
You can change different monitoring layouts in this area. There are six kinds of layouts, 1, 4, 6, 9, 13 or 16 video display frames in the video area, for the user's choice.
 - ✓ Hard disk status
In this area, you can get the status of the hard disk which the video database resides in. This reminds you to arrange the available storage size of the recorded video database.
 - ✓ Common control area
This area includes volume control, manual recording, video printing, snapshot and trash can to remove video from display frames.
 - ✓ PTZ control
In the area, you can do the PTZ control, auto pan, auto patrol and preset location control of the selected video channel if the PTZ camera is connected to the remote Visual Server / Network Camera series product.
 - ✓ DI/DO control
This tool receives the digital input signal and sends digital output signal to the remote Video Server/ Network Camera series product associated with the dedicated video channel.
 - ✓ Alert Message
This tool will display the latest alert messages received by the remote Video

Server / Network Camera series product associated with the selected video channel.

3.3 Logging In

You need to login our system every time when you start the monitor program. The authentication window is shown in Figure 3-2. If you did not get an account, the monitor tool won't be executed. There are two privileges in the user-protection system of this application software: the root (administrator) and the general user.



Figure 3-2 Authentication window

3.3.1 The Root Privilege

In the monitor tool system, the root privilege has the right to access Video Server / Network Camera series product through this application software and change the local settings as well. But the root privilege is not the same as the root privilege of Video Server / Network Camera series product. Only if you have got the root privilege of the remote Video Server / Network Camera series product, you can change the settings of each selected Video Server / Network Camera in the remote site.

If you get the root privilege, you have the right to do the following items:

- ✓ Running the configuration tool
- ✓ Changing the recording schedule
- ✓ Change the local settings

Again, if you need to change the settings of remote Video Server / Network Camera series products, you must have the password of the root user for each of them.

3.3.2 The General User Privilege

Not implemented yet. In current version, only root can login this application software.

3.4 Camera Configurations

When you log in for the first time, you shall configure this application software to connect the remote Video Server / Network Camera series product in “Configuration Menu \ Camera Configuration”, shown in Figure 3-3. You will need the root (administrator) privilege in order to run the configuration.

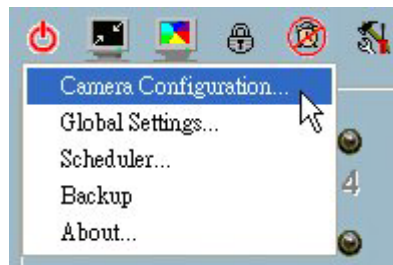


Figure 3-3 Camera configuration

ATTENTION: Once you click “Configuration Menu\Camera Configuration” for setting each camera, all recording process will be stopped with a warning window popped up in advance to keep you informed.

3.4.1 The Layout of the Configuration

In this section, we will talk about the local settings for the connection and the functional configuration of each camera. If you are interested in the remote settings for each camera, you can refer to Video Server / Network Camera series product user’s manual bundled with the shipment of the hardware.

NOTE: As for the location of the selected camera, you shall check the location string for not including prohibited characters such as “\" / : * ? \" < > |”. Otherwise, the location string will cause this application program to malfunction. You can change the location string in “Video->Text on Video” of the remote setting webpage.

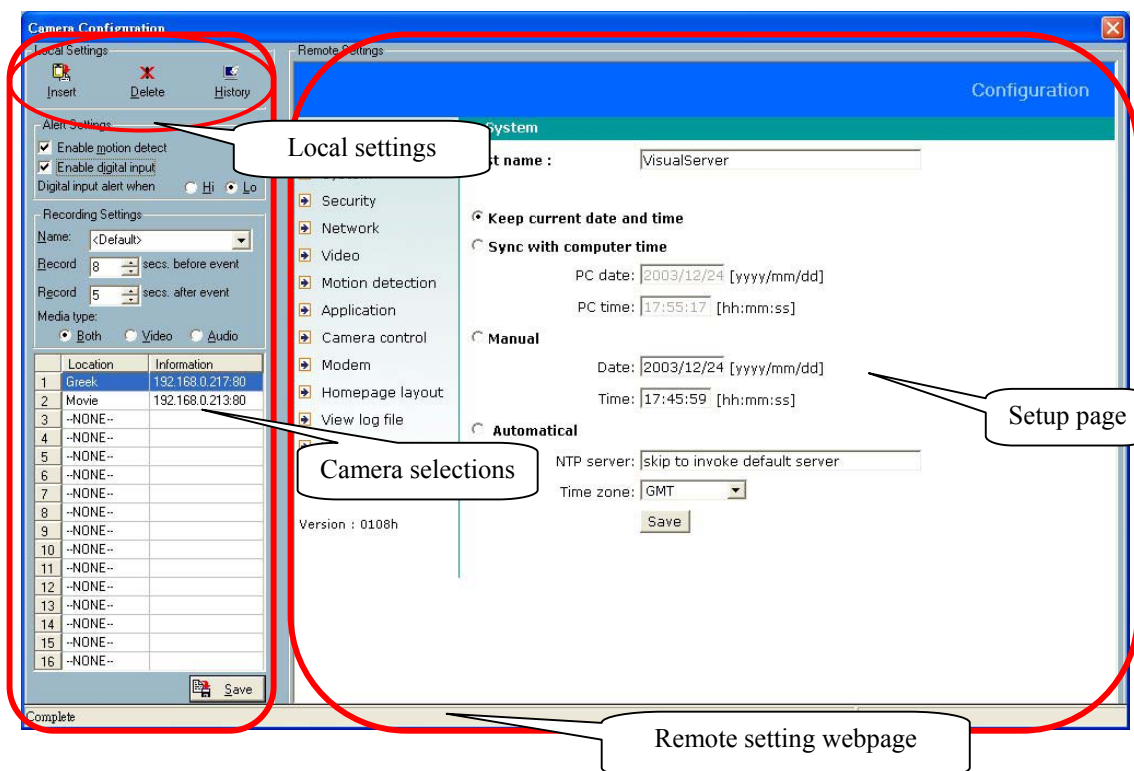


Figure 3-4 Layout of camera configurations

3.4.2 Local Settings

In the local settings shown in Figure 3-5, we provide three main functionalities:

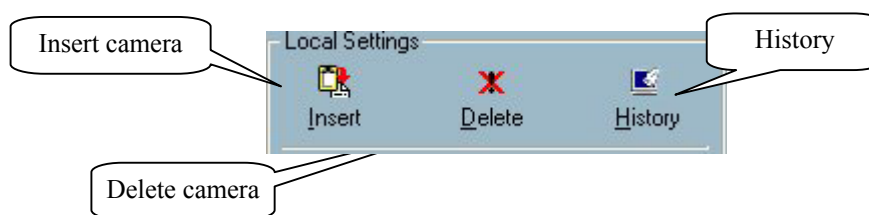


Figure 3-5 Local Settings

Insert – Let users insert a remote Video Server / Network Camera series product to the camera list. Click the “Insert” button, an “Insert New Channel” dialog will popup, as shown in Figure 3-6. Specify the IP address, port and root password of the remote Video Server / Network Camera series product, click “Ok” button to close

the dialog. Then the system will try to connect to the selected camera. If the connection succeeds, the camera will be inserted to the list, which is shown in Figure 3-7.



Figure 3-6 Insert New Device dialog

Delete – the deletion is much easier operation than “insertion”. It removes the selected Video Server / Network Camera series product from the camera list.

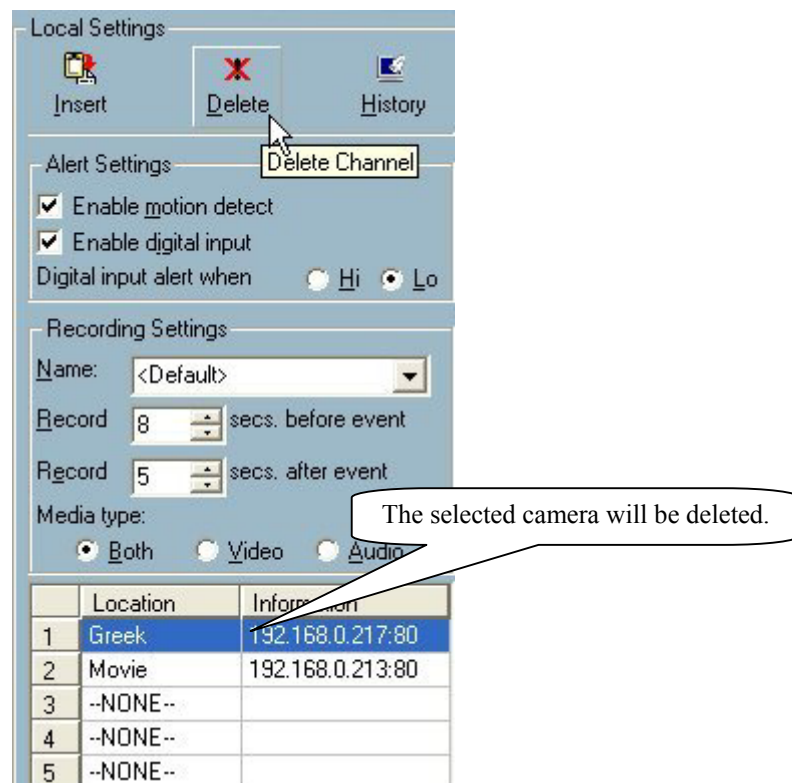


Figure 3-7 Add a camera to the list

History – Clicking “History” button will popup a historical camera list that lists the latest 16 cameras you inserted into the camera list. 16 is the default number, you can change the number of the latest cameras you want to keep in registry when installation. When clicking on one of the cameras in the history list, the camera will be inserted into the camera list. The historical camera list is shown in Figure 3-8.

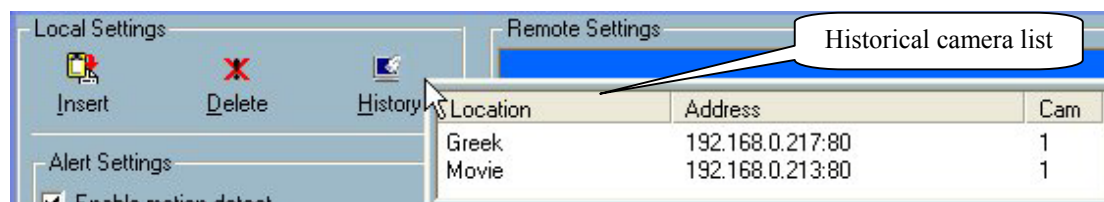


Figure 3-8 Popup historical camera list

3.4.3 Alert Settings and Recording Settings

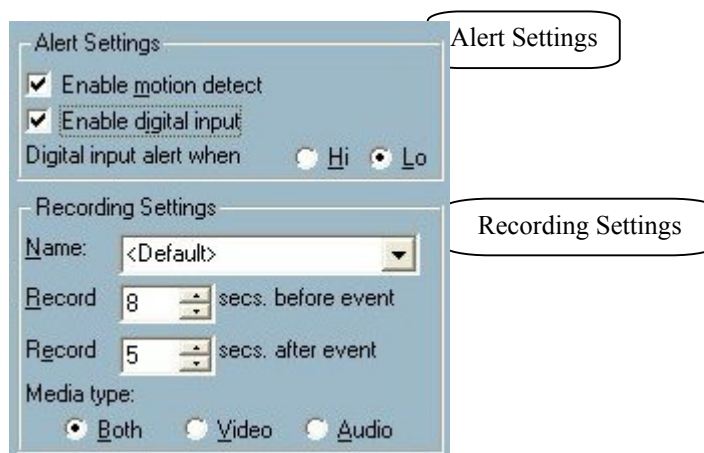


Figure 3-9 Alert settings and recording settings

Alert Settings:

Some specific actions can be performed by setting options in this window.

- ✓ Enable motion detect —

This application software will trigger the alert sound specified in “3.5 Global Settings \ Alert Sound” with this option checked for this video channel.

✓ **Enable digital input —**

This function is similar with “Enable Motion Detect” mentioned above. Once the digital input of the remote Video Server / Network Camera series product has been triggered, the alert sound can be activated by checking this option.

✓ **Digital input alert —**

This application software provides options for you to define the triggering criterion for the digital input of the remote Video Server / Network Camera series product. The alert of the digital input can be defined as high-level triggered or low-level triggered.

Recording Settings:

✓ **Name —**

If you want to specify your own location name, specify it into this field. Otherwise, just leave this field as the default value “<Default>”, you will get a default location name which concatenates the string in server’s “Text on video” field, an underline and the channel index.

✓ **Record # secs. before event —**

Once the automatic video recording has been activated, you can apply this setting to regulate the time for recording the triggered event. This application software recording will be started from the limited time before the alert event has been invoked.

✓ **Record # secs. after event —**

This application software recording will last for the limited time just after the alert event has been invoked.

✓ **Media Type —**

You can specify which media type you want to record, Video, Audio or both.

3.4.4 Changing the Camera Order in the List

You can apply “drag and drop” in the grid area of the camera list to change the

sequence of the connected Video Server / Network Camera series products, which is shown in Figure 3-10. It gives great help when you want to rearrange the cameras order for your convenience.

Step 1:

	Location	Information
1	Greek	192.168.0.217:80
2	Moving channel 1 ...	192.168.0.213:80
3	--NONE--	
4	--NONE--	
5	--NONE--	
6	--NONE--	
7	--NONE--	
8	--NONE--	
9	--NONE--	
10	--NONE--	
11	--NONE--	
12	--NONE--	
13	--NONE--	
14	--NONE--	
15	--NONE--	
16	--NONE--	

Press left mouse button at the gray index field.

Move mouse to where you want to move and then release the mouse button. Then Video 1 will be moved to the 12th row.

Step 2:

	Location	Information
1	Greek	192.168.0.217:80
2	Movie	192.168.0.213:80
3	--NONE--	
4	--NONE--	
5	--NONE--	
6	--NONE--	
7	--NONE--	
8	--NONE--	
9	--NONE--	
10	--NONE--	
11	Moving channel 1 to 10 ...	
12	--NONE--	
13	--NONE--	
14	--NONE--	
15	--NONE--	
16	--NONE--	

Figure 3-10 Change the sequence of the connected camera

3.4.5 Saving the Changes

Once you click the “Save” button in the left-bottom corner of this window, the changes for all camera configurations will be saved and will validate immediately in this IP surveillance system.

NOTE: If you try to change the remote settings of Video Server / Network Camera series product in the right web page of this window, you need to apply the “SAVE” button in each corresponding page in order to save the settings to the remote servers. There are different “SAVE” buttons for changing the settings of the local IP surveillance system and the remote Video Server / Network Camera series product respectively.

3.5 Global Settings

After completing the connection for each remote Video Server / Network Camera series product, we need to configure some global settings for all the connected servers. These include the video database directory, the usage of the Hard disk and options for video displaying.

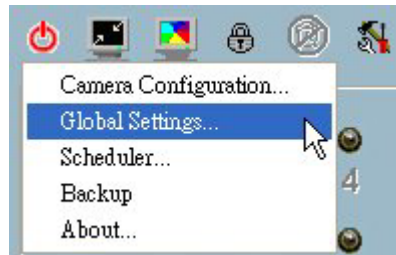


Figure 3-11 Global settings

You can activate the global setting window from “Configuration Menu \ Global Settings...” shown in Figure 3-11.

ATTENTION: Also, the recording process will be stopped with a warning window popped up in advance to keep you informed when activating the global setting window.

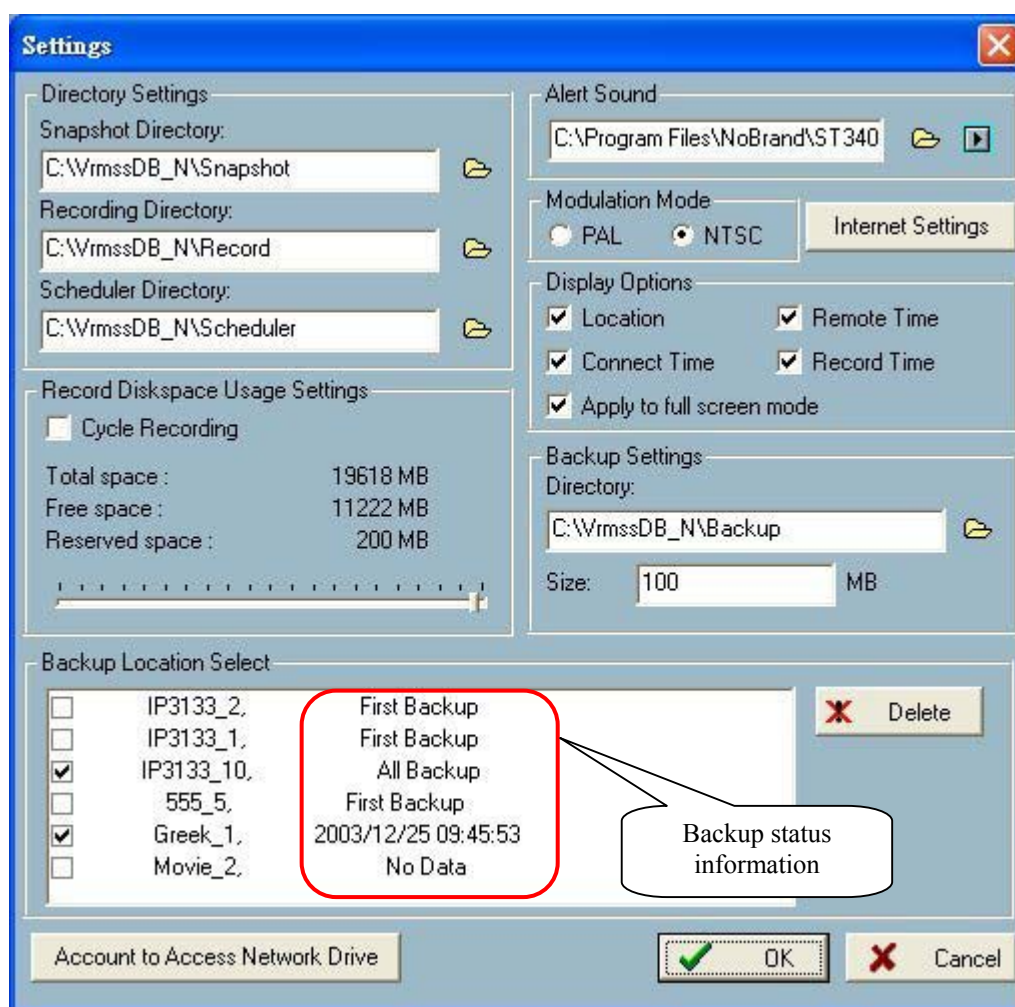


Figure 3-12 Global Settings window

Directory Settings:

- ✓ Snapshot directory —
the directory for storing the snapshot in *.bmp format from video channels of the monitor tool and the playback tool, which is shown in Figure 3-12.
- ✓ Recording directory —
the directory for storing the recorded video data from remote video channels
- ✓ Scheduler directory —
the directory for storing the default and user-customized plots for the recording schedule of each channel.

Record Diskspace Usage Settings:

✓ Cycle Recording —

When you turn this setting on, the video database system of this application software will overwrite the oldest data if the usage of the database reaches your limitation. That means it will record video data circularly. Otherwise, with this setting unchecked, the software will pop up a warning message when it is approaching your limitation. After that, it will stop recording when reaching the limitation of the hard disk usage.

✓ Reserved space —

Indicate the size of the hard disk which shall be reserved in the recording disk. If the recording data exceeds this limitation, the new coming video data will replace the oldest data when “Cycle Recording” has been checked.

Alert Sound:

You can load the custom *.wav file for the sound of alert triggering. Also, you can pre-play the sound file that has been chosen.

Modulation Mode:

You must select the input signal format (NTSC or PAL) for displaying the original resolution of video stream from the remote Video Server / Network Camera series product.

NOTE: You shall select the input signal format according to the camera type or CCD module type that is connected to the remote Video Server / Network Camera series product. But the remote Video Server / Network Camera series product with CMOS sensor, the input signal format needs to be set PAL no matter the power line connected is 50 or 60 Hz.

Internet Settings:

You can set the proxy server and the IP filter by clicking the “Internet Settings” button. This setting is quite helpful for connecting Visual Server / Network Camera series product in the Intranet while the proxy server is in use at the same time.

You can enable or disable the usage of the proxy server by the check box shown in

Figure 3-13. If you enable proxy server and IP restriction as well, the listed IP addresses will not apply to the proxy server. Often, the listed IP address will be the one assigned to Visual Server / Network Camera series product in the Intranet.

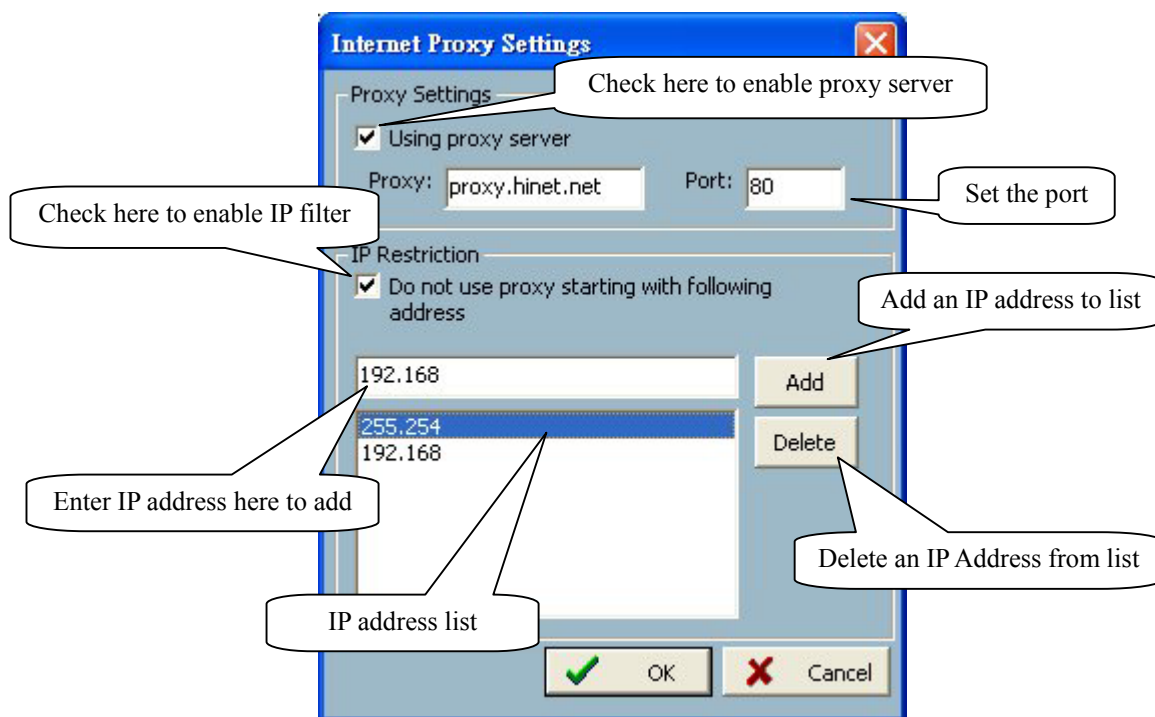


Figure 3-13 Internet proxy settings

Display Options:

In video displaying frame of each channel, there are two status bars with it. In the upper side, the status contains "Camera location" and "the time of the remote site". In the lower side, the status includes "Connection time" and "Recording time". All of them shown in Figure 3-14 can be enabled or disabled here individually in order for the status indication.

Besides, the "Apply to full screen mode" can be turned on. Once it has been checked, the status bar in each channel for showing date, location, connection and recording time will be shown in both displaying frame mode and full screen mode.

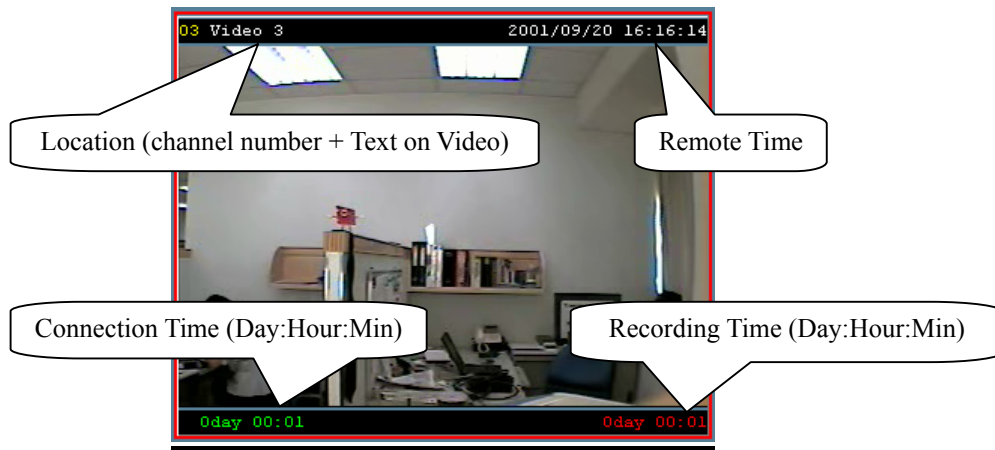


Figure 3-14 Status on the displaying frame

Backup Settings:

In this setting, you can select directory, maybe remote hard disk, for the video database backup, and also the backup size for your backup media.

Backup Location Select:

The window provides the settings for backup and the deletion of the video database. You can apply the check box to select which channels are needed to be backup. Also you can push the “Delete” button in the right side to delete directly the video database corresponding to the channel with its box checked. Several kinds of backup status information will be shown for each channel. Normally the status will show the time of the last backup, which indicates the last remote time you have backup to the dedicated media. “No Data” means that there is no video data recorded for this channel. “All Backup” means all the data in this location have been backup, and “First Backup” means there are video data recorded for this location and not any backup operation taken before. Please refer to Section 3.6.4 for the activation of the backup operation after all these backup settings have been done.

Account to Access Network Drive:

This button will pop up a dialog as Fig 3-15 shows. If you want to set the record path to network drives, you should enable the option “Account to Access Network Drive”, and give the local user name, password and network domain.



Figure 3-15 Account to Access Network Drive settings

3.6 Using Monitor Tool

Let's depict the method of how to manipulate the monitor tool in details in this section.

3.6.1 Connection of the Video Server / Network Camera Series

Channel:

Once you have the privilege to connect to the Video Server / Network Camera series product, you can drag and drop one camera to the video area. As for the channel area shown in Figure 3-16, if you do not set up the camera for the video channel, the color of the channel number will be gray. Once you have set up the camera in the video channel, the color of the channel number will turn into blue. That means this channel has been associated with the remote Video Server / Network Camera series product. Then, you can drag and drop the camera to the video area to monitor the remote video, and apply the other features if you have the corresponding privileges.

There is a unique light signal associated with each channel number. It indicates the status of the dedicated video channel, which is depicted as follows.

✓ Off

The video channel is not connected with any remote Video Server / Network Camera series product yet.

✓ Green

The green light means the Video Server / Network Camera series product associated with this channel number is connected, and the video is monitored in the video area.

✓ Orange

The red light indicates the video from this channel is recording into the video database. In this mode, you don't have to drag and drop the channel to the video area. That means this application software support real-time recording with and without real-time monitoring for the dedicated video channel.

✓ Red

The red light indicates the connection to server has been disconnected for some unexpected reasons, such as server power off, and Monitor is trying to reconnect to the server.

✓ Blink

With the motion detection mechanism set in the remote Video Server / Network Camera series product, the light of the corresponding channel will blink once the motion event is triggered.

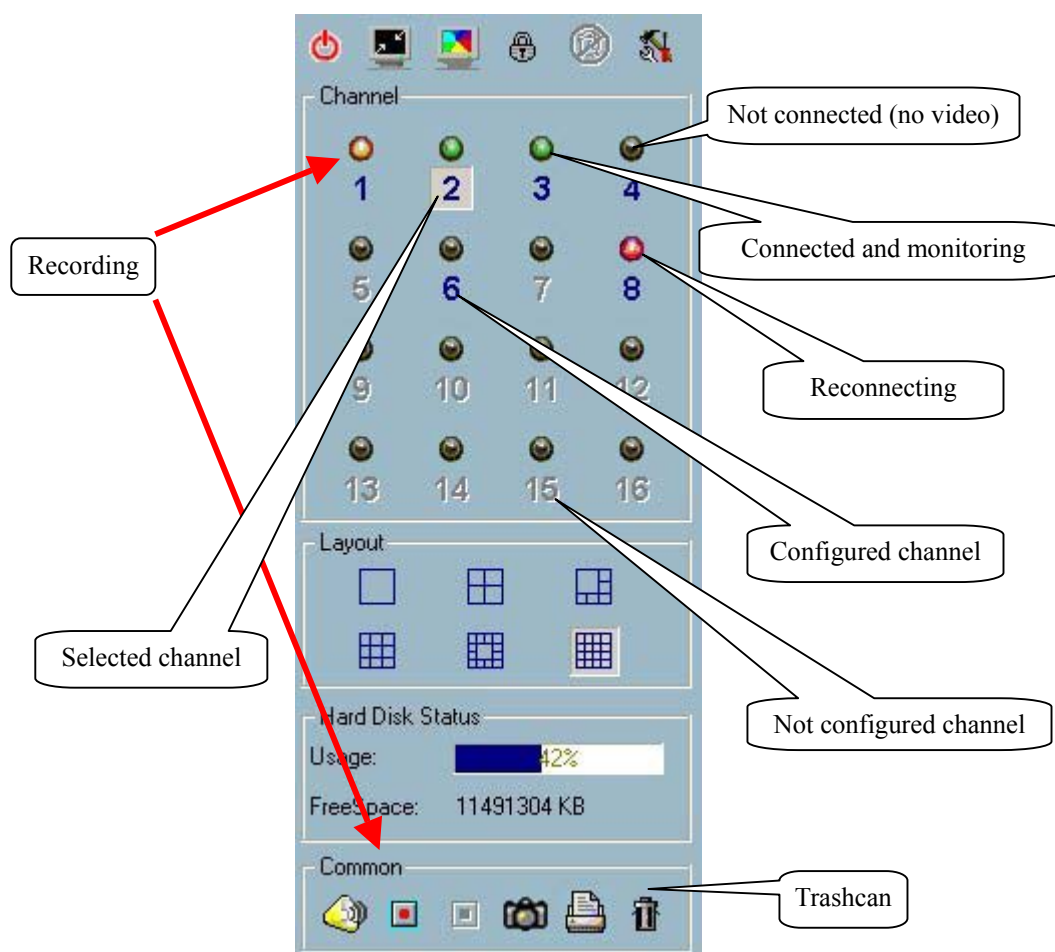


Figure 3-16 Video channel area

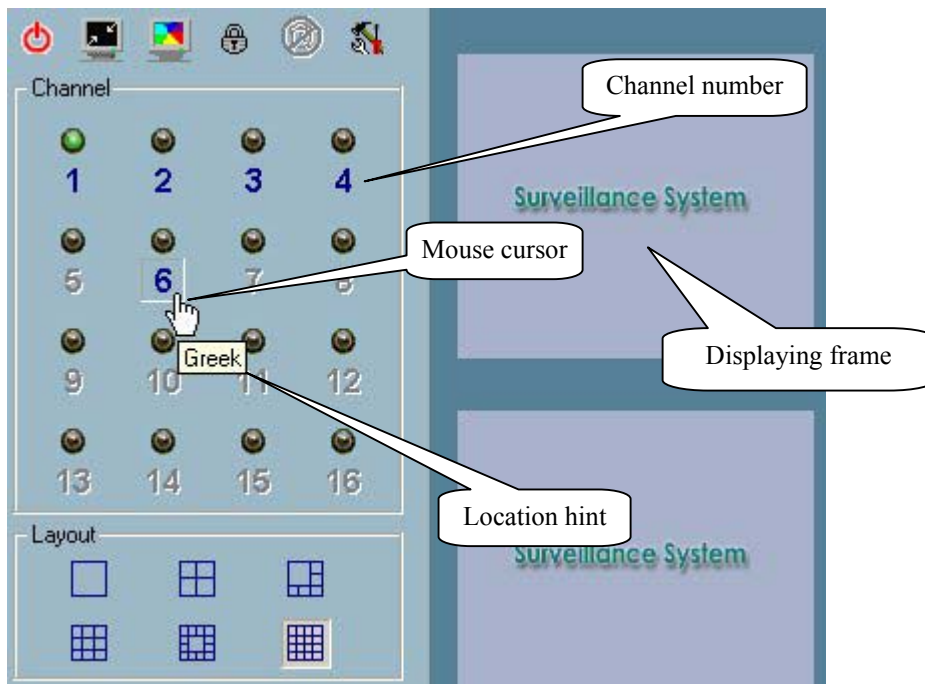
If you don't want to monitor one video, you can drag and drop the video (in the video area) to the trashcan in the common control area of the monitor tool. Here we'll show the procedures of the "drag and drop" step by step in the following.

3.6.1.1 Show the video of the specific channel

In this section, the method of how to show the video of the specific channel in the dedicated displaying frame in the video area is depicted.

Step 1: move the mouse cursor to the channel number shown in Figure 3-17.

Figure 3-17 Mouse cursor on the video channel number



Step 2: Press and hold the left mouse button, and then move the cursor to the displaying frame in the video area, which is shown in Figure 3-18. You can note that the cursor will change according to the area in order to indicate whether the place is droppable or not.

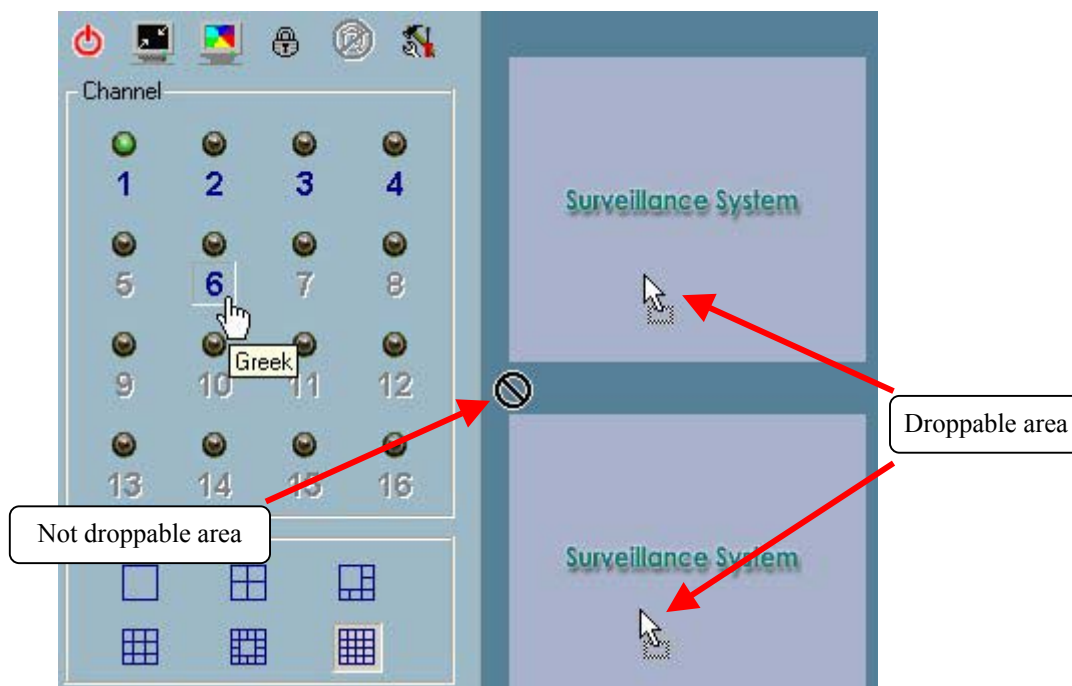


Figure 3-18 Drag the video channel to the displaying frame

Step 3: Just move the mouse cursor to the droppable area (in this case, it should be the video area), and then release the mouse button. In each layout, one video channel is corresponding to one and only one displaying frame in the video area shown in Figure 3-19. Therefore, the drag and drop from the channel number to the displaying frame which has been occupied can be treated as “exchange of video channels in the displaying frames”. That means the video channel associated with the displaying frame will be replaced by the new one. Besides, you can apply this criterion to exchange the video channels in different displaying frames. Assume the video of channel 1 is shown at displaying frame A, and the video of channel 2 is shown at displaying frame B. The video channels associated with the dedicated displaying frames will be exchanged when you drag and drop the video from displaying frame A to displaying frame B and reversal as well. Also, you can move the video channel from its original displaying frame to the empty displaying frame which is not occupied. All these functions can be done by single mouse operation “drag and drop”. That would be quite convenient for you to manipulate the suitable video displaying layout for monitoring.

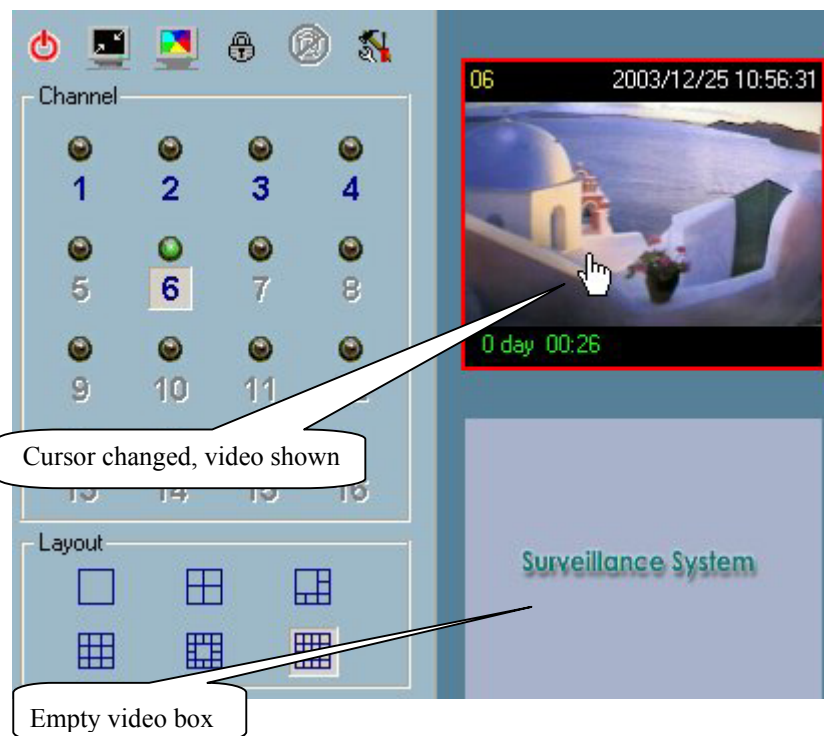


Figure 3-19 Showing video on the displaying frame

3.6.1.2 Close the video channel in displaying frame

In this section, the method of how to close the video channel in displaying frame of the video area is demonstrated.

Step 1: Move the mouse cursor to the displaying frame that is associated with the video channel you are intended to close.

Step 2: You will note that the cursor will change to the hand-shape when it has been moved on the displaying frame. After that, press the left button and hold it.

Step 3: Move the cursor with still holding it to the trashcan in the left upper corner of the monitor tool.

Step 4: Again, after the cursor shape has been changed to arrow-shape over the trashcan, release the left mouse button. The video in the corresponding displaying frame will disappear. All operations above are shown in Figure 3-20. Besides, there are tips for all the operations of the monitor tool when you move the mouse cursor over it.

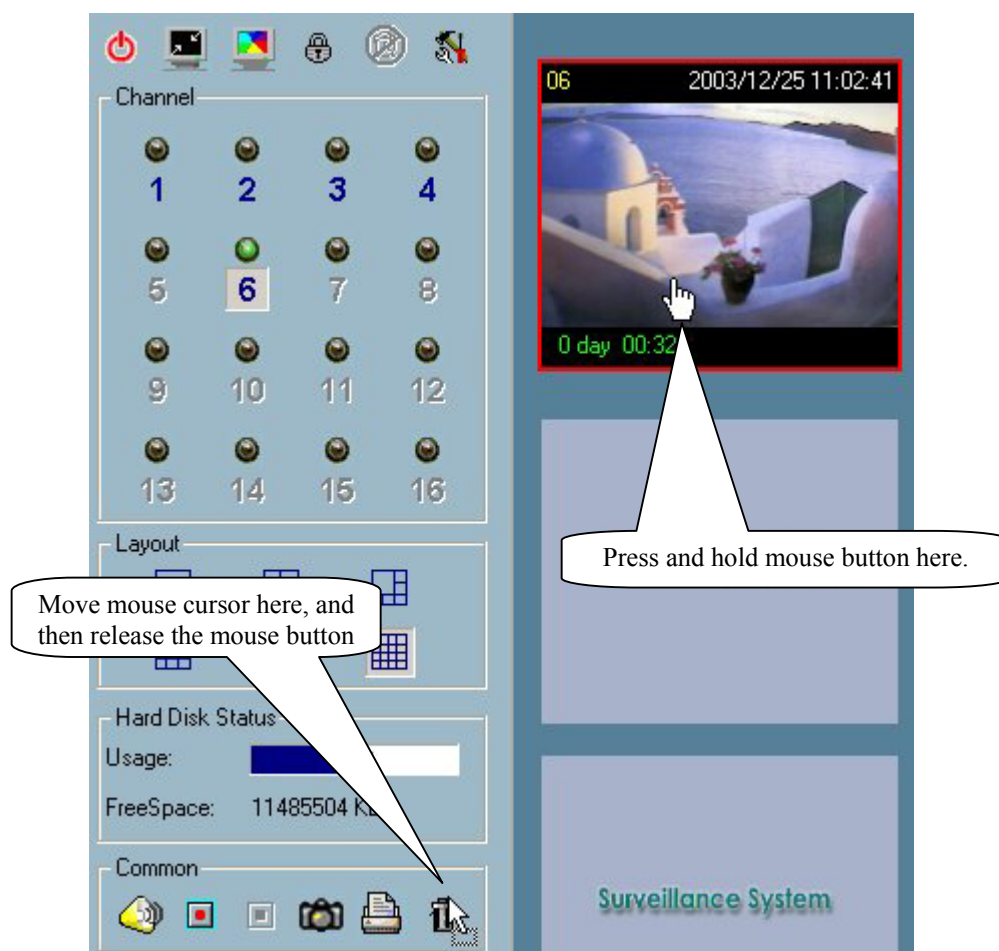


Figure 3-20 Close the video channel

3.6.2 The Layout

There are six kinds of layouts shown in Figure 3-21 for the displaying frames in the

monitor tool. You can select one of them by clicking left mouse button on the layout icon you want. In each layout, you can drag and drop the “channel number” to any displaying frame in the video area. And then the video from the remote site will be shown. Following the procedures described in Section 3.6.1.1, you can add the video of the video channel to displaying frames of the selected layout in the video area one by one. After that, you can also exchange the video between different displaying frames by drag and drop.

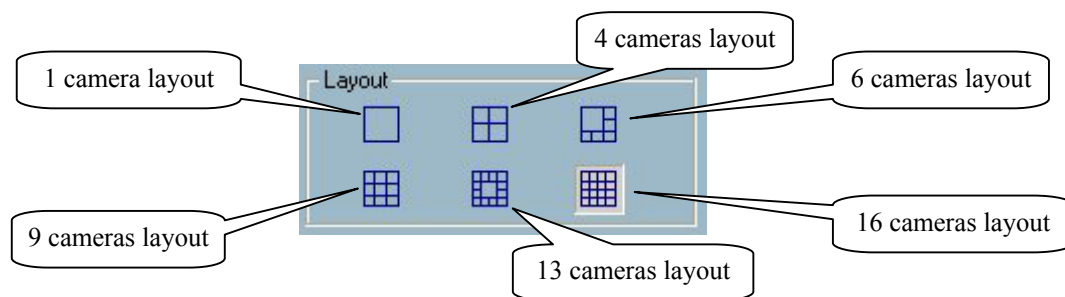


Figure 3-21 Layout of the monitor tool



Figure 3-22 Double-clicking on the displaying frame

When you choose one-camera layout or four-camera layout, the “Page up” and

“Page down” buttons will be shown in the left-bottom corner of the video area. You can use these two buttons to switch the pages. As shown in Figure 3-23.

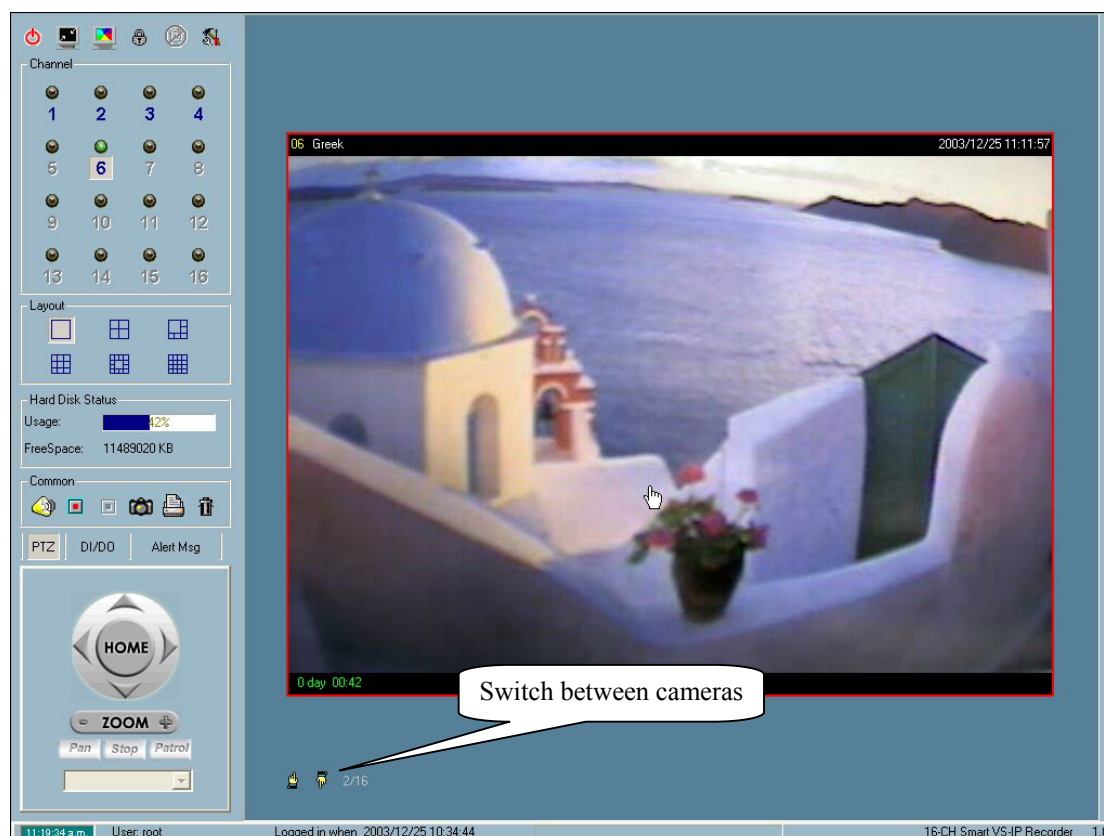


Figure 3-23 One-camera layout

Besides, when you want to view one individual camera from the multi-camera layout shown in Figure 3-24, the user can double-click on the displaying frame associated with the dedicated video channel the user wants to see in the video area. You will see the size of display frame is the same as the one-camera layout. Clicking the “Back” button in the left-upper corner of the video area will switch to the previous selected multi-camera layout.

At last, the position for each video channel in every kind of layout will be kept for the next time when the layout is selected again for monitoring.

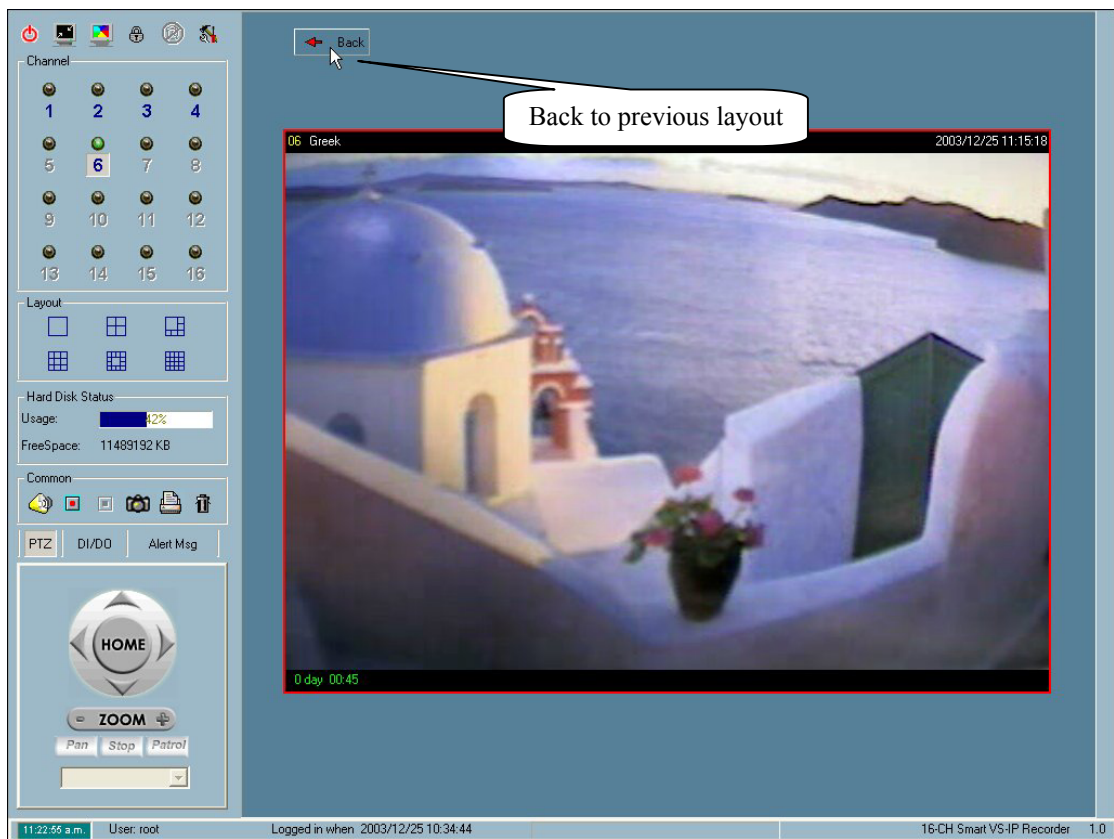
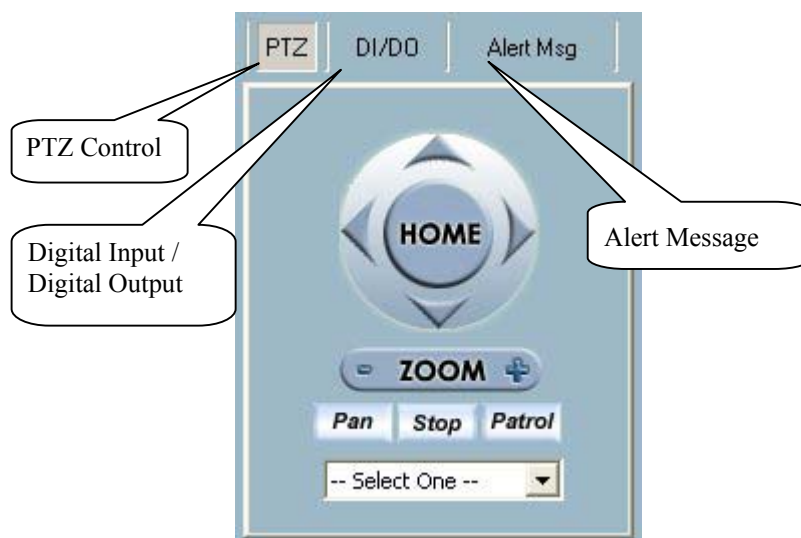


Figure 3-24 Single view mode when in multi-camera layout



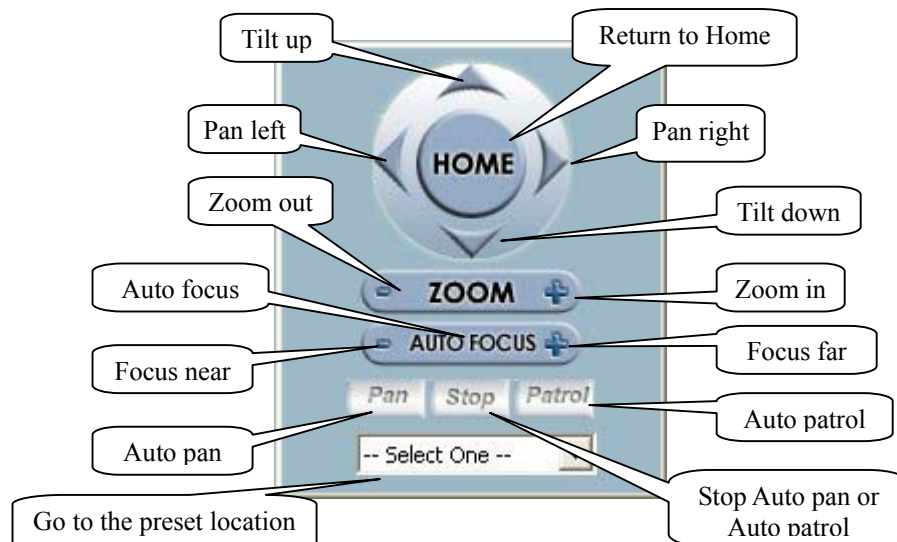
3.6.3 Input/Output Control Tools

Figure 3-25 Input/Output control tool

This application software provides another four tools shown in Figure 3-25 in the left-bottom corner for controlling the remote Video Server / Network Camera series product of the associated video channel. You can click on the dedicated buttons to switch to different control tools which include PTZ(Pan/Tilt/Zoom) control, DI/DO (Digital Input / Digital Output) control and Alert Message receiver. All those will be depicted in details in the following.

3.6.3.1 PTZ Control

You can find there is a PTZ (Pan / Tilt / Zoom) tool shown in figure 3-26 in the left-bottom corner. If the remote Visual Server/ Network Camera series product associated with the selected video channel is connected with a PTZ control camera, this PTZ control tool will be activated. You can not only do PTZ operations, but also go to the preset location set by the user-defined position previously. You can apply



PTZ control to several cameras simultaneously. See Section 3.6.8.

Figure 3-26 PTZ control

3.6.3.2 DI/DO Control

After clicking on the “DI/DO” button shown in Figure 3-27, you can switch to DI/DO control tool. This is only for the user with root privilege to access the DI/DO control of the remote Video Server / Network Camera series product. In this application software, the color of the channel number indicates the status of the DI (Digital Input) of this video channel. And you can click the “Switch button” to change the HI/LOW state of the DO (Digital Output). With these features, you can monitor the remote sensor input from DI and also trigger the remote by DO switch.

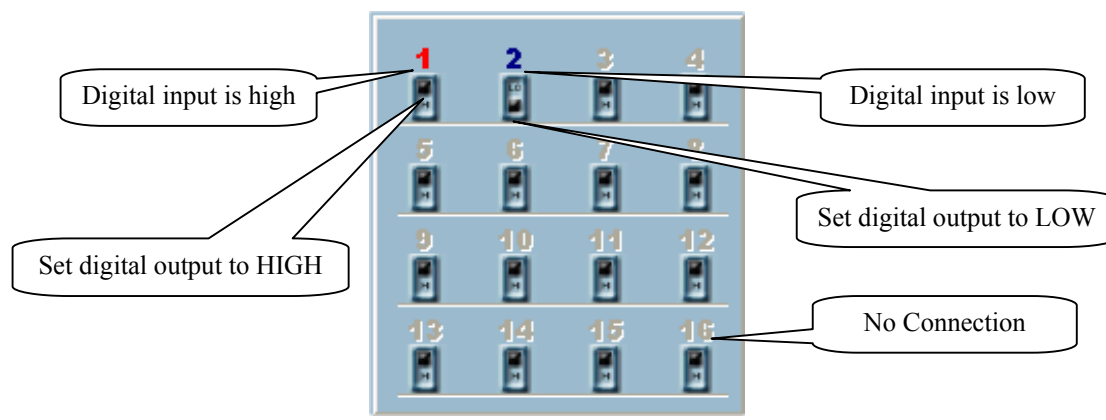


Figure 3-27 DI/DO control

The color of the DI status is depicted as follows.

✓ OFF

When the color of the video channel number is gray, that means this video channel has not been connected to any remote Video Server / Network Camera series product yet.

✓ Red

If the DI of the remote Video Server / Network Camera series product associated with the selected video channel is in high level, the color of the channel number will turn into red.

✓ Blue

If the DI of the remote Video Server / Network Camera series product associated with the selected video channel is in low level, the color of the channel number will turn into blue.

3.6.3.3 Alert Message

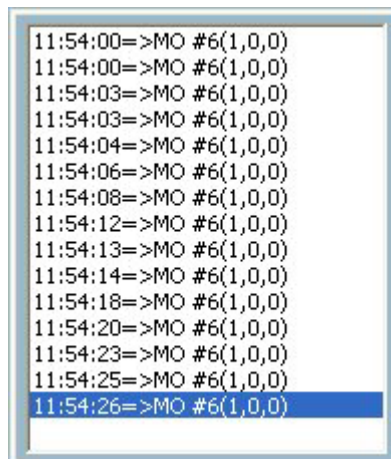


Figure 3-28 Alert message

If you turn on the check box for “Enable Motion Detect” or “Enable Digital Input” in the path “Configuration Menu \ Camera Configurations \ Alert Settings ” with referring to “Alert Settings” of Section 2.4.3, the alert message will show in the window shown in Figure 3-28. Once the alert caused by the motion detection or digital input level change defined by the user is triggered, the alert message will be printed out in this window. Also you can apply the scroll bar of this box to check the historical alert events.

The message format is described as follows:

“time”=>”alert type” #”channel number”(“win1”, ”win2”, ”win3”)

For example, the message “02:41:00=>MO #1(0,1,1)” means that this is a motion detection alert occurring at 02:41:00 AM in Motion Window 2 and Motion Window 3. Besides, if the message “14:41:56=>DI #1” is listed, that means there is an alert triggered by the first DI at PM 02:41:56.

3.6.4 Backup

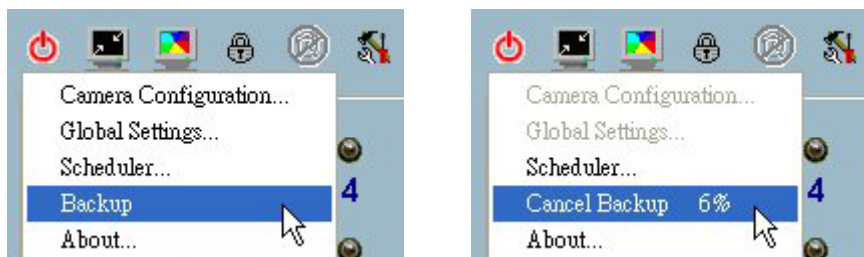


Figure 3-29 the process of backup operation

The “Backup” mechanism will help you to copy the recorded video data to another media according to the location and the size you selected. About the backup settings, you can refer to Section 3.5 “Configuration Menu \ Global Settings \ Backup Settings” for more details. From the backed up video data in the media, you can duplicate the backup-data to any removable device such as CD-ROM, ZIP disk, DVD-RAM or tape manually.

After the backup settings have been configured, you can activate the backup operation by clicking “Configuration Menu \ Backup” shown in Figure 3-29. Once the backup starts, you are prohibited to configure the remote Visual Server / Network Camera series product and change any local settings while the backup is still in process. You can cancel backup process by simply clicking “Configuration Menu \ Cancel Backup” option with the status of the progress. After the backup completes, a message box will be popped up to inform the user the completeness of the backup of this time.

3.6.5 About

With clicking the menu “Configuration Menu \ About...” shown in Figure 3-30, this application software will pop up a dialog box to show the information about it. The information includes the product name, version, user information and the serial number of it.

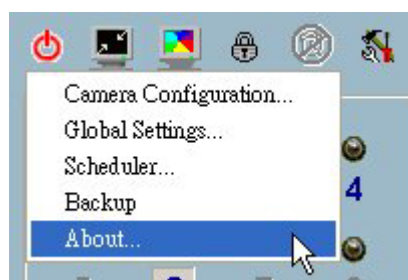


Figure 3-30 About

3.6.6 Miscellaneous Functions

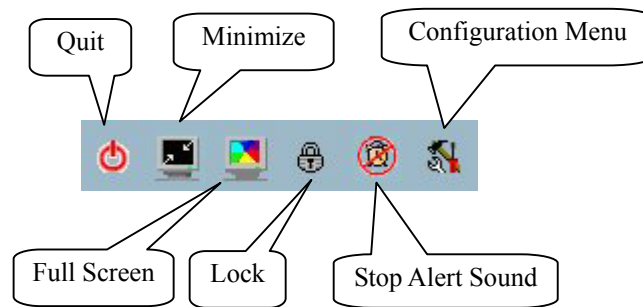


Figure 3-31 Miscellaneous functions

This section will describe some other miscellaneous functions shown in Figure 3-31 with the type of the small icons in this application software. These functions can apply regardless of which the currently focused channel is. These functions will be listed as follows one by one.



Quit

By clicking this button, the application software will be closed with latest settings saved.



Minimization

Minimize the Monitor application.



Full Screen

With this function, you can enlarge the selected video channel to do the full-screen display. In order to switch back to the original layout, you can press “ESC” in the left-top corner of the keyboard or double click the mouse on the screen.



Lock

If you want to leave away from your computer, for the secure concern, we suggest

you to close the playback program or you can just click on the “Lock Window” button to lock the main window. Once you click this button, the main window will be hided and the login dialog will appear. To return to the main window, you need to enter the root’s password again.



Stop Alert Sound

Whenever alert is triggered, the alert sound will start to play if you have set it up previously. After being informed of the situation, you can press this button to stop the alert sound. Besides, it will switch the I/O Control Tool to the Alert Message Tool, which has been depicted in Section 3.6.3.3, automatically for showing the alert messages.



Configuration Menu

A menu includes Camera Configuration, Global Settings, Scheduler, Backup and About options.

3.6.7 Common Control Functions

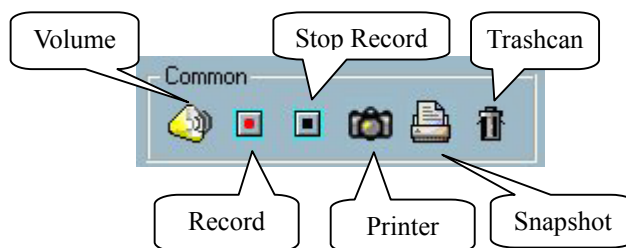


Figure 3-32 Common control functions

This section will describe some other Common control functions shwon in Figure 3-32 with the type of the small icons in this application software. These functions can only apply to the focused channels. These functions will be listed as follows one by one.



Volume

You can tune the audio volume when monitoring the camera which supports audio.



Record

By clicking on this button, you can record video of the selected channel manually.



Stop record

After the video recording has been activated by manual, event-driven or scheduled triggering, the button allows you to stop recording the selected video channel manually.



Printer

You can print all the views currently shown in the view window.



Snapshot

This function can take the snapshot of the selected video channel in current layout mode, and then save the picture as a bitmap file to hard disk. You can set the directory for storing these bitmap files in “Configuration menu \ Global Settings”. Please refer to Section 3.5 for more in details.



Trashcan

You can drap and drop the video channel to Trashcan for closing the video connection with the remote Video Server / Network Camera series product.

You can apply Volume, Record, Stop record, Printer and Snapshot to several cameras simultaneously. See Section 3.6.8.

3.6.8 Multiple Focus

You can apply some functions to more than one cameras simultaneously, these functions include PTZ controls, Volume control, Record, Stop record, Printer and Snapshot. Firstly, multiply focus the cameras you want to control, and then do the operations like PTZ controls or record, etc. The way to focus more than one cameras is to press CTRL and click on displaying frame in the view window. You only can multiply focus the cameras in the same layout page. And only can select them from the view window, not from channel panel.

3.6.9 Status Bar

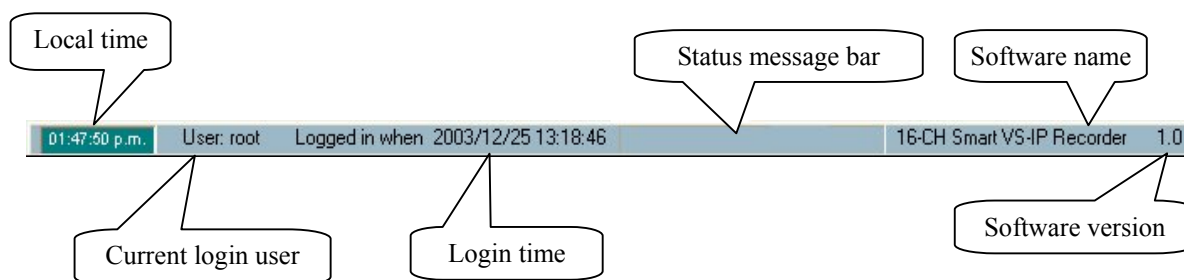


Figure 3-33 Status bar

- ✓ Local time — display the current time of the local site.
- ✓ Current login user — the current login user name.
- ✓ Login time — the time when user login.
- ✓ Status message bar — display hint messages about some background operations, such as repairing database or locations.
- ✓ Software name — software name of this application.
- ✓ Software version — software version of this application.

Chapter 4 Scheduling

The Scheduling tool helps the user to schedule the time for recording the video stream of the selected video channel from the remote Video Server / Network Camera series product. Through both the graphic user interface and time period selection options, you will be able to regulate the wanted schedule easily for each video channel in this application software.

The main features of the scheduling tool are depicted as follows:

Friendly graphic user interface for schedule editing

Flexible schedule scheme suitable for all needs of the variable application

Individual schedule for each video channel

Support up to 9 preset schedule schemes for each video channel

Automatic period recording

4.1 Invoke Scheduling Tool

In this section, the method of how to invoke the schedule tool is mentioned.

4.1.1 Start the schedule tool

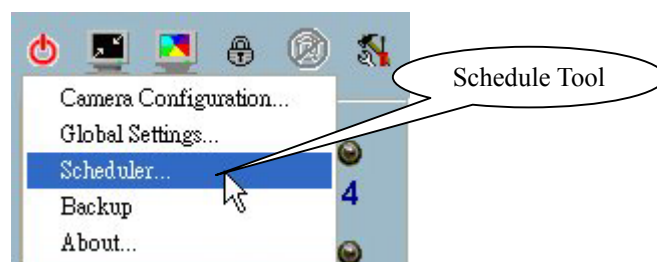


Figure 4-1 Open Scheduler tool

Before invoking the schedule tool by clicking the “Configuration Menu \

Scheduler...”, shown in Figure 4-1, There must be at least one camera in the camera list. Otherwise, the schedule tool cannot be invoked. Besides, you need also to specify the database directory of the schedule schemes and the video stream in the path “Configuration Menu \ Global Settings \ Directory Settings”. You can also refer to Section 3.5 for more detailed information. After all above are set, you can click “Configuration Menu \ Scheduler...” to invoke the schedule tool.

4.2 The Layout and Functionalities

In this section, the layout and the functionalities of the schedule tool is depicted in detail for the user to have a clear picture of it.

4.2.1 Introduction

First, the layout of the scheduler tool, shown in Figure 4-2, and its components will be described.

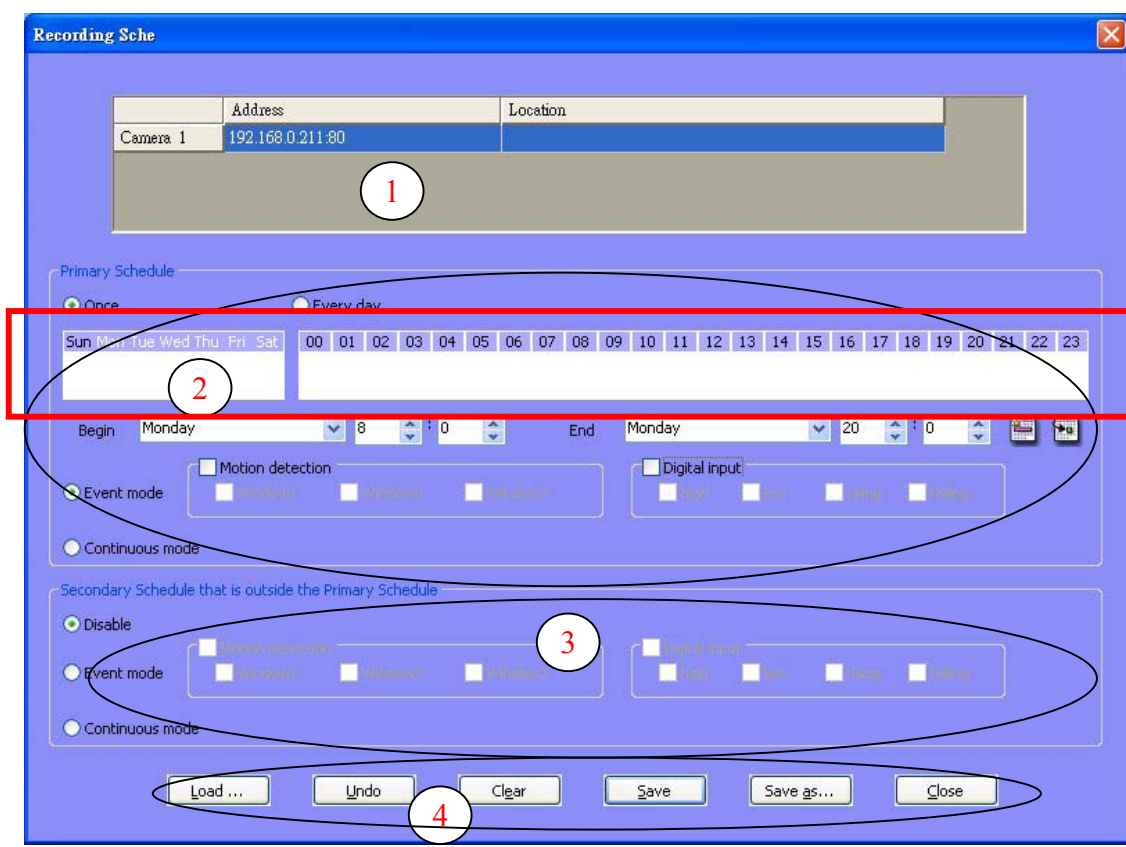


Figure 4-2 Overview of the scheduler tool

The layout of the scheduler tool is roughly divided into 4 parts that consist of many versatile components:

The first part of the scheduler tool is the video channel selection area. It provides the IP addresses and location information of the connected video channel for user's reference. You can select one video channel in this area and start to edit a dedicated schedule scheme for it. Besides, there is an editing schedule space in the top line of this area for the user to edit and save the temporary schedule.

Part 2 is the Primary schedule settings. It consists of the day time-line, week time-line, begin time selector, end time selector, and event mode settings.

Part 3 is the Secondary schedule , which consists of event mode settings.

Part 4 is the operation buttons for the user to manipulate the edited schedule-scheme of the selected video channel, and close the schedule tool's window as well.

4.2.2 The Functionalities of Configuration Components

The main four parts of the schedule tool has been briefly described in the above section. Later, Part 1~4 will be described in detail in the following Section.

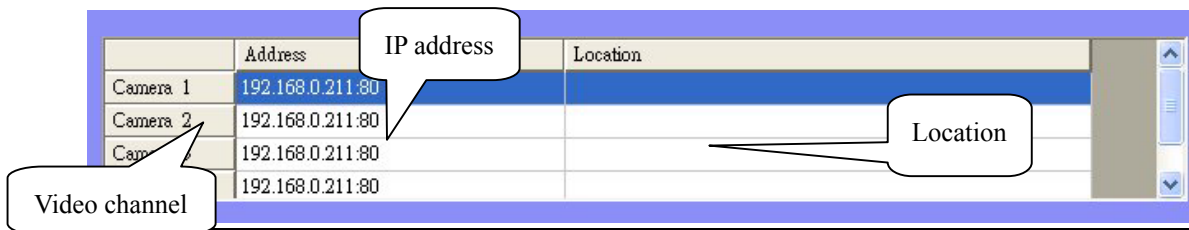


Figure 4-3Video channel selector

The video channel selector shown in Figure 4-3 is the common selection for the dedicated video channel. When you click on the row of the wanted video channel, the scheduling tool will load the dedicated schedule scheme associated with the selected video channel automatically according to the Year-setting. From this selector, if you have well configured the remote Video Server / Network Camera series product, the IP address and location of the selected video channel will show in

it. Please note that when you switch between video channels in this selector, the changes of the editing in the schedule scheme will be saved automatically.

4.2.3 The Schedule Scheme operations

There are six related buttons. “Load...”, “Undo”, “Clear”, “Save”, “Save as...” and “Close” for handling the schedule schemes. These operations are shown in Figure 4-4



Figure 4-4 Operations for the schedule scheme manipulation

Load...

This operation allows the user to load other pre-edited schedule schemes from the scheduling directory for the selected video channel. Note that you shall save the current-edited one with user-defined name before applying this function. Otherwise, the editing changes will be lost.

Clear

This operation will clean permanently all the plotting markers in the current-editing schedule scheme of the selected video channel. So, you shall be very careful when applying this function.

Save

The button is used for saving the changes for the current schedule scheme in editing.

Save As...

If you want to save the current-edited schedule scheme to another file name instead of the default one, the button will serve this need.

Undo

You can click on this button to undo all the plotting markers for this schedule scheme from the last-time saving.

Close

You can close the scheduling tool by clicking this button.

4.3 Primary Schedule

4.3.1 Schedule with Time Lines

There are two time-lines of different scales: hour unit time-line and week unit time-line. You can make your own schedule scheme by plotting markers in all time-lines. These two time lines are associated with each other. That is, if you make changes in one time-line, the corresponding changes will be applied with scale to the other three time-lines in the same schedule scheme.

4.3.1.1 Week Time-Line

In Figure 4-5, Week time-line has been demonstrated. It includes the time-line, schedule information and the selected day in week.

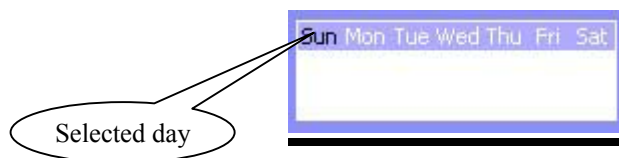


Figure 4-5 Week time-line

4.3.1.2 Marking/Unmarking the Recoding Time

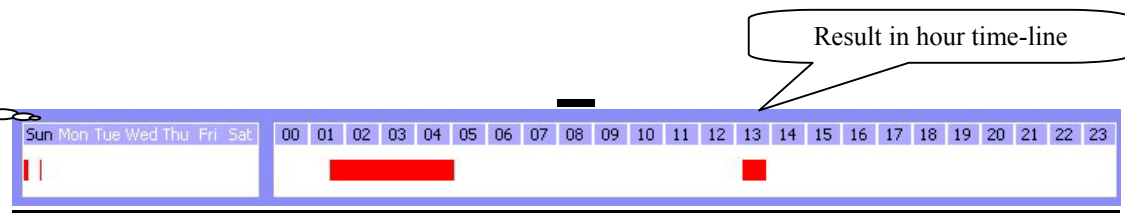


Figure 4-6 One-click on Week time-line

The corresponding changes for the markers on the week time-line will be automatically added to the hour time-lines, which is shown in Figure 4-6. You can also mark and unmark the plotted bar by the left and the right mouse button.

4.3.1.3 Hour Time-Line

In Figure 4-7, Hour time-line is shown.

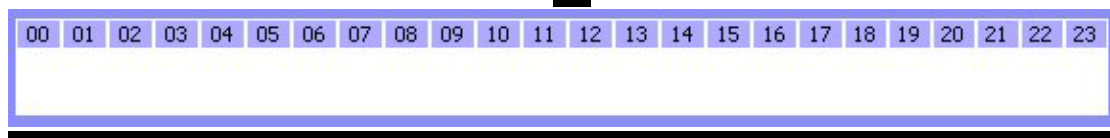


Figure 4-7 Hour time-line

4.3.1.4 Marking/Unmarking the Recording Time

You can apply one-click function by clicking the left mouse button to mark the time on this time-line. The operating method for the hour time-line is the same as that of the week time-lines. Please refer to Section 4 for more details.

4.3.2 Schedule with Time Picker

4.3.2.1 Begin and End Time

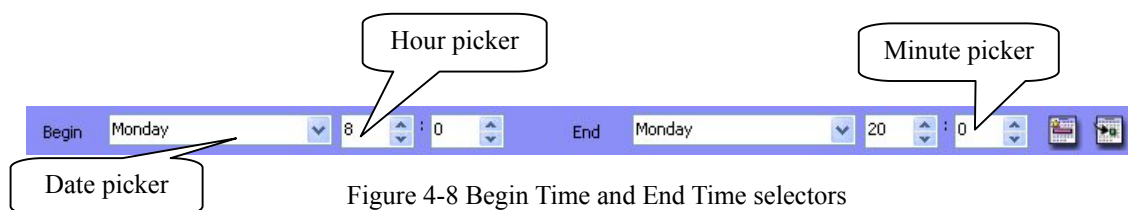


Figure 4-8 Begin Time and End Time selectors

There are three controlling units in both “Begin Time” and “End Time” selectors shown in Figure 4-8. The first unit of these two selectors is the date picker. You can select day with it to set the beginning time and the ending time for the recording interval.

The second and third units are the hour picker and the minute picker. You can change the hour and minute settings for the beginning and ending time with them.

NOTE: The time set in “Begin time” shall be earlier than that in “End time”. Otherwise the settings will not be applied.

4.3.2.2 Add and Erase Buttons

After you have selected the time period with “Begin time” and “End time” picker, you can apply the period picker, shown in Figure 4-9, to set the periodical types of the time interval set previously. After the settings in “Begin Time”, “End Time” and “Period Picker” are all done, you shall click the “Apply” button or “Erase” button to add or clear this scheduling information to the editing schedule scheme. There is one note that only after you click on the “Apply” button, the scheduling information settings will be written back into the whole editing schedule scheme. That means this edited scheduling time interval is valid only after you “Apply” the changes.



Figure 4-9 Period Picker, Apply button and Erase button

4.3.3 Schedule in event mode

You can select to record in Event mode or Continuous mode by the Schedule mode selector as shown in Figure 4-10. There are two type of event recording please refer to section 4.3.3.1 and section 4.3.3.2 for more information.



Figure 4-10 Schedule mode selector

4.3.3.1 Motion detection



Figure 4-11 Motion detection selector

As shown in Figure 4-11. You can check the window which you would like to record while the motion detection is triggered.

4.3.3.2 Digital input



Figure 4-12 Digital input selector

In Figure 4-12 there are four condition of the digital input. Check the condition that you would like to record while the condition triggers.

high : Check this will trigger while the digital input is high.

low : Check this will trigger while the digital input is low.

rising : Check this will trigger while the digital input is changing from low to high.

falling : Check this will trigger while the digital input is changing from high to low.

4.3.4 Schedule in Continuous mode

As you can see in Figure 4-10, if you select the Continuous mode then it will record continuously during the schedule that is setup by the user.

4.4 Secondary Schedule

Secondary schedule is the time that outside the primary schedule.

4.4.1 Schedule modes

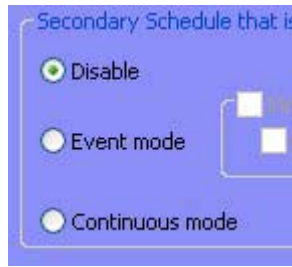


Figure 4-13 Secondary schedule mode selector

There are three modes in secondary schedule: Disable, Event mode and Continuous mode. You can either disable the secondary schedule or choose the event or continuous mode. These two modes are the same as the primary schedule. Please refer to section 4.3.3 and section 4.3.4.

Chapter 5 Playback

5.1 Features of Playback

The playback program this application software provides here is a very powerful, convenient, and easy using tool to assist the user in browsing the recorded video database. It has two display modes (normal display mode, event preview mode) and three playback methods (full range, time period, events preview). There are several main tools consisting of special features in this Playback tool. These tools are depicted as follow.

Powerful play control tool:

Play

Stop

Pause

Step forward

Fast play (from x1 to x16)

Slow play (from /1 to /16)

Convenient display adjustment tool:

Zoom in (from 1:1 to 2.25:1)

Zoom out (from 1:1 to 1:2)

Full screen

Flexible searching range adjustment tool:

User input (from full range to 1 second)

Zoom in (from full range to 10 seconds)

Zoom out (up to full range)

Page searching

Full range

Various tools:

AVI file transducer
BMP file snapshot
Output to printer directly
Volume control

System control tool:
Window locker
System settings
Minimize

Miscellaneous tool:
Location selector
Alert window selector

5.2 Logging In

Before you start the playback program, it is necessary for you to login this application software. Figure 5-1 shows the login dialog. For the security concern, only the root account can login this program. To change the password of root account, please refer to Section 3.3 “Logging In”.

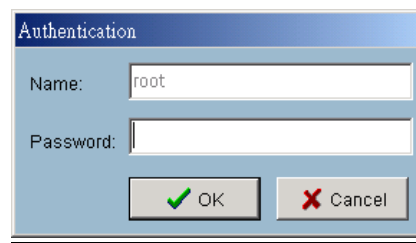


Figure 5-1 Login dialog

5.3 Layout

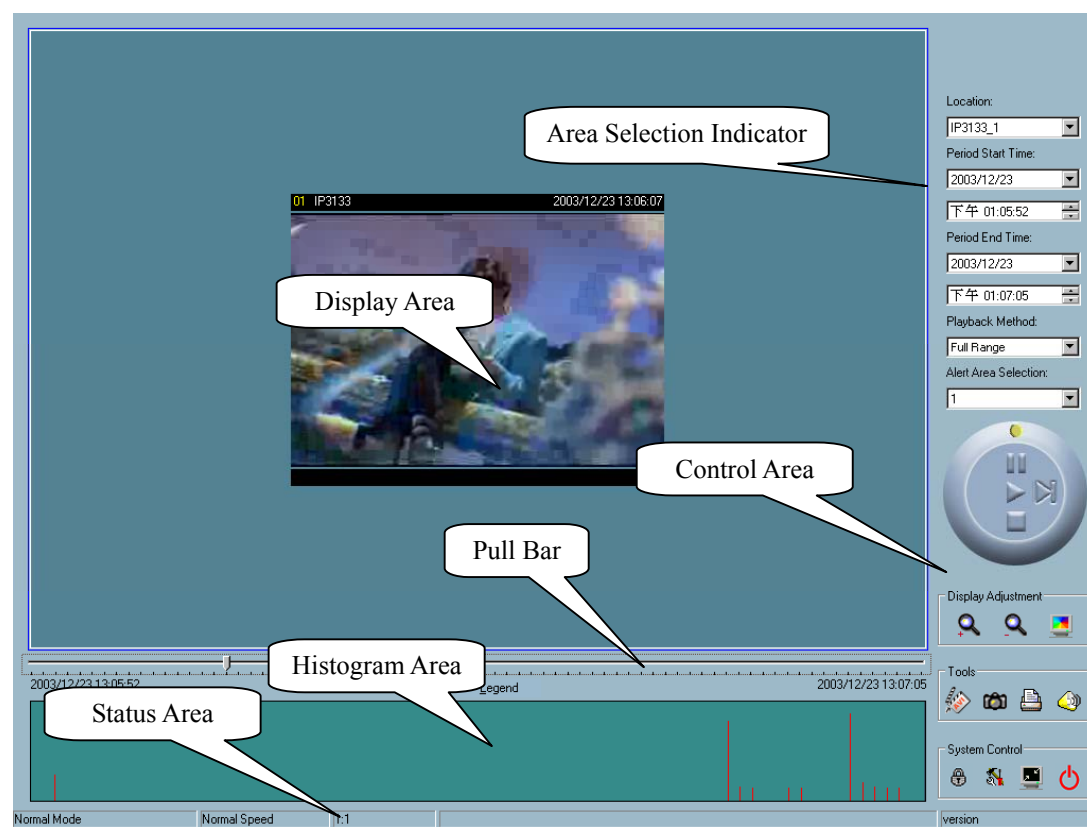


Figure 5-2 Playback main window

Once you login the playback system successfully, the main window will be shown on the top of the screen and the display resolution will change to 1024x768 automatically (Figure 5-2). There are four main areas in that window, i.e. display area, histogram area, control area, and status area. There are also three visualized control in it, i.e. area selection indictor, frame selection indictor, and pull bar. These features provide you much more convenience to search the video recorded in the surveillance database.

5.3.1 Main Areas

5.3.1.1 Display Area

The display area is able to show the surveillance database of each camera by three methods; by events triggered, by the alert or by time. You can change the video size

through the display adjustment tool and the playback method through the play control tool.

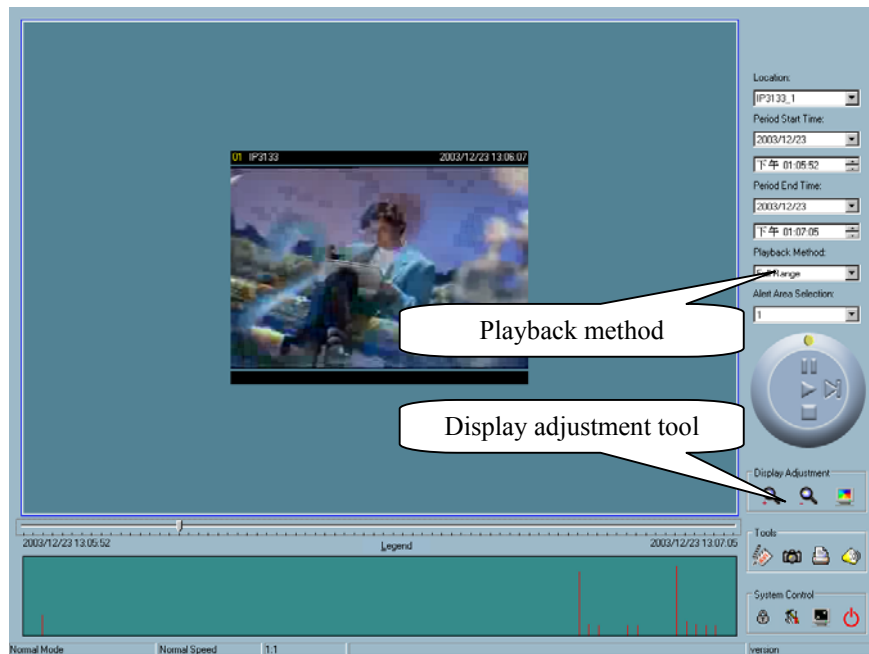


Figure 5-3 Display by time (normal display mode)



Figure 5-4 Display by events (event display mode)

5.3.1.2 Histogram Area

The histogram is an interactive control. Not only you can get the event's location in time domain and its quantity of the motion percentage, but also you can select a group of events or a period from the event histogram area and show it on the display area.

5.3.1.3 Control Area

The control area contains almost all the control selectors and toolboxes you need to browse the database except the page control. The page control tool is located on the right-bottom corner of the display area when the program is operating in the event preview mode (shown in Figure 5-4). These control tools include location selector, period selector, playback method selector, jog dial, display adjustment tool, searching range adjustment tool, exporting tool, and system control tool. In Section 5.7 "Using Tools", we will discuss these in more details.

5.3.1.4 Status Area

The status area is located at the bottom of the main window. It tells you all about the program status information including display mode, display size, display speed, exporting file format, and exporting file name.

5.3.2 Indicators

5.3.2.1 Area Selection Indicator

In Figure 5-2, the display area is surrounded by a blue rectangle. This rectangle is the area selection indicator. This indicator can set to either display area or histogram area, as long as you move your mouse cursor to the area you intend to select. When you select the display area, the display adjustment tool will appear in the control area. If you select the histogram area, the display adjustment tool will disappear and the searching range adjustment tool will be shown in the same place of the control area.

5.3.2.2 Frame Selection Indicator

The frame selection indicator only appears when you change the display mode to

event preview mode (as shown in Figure 5-4). It is a red rectangle surrounding to one of the nine event preview frames. Once you select one of these frames, you can control its playing status through the jog dial in the control area.

5.3.3 Pull Bar

The pull bar is a fast, flexible control for seeking data in the selected time period. It represents the total length of time in that period. You can click or pull the indicator on the pull bar to the sharp time-point you want to see. And the displaying video will halt and restart to play the video sequence from the point you choose. If the video sequence has been paused, the display area will show the point you select without playing. Note that the pull bar will only function under the normal display mode.

5.4 Settings

Click on the “Settings” button shown in Figure 5-5 in the system control tool, and the setting dialog will appear on the screen as shown in Figure 5-6.

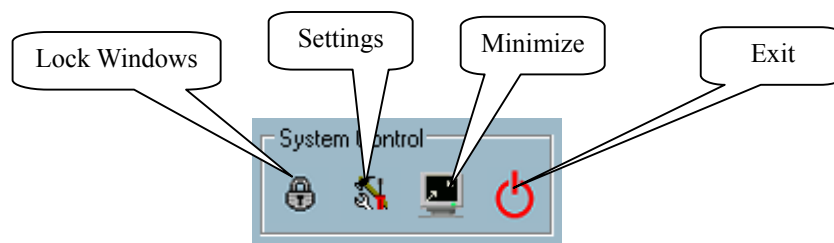


Figure 5-5 System Control tool

Database location

The most important item in the settings dialog is the database path setting. You must set it to the directory that contains the surveillance database to make the program to work properly.

AVI files location

It sets the storing directory when you export AVI files. These exporting AVI files will be stored in the sub-directory under the directory you set here with the name of

the location you select.

Snapshot files location

It sets the directory when you use the snapshot to export bitmap files. These exporting bitmap files will be stored in the sub-directory under the directory you set here with the name of the location you select.

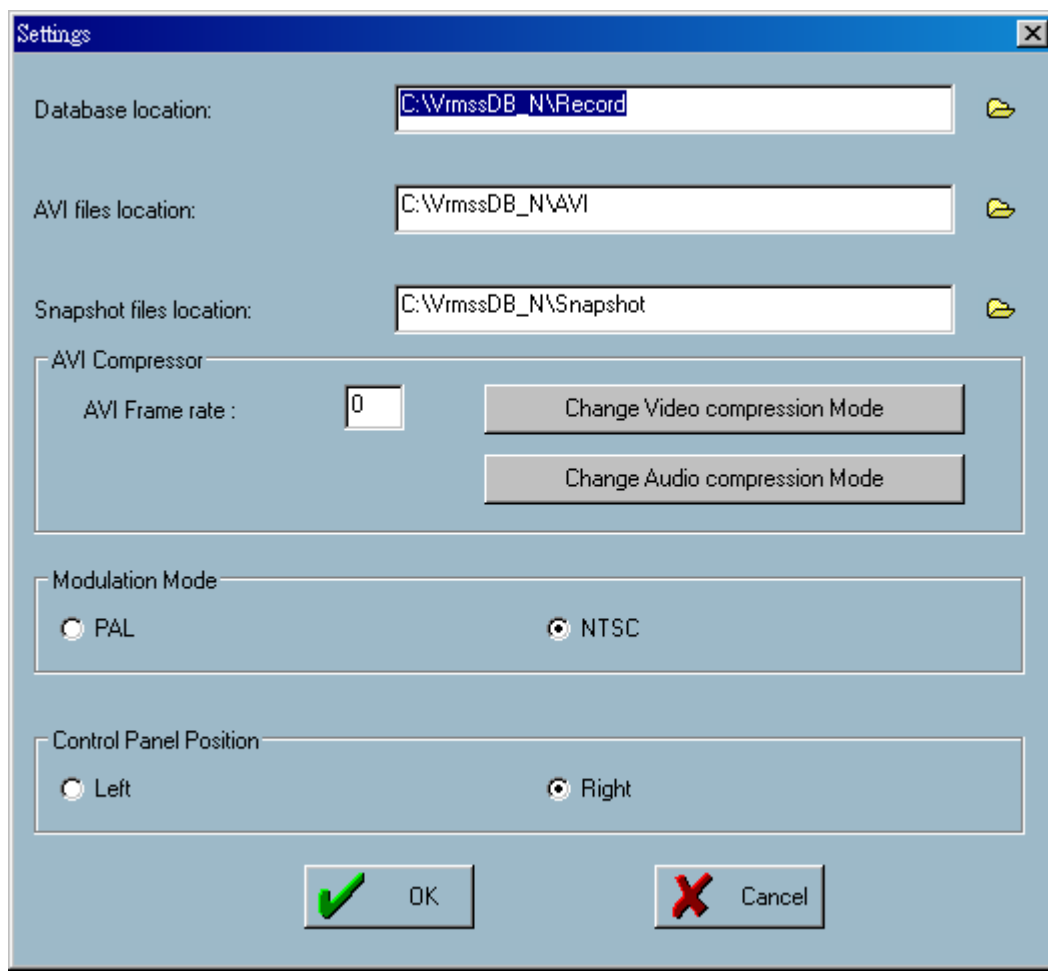


Figure 5-6 Settings dialog

AVI compression mode

We use only 24 bits color depth to export the AVI file in this mode. During the AVI compression mode selection, you can select one of the compression methods (both video and audio) that your computer have supported to export the AVI file. The compression methods may be different on different computers due to the

compression methods is optional for each computer installation

Modulation Mode:

The modulation mode can't be changed uninhibited. It depends on how you recorded the video sequence in the monitor program. If you select the wrong mode, the video shown in the display area will become deformed. Under the situation that you choose the wrong modulation mode, you may open the settings dialog again, change to the correct mode. After that, it will display properly.

Control Panel Position:

It provides you a very convenient method to change the position of the control area to the left side or the right side of the main window for fitting your habit.

5.5 Normal (Single Frame) Mode

There are several methods for you to enter the normal display mode with only one displaying frame after,

- (1) Changing the database path for retrieving another one in the settings dialog of “System Control” tool
- (2) Changing the location selector to another location in control area.
- (3) Changing the playback method selector to “Full Range”.
- (4) Changing the playback method selector to “Time Period”.



Figure 5-7 Normal display mode

Under the normal display (single frame) mode, you can use all the tools the playback program provided except the page control. In this mode, the two labels under the pull bar show the starting and the ending time of the interval individually (as shown in Figure 5-7).

5.5.1 Histogram Area

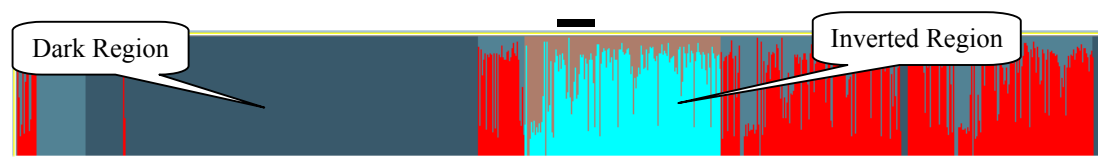


Figure 5-8 Histogram area in normal display mode

The histogram area in the normal display (single frame) mode only shows the events' occurred time and the percentage of motion detection with red bars. If you want to access the histogram area, you must change the area selection indicator to

the histogram area. You can mark one time interval you want to see with a color-inverted region by dragging your mouse with the left button pressed (as shown in Figure 5-8). When you release the left button, the color-inverted region will be enlarged to the whole histogram area. This color-inverted region will be the new period the program is going to display. If you click on the left button without dragging it, the action will be the same as clicking on the pull bar in the same x-axis position. That means the playback system will shift to the pointed time and show video on the displaying frame. Besides, the dark regions in the histogram area mean there is no video data existed in that interval. If you click on those regions, nothing will happen except a warning message popped up.

5.6 Preview (Multiple Frame) Mode

You can enter the event preview mode only when you change the playback method selector to “Events Preview”. It can help you to identify the objects triggering the events via not only the time information and the alert percentage in the histogram area but also the real video preview playing. With it, you can easily tell the different alert situations. Under the event preview mode, the pull bar, “Transducer” button in exporting toolbox, and the display adjustment toolbox are disabled. The two labels under the pull bar show the number of displayed events and the total event count individually. There are nine frames in the display area that we call it one “page”. And each frame displays a 10-second interval video sequence with $\frac{1}{2}$ slow speed that contains different events. You can use the “Page Up” and “Page Down” button in the page control to browse the events in the selected period with nine events per page. Furthermore, there is page status informing you the current page number and the total page count (as shown in Figure 5-9).

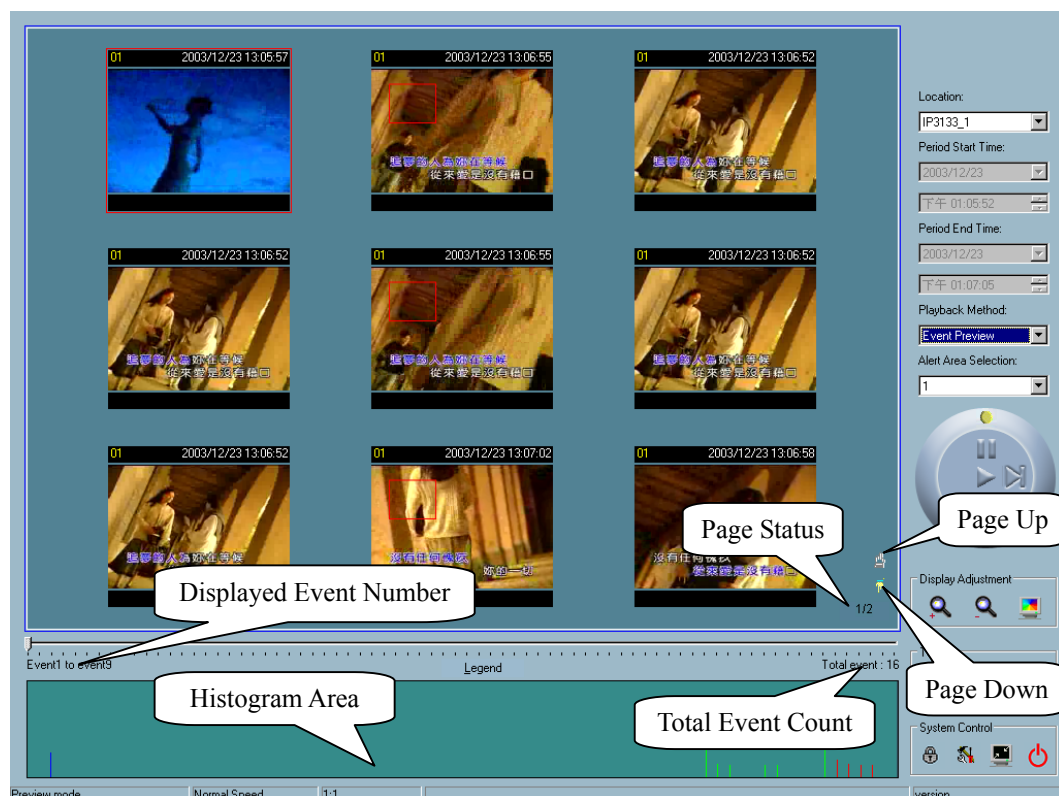


Figure 5-9 Preview mode

5.6.1 Histogram Area

The histogram area in the event preview mode not only shows the occurred time of events and the percentage of the detected motion with red bars, but also tells you the current displayed events with green bars and the selected event with blue bar. If you want to access the histogram area, you must change the area selection indicator to the histogram area. Then, you can mark a color-inverted region over it by dragging your mouse with the left button pressed (as shown in Figure 5-10).

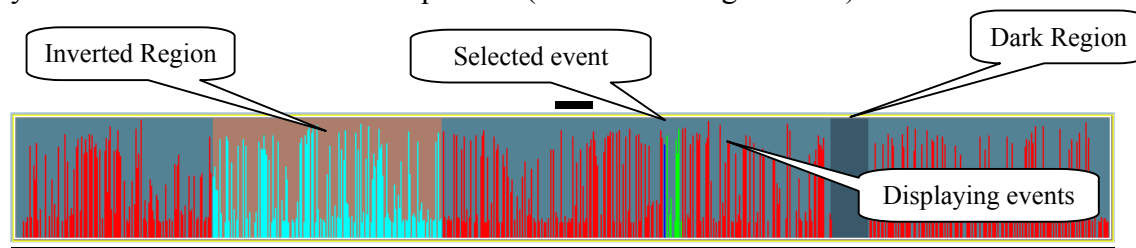


Figure 5-10 Histogram area in preview mode

When you release the left button, the color-inverted region will be enlarged to the whole histogram area. This color-inverted region will be the new period the program

is going to display. If you click on the left button without dragging it, the display area will show the event page closest to the point you select. The dark region means there is no video sequence existed in that interval. If you click on those regions, nothing will happen except a warning dialog.

5.6.2 Histogram Legend

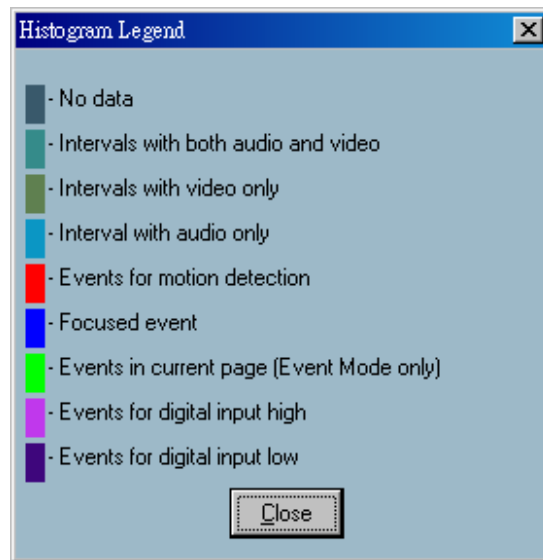


Figure 5-11 Legend of the histogram

Figure 5-11 shows the legend of the histogram. You can invoke this dialog by clicking the button of legend.

5.7 Using Tools

In this section, we will talk about the method of how to use the tools in the control area that has been shown in Figure 5-2.

5.7.1 Selector Tools

Figure 5-12 shows the selector tools. They are location selector, period selector for the selection of the beginning time and the ending time, playback method selector, and alert area selector.

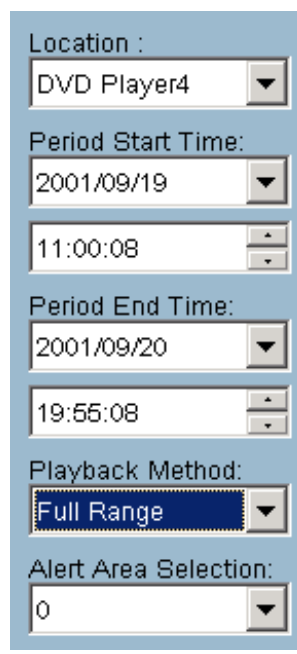


Figure 5-12 Selector tools

5.7.1.1 Location Selector

The location selector is a control that lets you select the camera you want to see (refer to Figure 5-12). The location information is the same as the location when you see the location name associated with the dedicated video channel in the monitor program. If there is more than one database in the same location, another dialog will appear (as shown in Figure 5-13). And you must select an interval in that dialog. If your selection is correct, the playback program will automatically switch to that camera and start displaying.

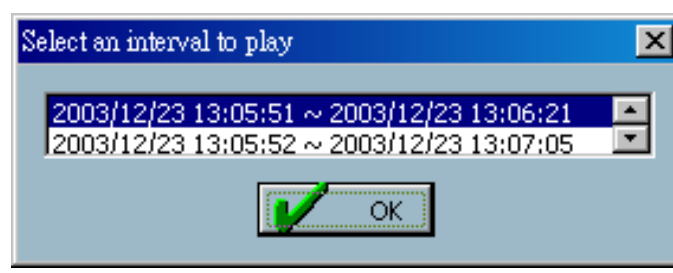


Figure 5-13 Time interval selection dialog

5.7.1.2 Period Selector

Period selector provides you a precise way to choose the start time and the end time of a new period. The end time should be larger than the start time. After you give the correct start and end time, clicking on the “Play” button in the jog dial will play the new period in the display area with changing the period start and end time label. Besides, the pull bar and histogram area will change, too. If the selected period is not present in the database, the data in the period selector will change to the previous correct start and end time and a warning message will be displayed.

5.7.1.3 Playback Method Selector

Full Range

If you select this method, the database will be displayed from the beginning to the end of this location. Any change in the period selector will take no effect except you change this selector to “Time Period”.

Time Period

If you change the playback method to “Time Period”, you can modify the start and end time in the period selector. When you click on the “Play” button in the jog dial, the period you select will be displayed.

Events Preview

This method will change the display mode from the normal display mode to the event preview mode.

Since the program will record the previous start and end time in “Time Period” mode. Whenever you want to change the period selector to see the other period, you must change the playback method selector to the mode you want to use first. Otherwise, the period selector will change back to the previous period when you change the playback method selector last time.

5.7.1.4 Alert Area Selector

In the preview mode, the playback program can show the information of total events of only one alert window each time. If you want to see the events of the other two alert area windows, you must change the alert area selector to the other window

numbers. In the normal display mode, the alert window that the alert area selector indicates will be highlighted with red rectangle if you checked that window in the settings dialog. The alert area selector will be changed to alert window 0 by default settings when you change the location selector to another one.

5.7.2 Play Control

For the play control, we used a jog dial shown in Figure 5-14 to provide the easiest way to control the video sequence displaying. Except the “Play” button, all other buttons can control the displaying frame in the normal display mode and the selected displaying frame in the event preview mode.

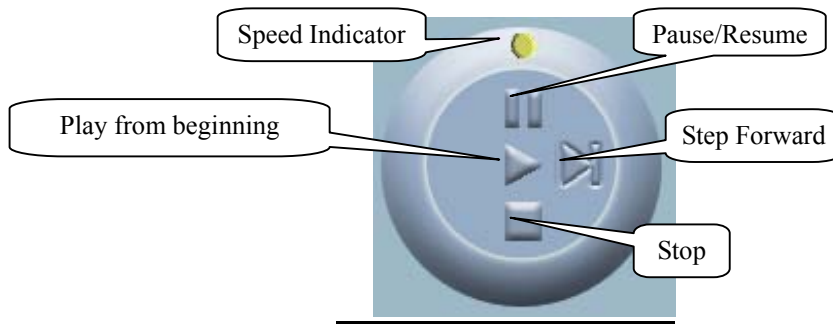


Figure 5-14 Jog dial

Play from beginning

The “Play” button we support here is an intelligent play user-interface. The functionality of this button can vary to fit with different circumstance. In the normal display mode, click on the “Play” button can restart the displaying video sequence. In the preview mode, if you don’t change the data of period selector, click on this button only restarts the selected displaying frame. If the data of the period selector has been changed, clicking on the “Play” button will restart all frames to display the first nine events in the new period.

Stop

When you want to stop the displaying video sequence, you can click on the “Stop” button. Note that once you had pressed the “Stop” button, the start point will be reset to the start of the present period.

Pause/Resume

The “Pause” button provides you a way to pause the video sequence displaying. When the displaying video is paused, click on the “Pause” button again will continue the video to display.

Step Forward

This button is only valid when the displaying video sequence is paused. It will display the next frame in that period when you click on the “Step Forward” button one time.

Fast Play and Slow Play

We support maximum to x16 fast forward play and minimum to /16 slow forward play. This function helps you browse the surveillance database with more flexibility. If you want to change the playing speed, you just need to move the speed indicator. To increase playing speed, move the indicator in the clockwise direction. And to decrease playing speed, move it in the counterclockwise direction. Current speed you set will be shown in the second column of status area.

5.7.3 Display Adjustment Toolbox

When you move the mouse cursor to the displaying area, the display adjustment toolbox will appear. Using the display adjustment toolbox, you can change the displaying video sequence to the size you want to see in the normal display mode when you move the area selection indicator to the display area. Figure 5-15 shows the display adjustment toolbox and its own three elements, i.e. “Zoom In”, “Zoom Out”, and “Full Screen”.



Figure 5-15 Display adjustment toolbox

5.7.3.1 Zoom In



When you click on the “Zoom In” button one time, the image size in the display area will be magnified 12.5 percent to the original size. Due to the limitation of the display area size, the maximum zoom in ratio we support here is

only 2.25:1 for NTSC modulation mode and 1.875:1 for PAL modulation mode. If you want to see the image in more details, you can use the full screen function we support in the same toolbox.

5.7.3.2 Zoom Out



When you click on the “Zoom Out” button one time, the image size in the display area will be minified 12.5 percent to the original size. To show the location and time information completely, the minimum zoom out ratio is limited in 0.5:1.

5.7.3.3 Full Screen



When you click on the “Full Screen” button, the video sequence will be enlarged to the whole screen instantly. You can double click on any place or “ESC” key to return to the original state.

5.7.4 Searching Range Adjustment Toolbox

When you move the mouse cursor to the alert histogram area, the searching range adjustment toolbox will appear in the same position as that of the display adjustment toolbox. The searching range adjustment toolbox provides you a faster way to change the range of the displayed time period. By using this toolbox, you can browse the database of one location from any 10-second interval of the entire range. Figure 5-16 shows the searching range adjustment toolbox composed of its own three elements, i.e. “Zoom In”, “Zoom Out”, and “Full Range”.



Figure 5-16 Searching range adjustment toolbox

5.7.4.1 Zoom In



Each time you click on the “Zoom In” button in the searching range adjustment toolbox, the displayed time period will be half in the center of the original time period until the period is equal to 10 seconds. You can see the new

interval in more details. The scale of pull bar and alert histogram window changes and the period start and end time change, too. The period selector will show the new start and end time. And the display area will restart to display the new period from the newly defined start time.

5.7.4.2 Zoom Out



Each time you click on the “Zoom Out” button in the searching range adjustment toolbox, the displayed time period will be double in the center of the original time period unless the start time or end time exceeding the whole database time-boundary. The scale of pull bar and alert histogram window changes and the period start and end time change as well. The period selector will show the new start and end time. And the display area will restart to display the new period from the newly defined start time.

5.7.4.3 Full Range



As you click on the “Full Range” button, you will get the same functionality just like you change the playback method selector to “Full Range”.

5.7.5 Toolbox

In our playback program, you not only can check the database through our program but also can export the database to the other media. Using the toolbox, you can export the database into other more portable formats, such as avi file, bitmap file or paper. Then you may use windows media player or other program to browse the exporting data. Under the normal display mode, you can use all the exporting tools. And under the preview mode, only snapshot and print can be used. Figure 5-17 shows the elements of the toolbox.

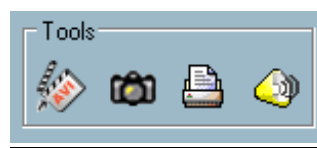


Figure 5-17 toolbox

5.7.5.1 Transducer



Using the transducer tool, you can transpose the displaying video sequence

to the avi file. Just click on the “Transducer” button and the conversion procedure will be started. The time of exporting data is depending on how fast the processor you use. During any time of the exporting interval, you can click on the “Transducer” button again to stop the procedure right in the process. Then you will get an avi file from the start time to the time you click the “Transducer” button. The exported avi filename will be generated automatically and listed in the fourth column of the status area. If you want to change the AVI file output directory, you can go to the settings window as we described in Section 5.4 Settings. To get the better quality of the exporting AVI file, it is suggested to set the video format to normal size (please refer to Section 3.4 “Camera Configurations”).

5.7.5.2 Snapshot



When you click on the “Snapshot” button one time, you can make the program to export a bitmap file. In the normal display mode, the exporting bitmap is the image shown in the display area. And in the preview mode, it is the image that you selected through the frame selection indicator. The size of the bitmap will be the same as the source image you select. The exported bitmap filename will be generated automatically and listed in the fourth column of the status area. If you want to change the bitmap file output directory, you can go to the settings window as we described in Section 5.4 “Settings”.

5.7.5.3 Print



When you click on the “Print” button, a printing dialog will appear. After you made your selection and send to the printer, the images on the display area will be printed out. The printing functionality is designed based on the idea, “what you see is what you get”. Therefore, the output data will be the same as whatever you see in the display area.

5.7.5.4 Volume



When you click on the “Volume” button, a volume control dialog (Figure 5-18) will appear. After you made your selection, it will change the volume to the value you decided. Also, you can check the mute checkbox to make the system to be muted.

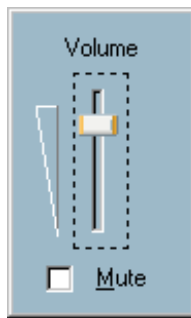


Figure 5-18 Volume control dialog

5.7.6 System Control Toolbox

The system control toolbox provides you some basic operations for the playback program. Figure 5-19 shows the elements of the system control toolbox, i.e. “Lock Window”, “Settings”, “Minimize”, and “Exit”.



Figure 5-19 System control toolbox

5.7.6.1 Lock Window



If you want to leave away from your computer, for the secure concern, we suggest you to close the playback program or you can just click on the “Lock Window” button to lock the main window. Once you click this button, the main window will be hided and the login dialog will appear (as shown in Figure 5-1). To return to the main window, you need to enter the root’s password again.

5.7.6.2 Settings



The settings dialog will pop up when you click the “Settings” button. For more information about setting this program, please refer to Section 5.4” Settings”.

5.7.6.3 Minimize



The playback program will be minimized immediately when you click on the

“Minimize” button. You can invoke playback again by clicking playback window on the task bar or choosing playback from the launcher.

5.7.6.4 Exit



The playback program will be closed immediately when you click on the “Exit” button. If the avi exporting procedure is running, this procedure will be stopped first.