Playing Back Video Files

Recorded files can be played back using five different software applications offered by the system – ViewLog, Quick Search, Remote Playback System, Remote Playback System WebCam version, and Q-View.   Following is a comparing table for these applications.   This is not a complete comparing table, because many of these features are dealt with in details throughout the manual.   However, this table may help you to decide which application to use under a given situation.

Application	Description
ViewLog	Plays back video files on the servers and computers within the LAN, as well as supporting the Backup function.
Quick Search	A more convenient tool that allows you to search video files recorded on motion, alarm, or POS events.
Remote Playback System	Plays back files through network connection. Offers most complete playback features among the five. This application is a management system itself. It can download and play back history video files from several servers via Internet. See *Playing Back over Internet* in this chapter.
Remote Playback System WebCam version	No additional software installation is necessary. Just play back by your web browser. See *Remote Playback on WebCam* in Chapter 6.
Q-View	Plays back files saved at the remote site. It comes with the installation of any GV remote applications (Remote View, IP Multicast, and Center V2) for instant playback. This feature is discussed in Chapter 8.

This chapter discusses ViewLog, Quick Search, and Remote Playback System in details.

Playing Back on ViewLog

The ViewLog would play back recorded video files without affecting recording.   There are two ways to launch ViewLog:

- Start Video Log from the GV-folder (Windows Start menu/programs)
- In the main system, click the ViewLog button and then select Video/Audio Log. Or press [F10] on the keyboard.
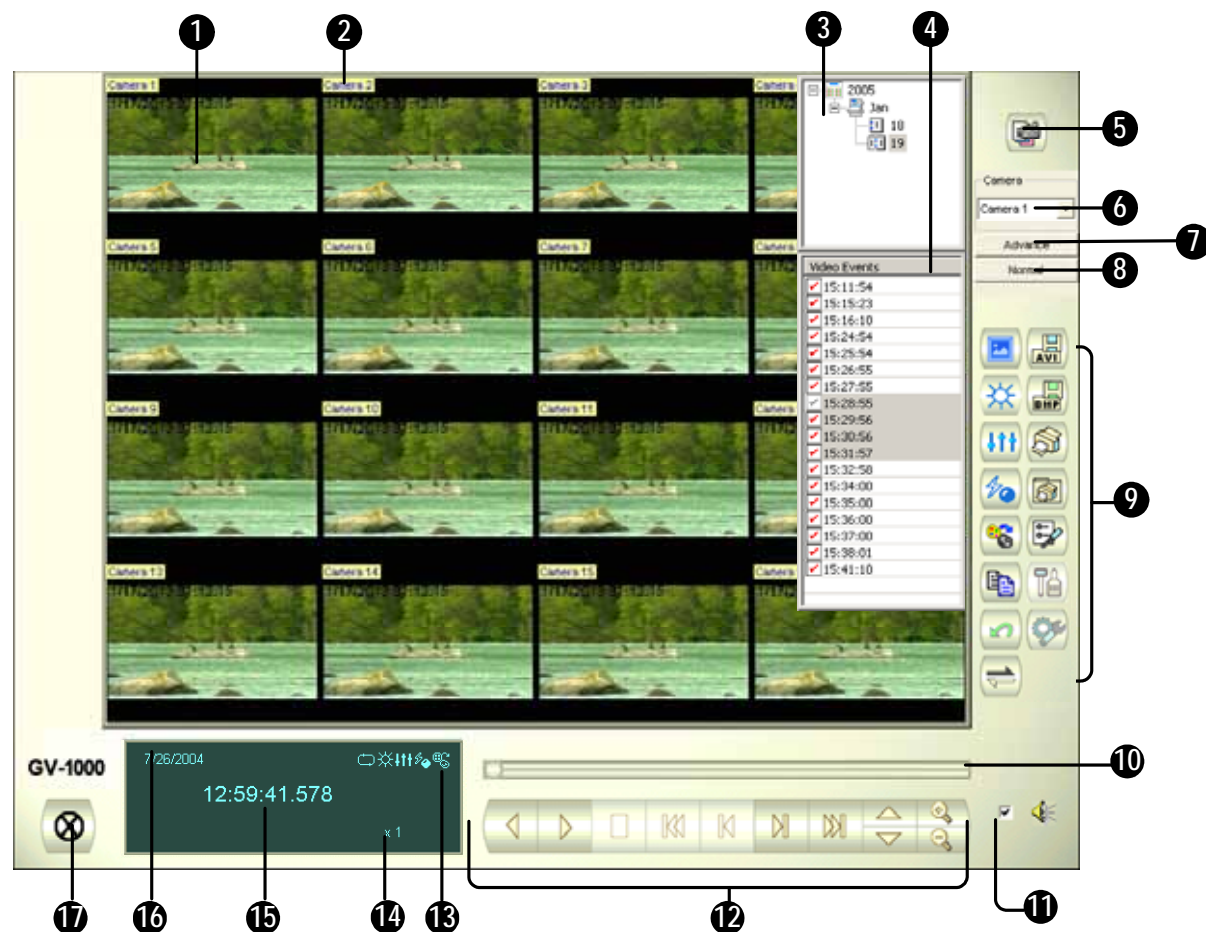

Figure 4-1 *The ViewLog widnow*

By default when you open ViewLog, it will play the last event of camera number 1. Without further settings you could already play back the event by clicking the Play button on Playback Panel (No. 12 in Figure 4-1). Click on the View Mode button (No. 5) to switch the current view mode to a multi-channel view. Use controls on Playback Panel to view the event at the way you want. Move the slider in Playback Meter (No. 10) back and forth to navigate video frames.

To play back multiple events, keep pressing the Ctrl key on the keyboard and highlight the desired events on the Video Event List (No. 4). Then click the Play button to play these events. To select events from different dates, click the date from the Date Tree (No. 3). Events of that date will be listed in the Video Event List.

The controls in the ViewLog window:

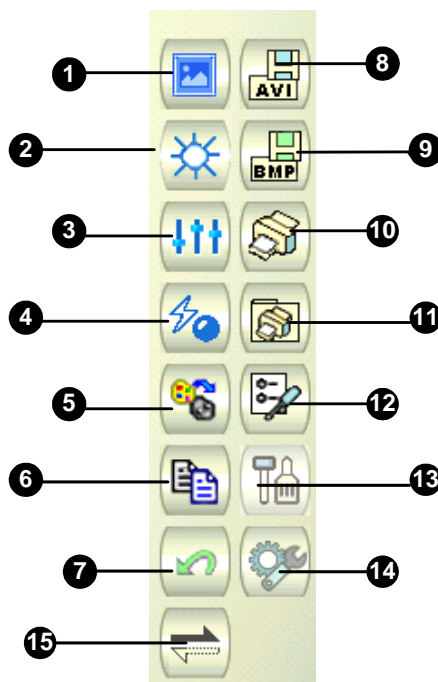|	Name	Description
1	Camera View	Displays the playback video.
2	Camera Name	Displays the camera ID.
3	Date Tree	Displays date folders.
4	Video Event List	Displays video events within a certain date folder.
5	View Mode	Selects different screen layouts; see *Playback Screen Layout* on page 92.
6	Camera Select	Selects a desired camera for single, thumbnail, quad, or multi view.
7	Advance Search	Selects the basic or advanced search; see *Searching a Video Event* on page 94.
8	Normal Mode	Displays the date tree and video event list.
9	Function Panel	Provides various settings for ViewLog. Functions of each button will be discussed below.
10	Scroll Bar	Scrolls forward or backward of the playback video
11	Audio Playback	Checks to allow audio playback
12	Playback Panel	Contains typical playback control buttons; see *Playback Control Buttons* on page 93.
13	Function Icons	A highlighted icon indicates an enabled function. The first icon indicates the auto playing of next events; the second indicates the brightness and contract functions; the third indicates the light enhancement and equalization functions; the fourth indicates the sharpness and smoothness functions; the fifth indicates the gray scale function.
14	Playback Speed	Indicates the playback speed. x1 represents normal playback speed.
15	Time Display	Indicates the time of the playback video.
16	Date Display	Indicates the date of the playback video.
17	Exit	Exits or minimizes ViewLog.

Figure 4-2 *Function Panel*

The controls in the Function Panel:

	Name	Description
1	Sample	Gives the examples of "Before" and "After" effects of contrast, brightness, light enhancement, equalization, sharpness, smoothness and Gray.
2	Brighten/Contrast	Modifies color contrast and brightness of the video image.
3	Light Enhancement/ Equalization	Modifies light enhancement and equalization of the video image. To remove the applied effect, click the Undo button.
4	Sharpen/Smooth	Modifies smoothness and sharpness of the video image. To remove the applied effect, click the Undo button.
5	Gray Scale	Switches between the color and black/white image.
6	Copy	Copies the video image.
7	Undo	Undoes the applied effects on the video image.
8	Save AVI File	Saves a video file as AVI or EXE format; see *Exporting Video* in this chapter.
9	Save As Image	Exports image files in bmp, jpeg, gif , dcx, pcx, png, or tif format.
10	Print	Prints out the image.
11	Print Setup	Sets the parameters for the printer.
12	Page Setup	Adjusts the page layout.
13	Setting	Sets up advanced functions for ViewLog; see *Advanced Setup* in this chapter.
14	Tools	The options included inside are: Object Search, Advanced Log Browser, Advanced Backup and Fast Key, all of which are explained later in this chapter.
15	A to B Mode	Plays repeatedly the set frames A to B.

Playback Screen Layout

Click the View Mode button to select the following screen layouts:

- **Single View:** Displays one playback channel only.
- **Thumbnail View:**   Reviews images frame by frame in thumbnails.   Only one camera at a time can be selected for this function.
- **Quad View:**   Plays back in a quad layout.
- **Multi View:** Plays back all available cameras.

Click the View Mode button any time when you want to change the current view mode.   The option of Thumbnail View is disabled while a video file is playing back.   Wait until the video ends or click the Pause button to make the option available.
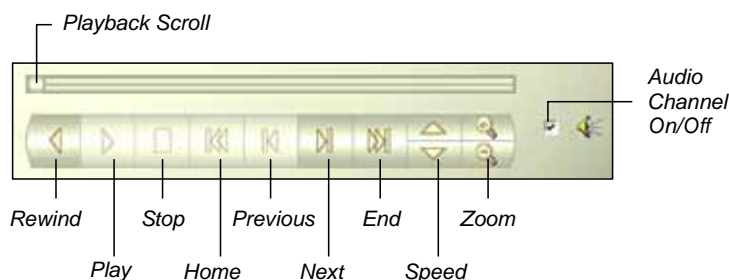
In a thumbnail view, a video file is divided into a set of frames.   The frames are displayed in 25 playback windows, shown as follows.

The key frame is in the center, with 12 video frames occurred before and after the key frame event. This helps to locate required frames you may otherwise miss by other viewing methods.

Playback Control Buttons

Video files may be played back with or without audio.   To play back with audio, check Audio Channel On/Off, as shown below.   (Please note not all GV cards support the audio function.)

A to B Playback Mode

When playing video events, you can set a starting and an ending frame for auto-playing:

1.   To set the starting frame A, click the A to B Mode button.   The message *A to B Mode (Set A)* appears on the screen.

2.   To set the ending frame B, click the A to B Mode button.   The message *A to B Mode (Set B)* appears on the screen.

ViewLog will start playing the set frames A to B repeatedly.   To stop the playing, click the A to B Mode button; the message *A to B Mode (Cancelled)* will appear.

Searching a Video Event

ViewLog offers two search methods: the Basic and the Advanced, allowing you to locate a video event within a certain date, time or camera.

Basic Search

1.   Click the Advance button and select Basic Search to display the following dialog box.
      Alternatively, press CTRL + F8 to call it up.
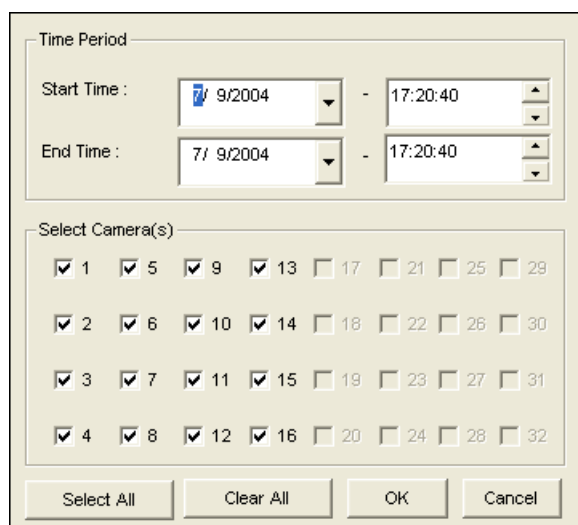

2.   Specify a desired date and time.
3.   Click the Search button for the search.   If the specified time can't be found, a prompt will appear for you to select a next or previously video event available.

Advanced Search

1.   Click the Advance button and select Advanced Search to call up the following dialog box.
      Alternatively, press F8 to call it up.

2.   Specify the desired date, time period, and cameras for search.
3.   Click OK to start searching.
4.   In the Video Event list, the events matching the search criteria will be highlighted in gray color.
      Click the Play button to play back the highlighted events.

Exporting Video

You can export a certain time period within a video event and play it back at the place where ViewLog is not available.   The max length of the exported file is 1 hour.

1.   Locate a desired file from the date tree and video event list.   See No. 3 & 4 in Figure 4-1.
2.   Select the screen division from the View Mode button.   See No. 5 in Figure 4-1.
3.   Click the Save AVI File button to display the following window.   Alternatively, press [S] key on the keyboard to call it up.
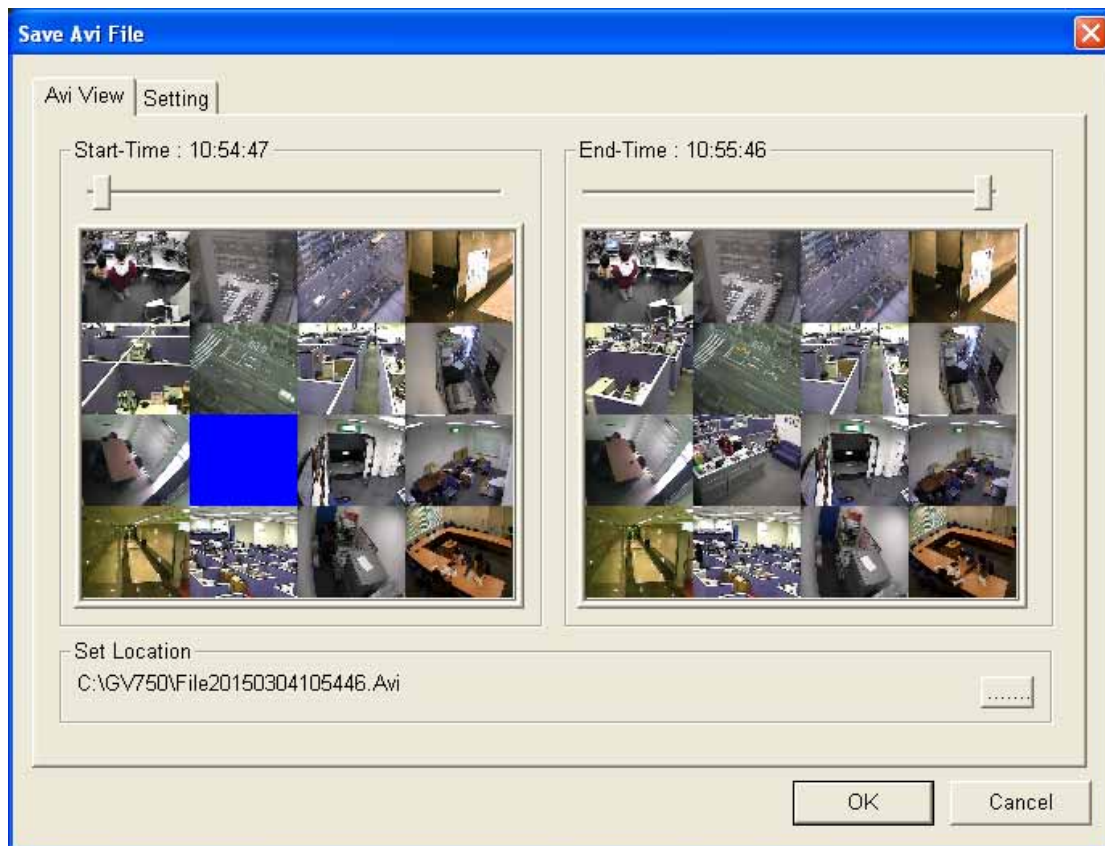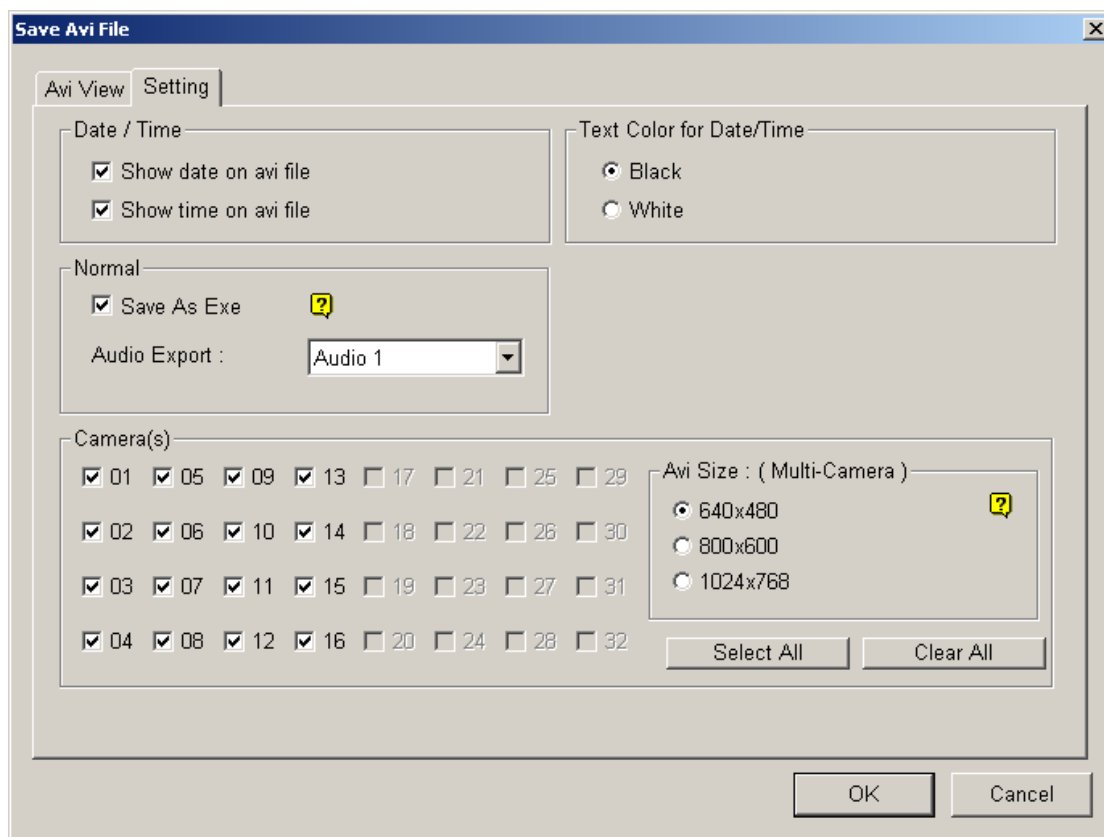

Figure 4-3   *Save AVI File*

4.   Drag the timelines to define a starting and ending time of the file.
5.   Click the button [……] in the Set Location section to assign a saving path.
6.   Click the Setting tab to configure the exported video.   See *AVI File Settings* below.
7.   Click OK to export and save the file.

AVI File Settings

To configure the format of exported video, follow these steps:

1. Click the Setting tab on the Save AVI File window.   The following window appears.
    (Note: When you save the AVI file in single view mode, the window looks slightly different.)

[Date/Time]   Select whether to include date and/or time stamps.

[Text Color for Date/Time]   Select the stamp color.

[Normal]

-   **Save as EXE:**   Select to save files as EXE format.   If you want to play back video at the PC without installing GV-system, this format is a simple and an efficient way to auto-play the files with any third-party player.
-   **Audio Export:**   This option is only available when your audio channels are set up.   See *Camera/Audio Install* in Chapter 2 on page 36.

[Camera(s)]   Select which camera file for exporting.

[AVI Size]   Select the screen size of saved files.

2. Click OK to apply above settings.

Object Search

This feature allows you to perform two functions: 1. Detect motion, missing objects or unattended objects within a certain region of a recorded file.   2. Perform the counting function within certain regions in a recorded file.   The following gives an example of motion detection.   For the applications of missing objects, unattended objects and counting, refer to *Configuring Object Counting* and *Detecting Unattended and Missing Objects* in Chapter 2.

1.   Select a desired video file from the Video Event list for the search.   Or select the multiple files by clicking on each file while keep pressing the CTRL button.

2.   Click the Tools button in the function panel, and then select Object Search to display the following window.
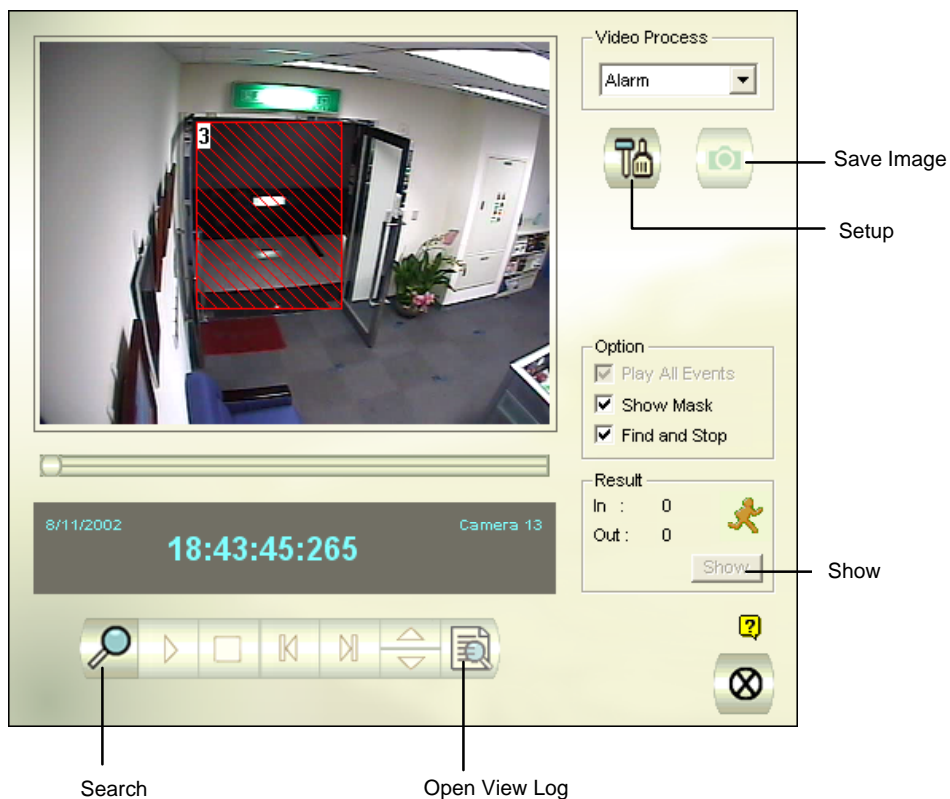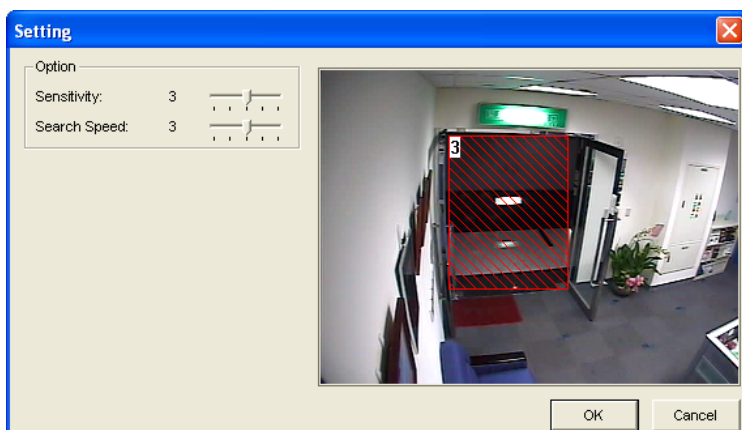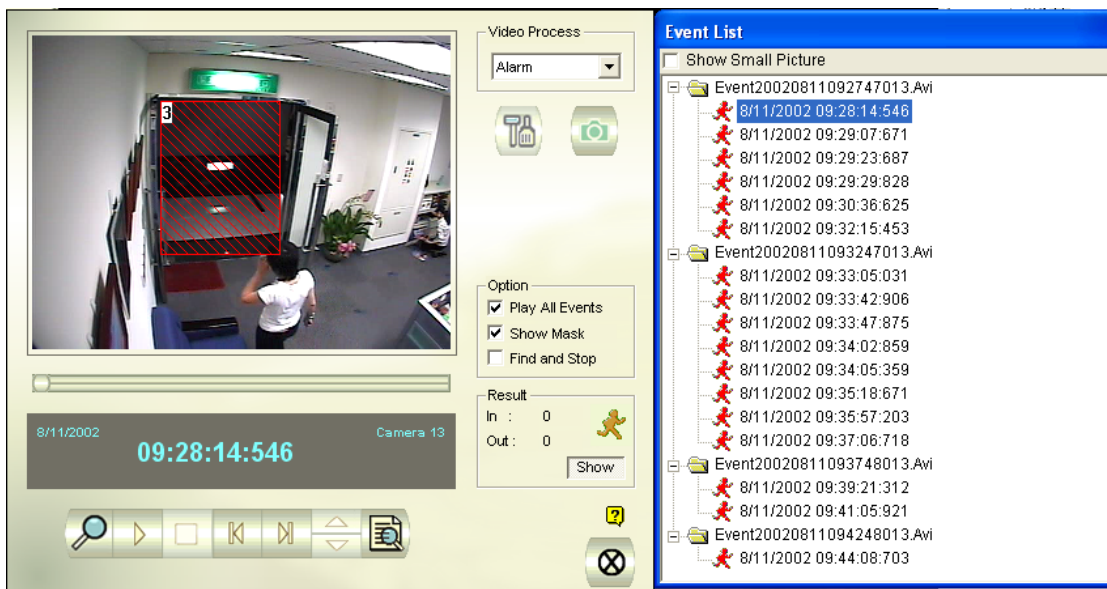

Figure 4-4   Object Search

3.   In the Video Process drop-down list, select Alarm.

4.   Click the Setup button for further settings.   The following window will appear.
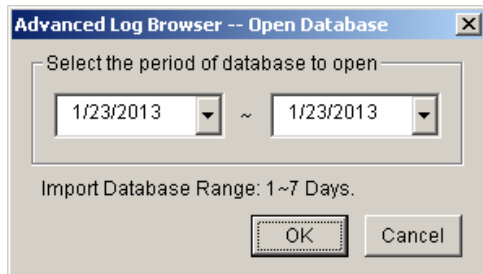
5   Use the mouse to outline a region for motion detection.   You will be prompted to enter Detect Object Region.

6.   Keep detection Sensitivity and Search Speed as defaults or adjust them if needed.

7.   Click OK to finish the settings and close the window.

8.   In the Option section, you have several options:

■   **Play All Events:**   Play back the video segments found as a continuous series of images.

■   **Show Mask:**   Show masks on the detection regions.

■   **Find and Stop** (recommended):   Pause the search process when a missing object is detected.

9.   In the control panel, click the Search button for the search.

10.   When any video segment matches the search criteria of motion detection, the Show button will be available.   Click Show to display the Event List window.

11.   Expand the event folders to see the video segments inside.   Or, enable Show Small Pictures at the upper of window to access the thumbnail view.

12.   Select one video segment, and then click the Play button in the Object Search window to play it back.   Or, click the Open ViewLog button to play it with ViewLog.

Searching and Playing Back Motion, Alarm, and POS Event

Click the Tools button, select Advanced Log Browser from the menu and the following dialog box will appear. Specify a time range, click the OK button, and all events within the specified range will be displayed in the Advanced Log Browser window (Figure 4-5).

In the Advanced Log Browser Window, double click on the Monitor Log list or the POS Log list will allow you to view related video in Quick Search Screen as shown in Figure 4-6.
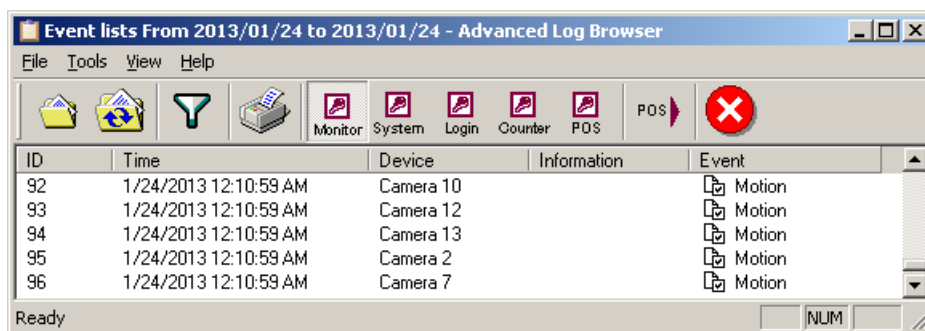
Figure 4-5 Advanced Log Browser

Quick Search is a very useful tool for searching and playing back video files that were based on motion detection, alarm, or POS events. The following figure and table give you an overview on Quick Search's features and functional buttons.
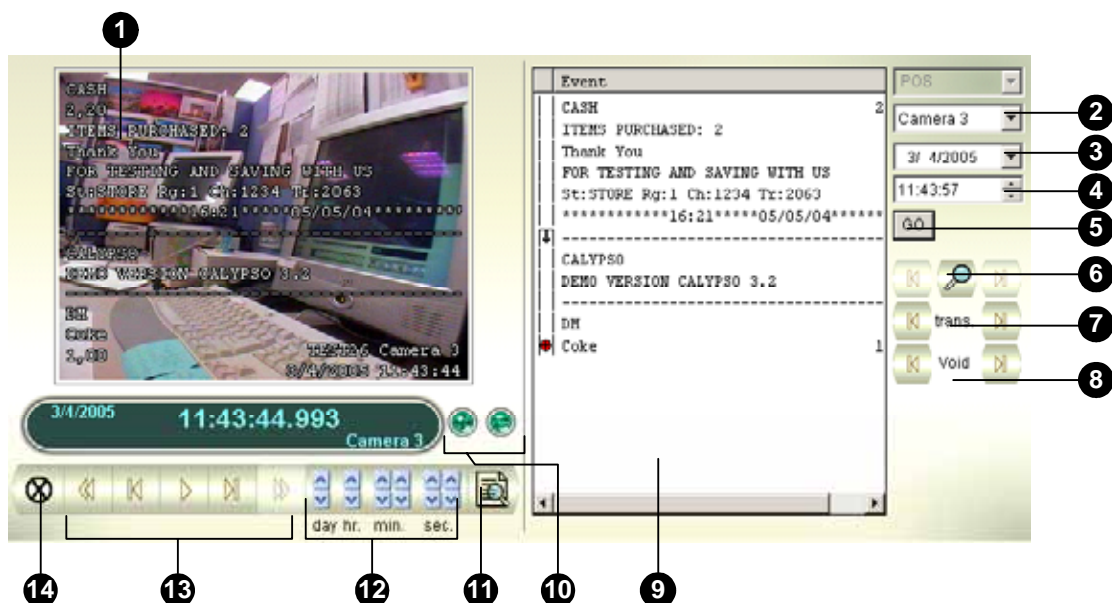
Figure 4-6 Quick Search Screen

No.	Name	Description
1	Monitoring Window	Displays video associated to the event
2	Camera Select	Use the drop-down list to select camera
3	Day Select	Use the drop-down list to select date
4	Time Select	Use the drop-down list to select time
5	Go Button	Click to search files that matches to the parameters set above.
6	Event Query	Click to specify event query
7	Transaction	Use the arrow buttons to select previous or next transaction event.
8	Void	Use the arrow buttons to select previous or next void event.
9	Transaction Window	Displays POS transaction
10	Mode Switch	Click these buttons to enable or disable Transaction Window and to switch between 640x480 or 320x240 display.
11	ViewLog	Click to open ViewLog application.
12	Time Period	Use these buttons to search event within the specified time.
13	Playback Panel	Includes Play, Pause, Previous 10 frames, Home, Next 10 frames, End buttons.
14	Exit	Click to close Quick Search screen

Click the Event Query button on the Quick Search panel, and the following dialog box will appear.

Use this function to find POS events by a specific item, transaction, or date.

[Find Text]   Enable this option to find video events that match to the key word.

[POS Event]   Enable this option to find video events that match to the specified transaction type.

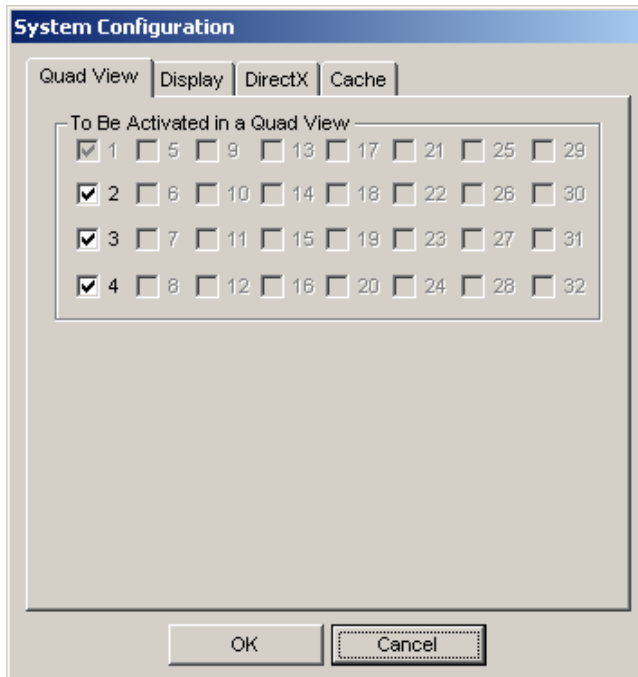**[Start Time]**   Enable this function and use the drop-down list to specify date and time

[Rule]   Specify to search forward or backward from the set date.
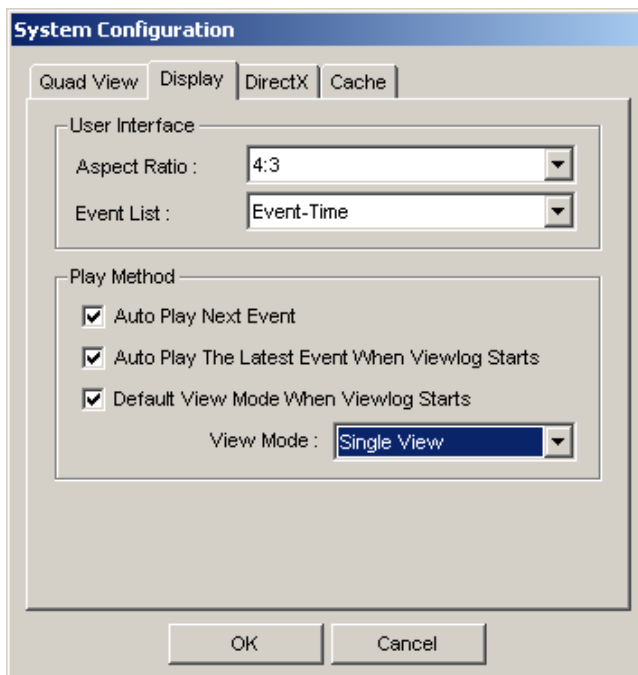
Advanced Setup

The Setting button on the Function Panel allows you to configure (1) Quad View, (2) Display, (3)

DirectX and (4) Cache.   Click this button to open the System Configuration dialog box.

[Quad View]

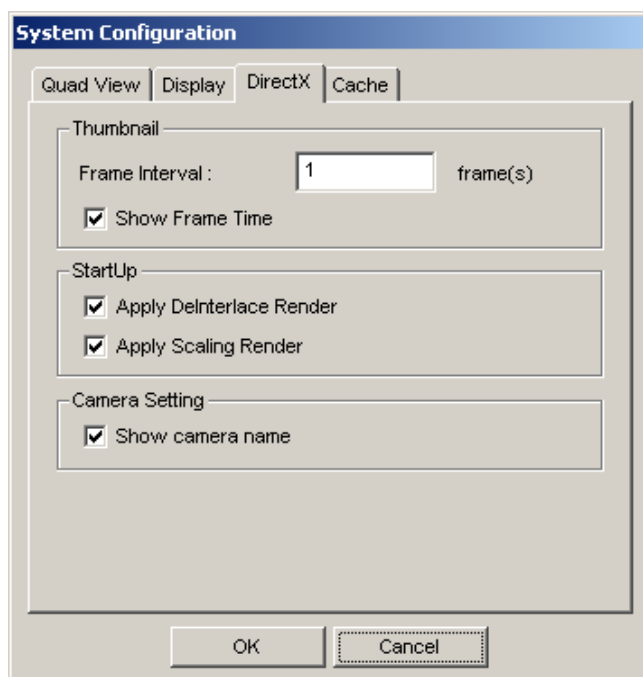Select four desired cameras to display in Quad View mode.

[Display]

- ■ **Aspect Ratio:**　Select the ratio between the width of the image and the height of the image.
- ■ **Event List Setting:**　Click the drop-down list to select the display layout of Video Event List. You can select to display Event Time only, Event Time together with Total Frame, Event Time together with Total Time, or Event Time together with File Size.
- ■ **Auto Play Next Event:**　The next events can be put in sequence for auto playing.
- ■ **Auto Play the Latest Event when ViewLog starts:**　The latest event starts playing when ViewLog starts.
- ■ **Default View Mode When Starts:**　Select the desired view mode at startup.

[DirectX]

[Thumbnail]

- ■ **Frame Interval:**　Specify the number of frames between each video thumbnail.
- ■ **Show Frame Time:**　Displays time stamp on each thumbnail.

[Startup]

- ■ **Apply De-interlace Render:**　Enable the De-interlace function, and then restart ViewLog to apply it.

Note:　This function requires DirectX 9.0C.　The De-interlace only works in single view with the resolution of 640 x 480 and 720 x 480.
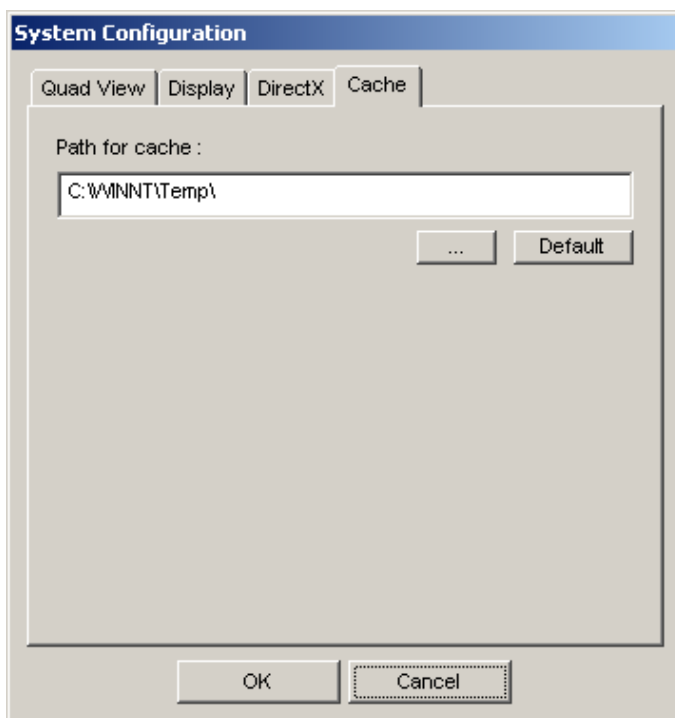
■ **Apply Scaling Render:** Select to smoothen mosaic squares when enlarging a playback video. Restart ViewLog to apply it for the first time.

Note: This function requires DirectX 9 and VGA card with the video scaling support. And the scaling only works in single view.

[Camera Setting] Display the camera number or ID on the screen.

[Cache]

A cache is a memory location that is used to store data temporarily, when you are using the function of Save AVI or Export DVD. If the default path does not have sufficient space for this temporary storage, assign another path by clicking the [.....] button.

Recycling Option for Video Files

You can choose whether to recycle your video files. To apply this function, follow the steps below.

1. Select a desired video event from Video Event List, and then right click it to call up a menu as shown below.

The never-recycling flag

The never-recycling option

2.   Select the option of Mark Never Recycle.   A never-recycling flag will appear next to the video event.

3.   To disable the never-recycling function, right click the video event again and select Unmark Never Recycle.

Unmarking All Never-Recycling Flags

The above step 3 illustrates how to unmark never-recycling flag one by one.   When you like to unmark all the never-recycling flags in certain cameras, follow the steps below.
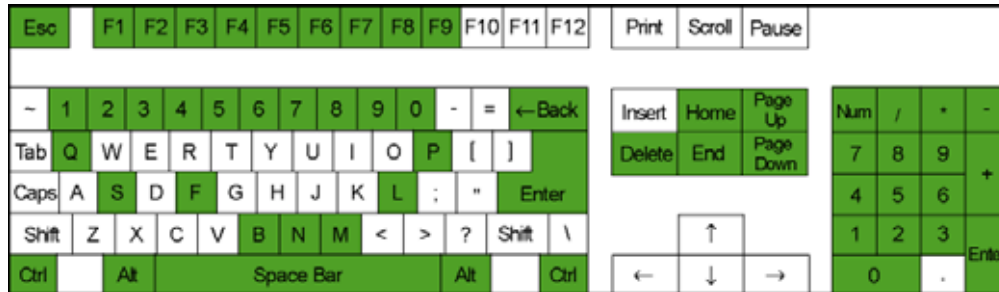
1.   Shut down ViewLog System and Main System if they are running.

2.   Go to the Windows Start menu, select Programs, point to the GV folder, and then click Repair Database Utility.   A valid ID and password are required.

3.   When the Select Camera for Repair Database dialog box appears, select the cameras of video files that you want to unmark their never-recycling flags

4.   Click OK to open the Repair Database window.   See Figure 5-9, on page 124.

5.   Click the Use Default Path button to unmark all the never-recycling flags.

Reserving Never-Recycling Flags

If you like to reserve all the never-recycling flags you marked on video events even after repairing the database, click the check box of Reserve Never-recycle Flag on the Repair Database window before making repairs.   See Figure 5-9, on page 124.

Fast Key Reference

This option lets you view the fast key window of ViewLog, giving you an instant reference.   Click the Tools button in the main screen, and then select Fast Key to display the window.

Key	Function
Esc	Exit
Enter	Play/Pause
Back	Rewind/Pause
Space	Stop
Num 1-9, 0 and F1~F6	Switch the camera channel
Num 1-9, 0 and F1~F6	Switch the audio channel
Ctrl+F8	Display/Hide the Basic Search dialog box
Ctrl+B	Display/Hide the Quick Backup dialog box
F7	Switch between single and multi view
F8	Display/Hide the Advance Search dialog box
F9	Display/Hide the Event List window
Alt+"M"	Turn the sound on/off
Alt+"N"	Go to the next event
Alt+"P"	Go to the previous event
B, b	Display/Hide the Advanced Backup dialog box
F, f	Display/Hide the Fast Key Reference table
P, p	Print the image
Q, q	Switch the screen division
S, s	Display/Hide the Save AVI File dialog box
Page up	Move one frame back
Page Down	Move one frame forward
Home	Go to the first frame
End	Go to the last frame
+	Zoom in
-	Zoom out
∗	Increase playback speed
/	Decrease playback speed
Delete	Delete events

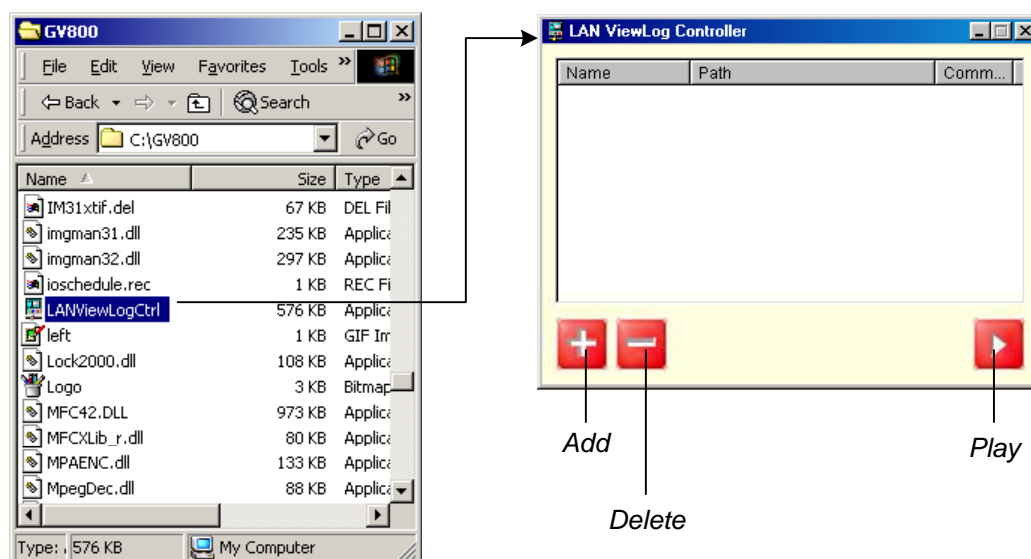# Playing Back across Local Area Network (LAN)

It is possible to playback video files across the network (LAN) using LAN ViewLog.   This application provides fast access to file location and allows playback using ViewLog in any local PC.   Same task would be accomplished by using Windows My Network Places but in a much more complicated process.

Before you start, make sure both your system folder (GV800 folder, for example) AND to-be-view video files are made available to network users, done through proper setups in Windows Sharing And Security.   After the folder and files made available, follow these steps to download LAN ViewLog to local PC:
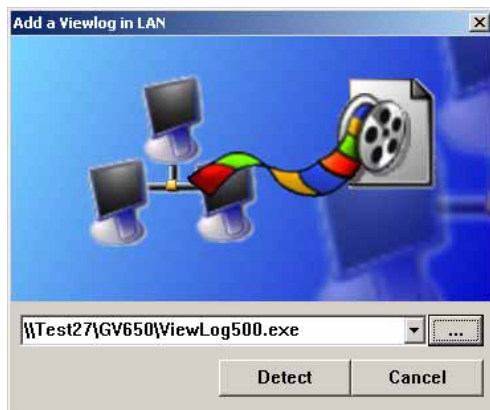
1.   At any local PC, go to Windows My Network Places.   Find server PC where the system is located, and then find LANViewLogCtrl from system folder, see follows (assuming that the system is running GV-800 on drive C:)
2.   Copy this application (Copy, Paste) to your local PC.   The application is now loaded to local PC.
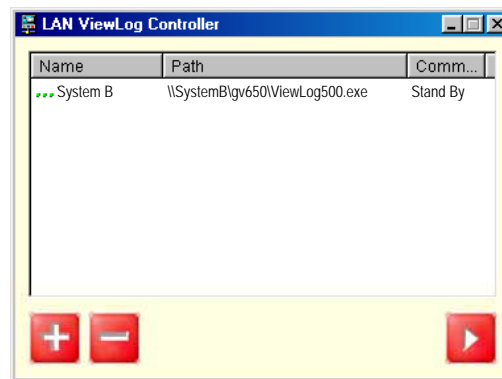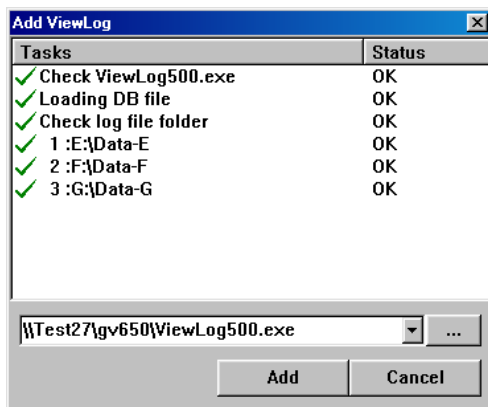
To choose video files to view:
1.   Open LAN ViewLogCtrl in local PC to bring up the LAN ViewLog Controller, as shown:

2.   Click the Add button to bring up the Add a Viewlog in LAN dialog box:

3.   Click the Browse button and select ViewLog500.exe in system folder.

4.   Click the Detect button to load recorded video files from server PC.   If you see a red cross sign instead of green checks (shown here), go back to your Windows Sharing And Security in server PC and check if you've made these folders share for intended PCs.

5.   A path to server is now established.   Click the path to open ViewLog that is loaded with video files. More paths may be added for fast access through the application.
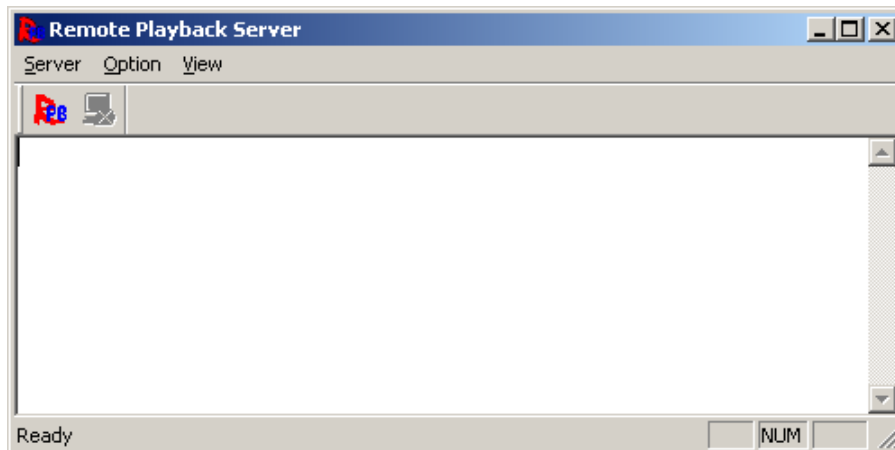
Playing Back over Internet

Remote Playback Client (RPB Client) allows client PCs to download history video files from server PCs through Remote Playback Server (RPB Server).   Before getting started, make sure the following requirements are met:

OS	Windows 2000, XP, Server 2003
CPU	Pentium 500 (minimum)
Memory	128MB RAM
Hard Disk	20GB (minimum)
VGA	NVIDIA GeForce II 32MB, 800x600 screen resolution (minimum)
Network	TCP/IP

Working with Remote Playback Server at the Server PC

To establish a connection, first activate RPB Server at one server PC.   RPB Server comes with the installation of Main System.   Follow these steps to activate it.

1. Go to Windows Start, select Programs, point to the GV folder, and then select Remote Playback Server.   This RPB window appears.

2. Click ![RPB] the Start Service button.   A valid ID and Password are required.

    In the PRB window, you can see the message, for example, "*1/4/2005 6:14:36PM Start Sever*", indicating when the server is activated.

To stop a connection, click ![End] the End Server button.   A valid ID and Password are required.

To minimize the RPB window in Windows taskbar, select Option from the menu bar, and then select Hide When Minimize.

Configuring RPB Server

To configure the RPB Server, select Option from the menu bar, and then select Setup.   This displays the following dialog box.

[Auto Run when Start Windows]   Automatically starts RPB Server at Windows startup.   Enter an ID and a password that are allowed to use the server.

[Save the Connective Record]   Check to create a log that keeps the login and logout status of the server.   Type a storage path in the Path field.

[Port]   The default port is 5066.

[End connection when idle more than x minute(s)]   Stops the connection after the assigned idle minutes.

[Maximum Users]   One RPB Server allows the maximum of 16 connections.   You can determine the maximum number of client PCs allowed to log in your RPB Server.

[Enable IP White List]   Check the item and click Edit to create a list of IP addresses only which are allowed to access the RPB server.   For the setting details, refer to *IP White List Settings* in Chapter 6, on page 130.
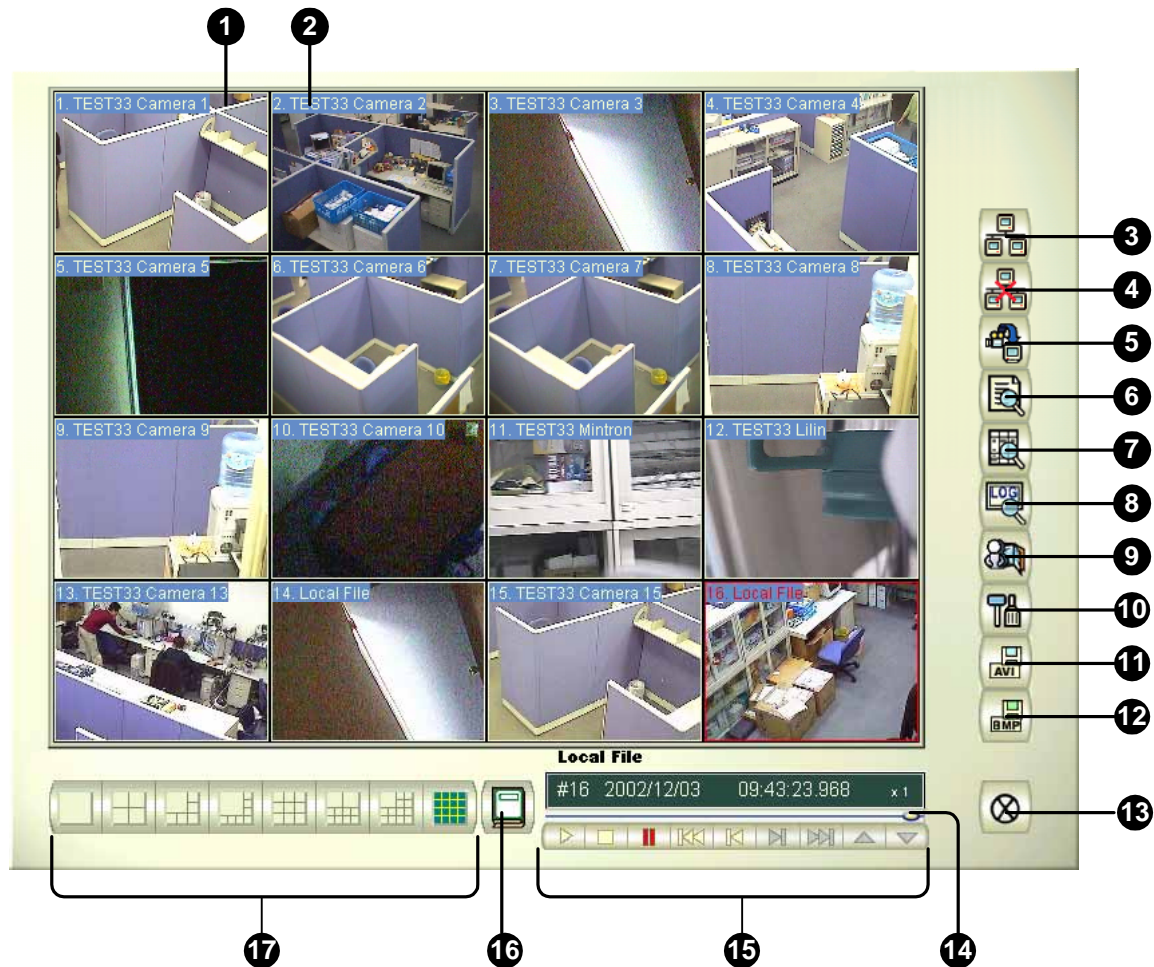
[Bandwidth Control]   Check to prevent overloading on slow network.   You can set the bandwidth from 0 to 100,000 Kbytes to transfer in one second.

[Enhance network security]   Enable to enhance Internet security.   Please note when the feature is enabled, the subscribers using earlier version than 7.0 cannot access the RPB any more.

Working with Remote Playback Client at the Client PC

RPB Client software is to be installed at the client PC, and the software is included in the installation CD.   For software installation details, see *Software Installation* on page 15.   Select Remote Playback Client Site when running into the Install Program menu.   Refer to Figure 1-15.
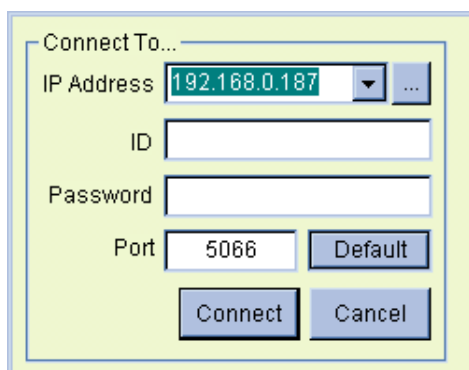
Camera views from different servers may be displayed in a single 16-channel screen view.   Clicking the Page Select button turns the screen view to the next page.   Maximum two pages (total 32 channels) may be displayed in one RPB Client.

Local File

NO.	Name	Description
1	Monitoring Window	Displays playback video
2	Camera Name	The descriptive name of the camera
3	Connection	Sets connection to the RPB server
4	Disconnect	Disconnects all or selected connections from the RPB server
5	Download (Play) Remote Video	Downloads and plays remote video
6	Play Local Video	Plays back video files at the client PC
7	View List	Keeps record of connection activity
8	Connection Record	Keeps track of the connections
9	Address Book	Creates a quick connection to the RPB Server
10	Preference Setting	Customizes the RPB Client
11	Save As AVI	The same function as ViewLog. Refer to *Exporting Video* on page 95.
12	Save As Snapshot	Saves the current frame
13	Exit	Closes the RPB Client window.
14	Scroll Bar	Moves forward and backward of the playback video
15	Playback Panel	Contains typical playback buttons
16	Page Select	Toggles between channels 1~16 and 17~32.
17	Screen Division	Selects the screen division mode.

Connecting to RPB Server

Click the Connection button on RPB Function Panel.   This displays the following Connect to dialog box.

Enter the login information.   You may enter the IP address or the domain name of the RPB server. Alternatively, you may click the drop-down list to find recently visited servers, or click the Browse button to select a RPB server from the folder.
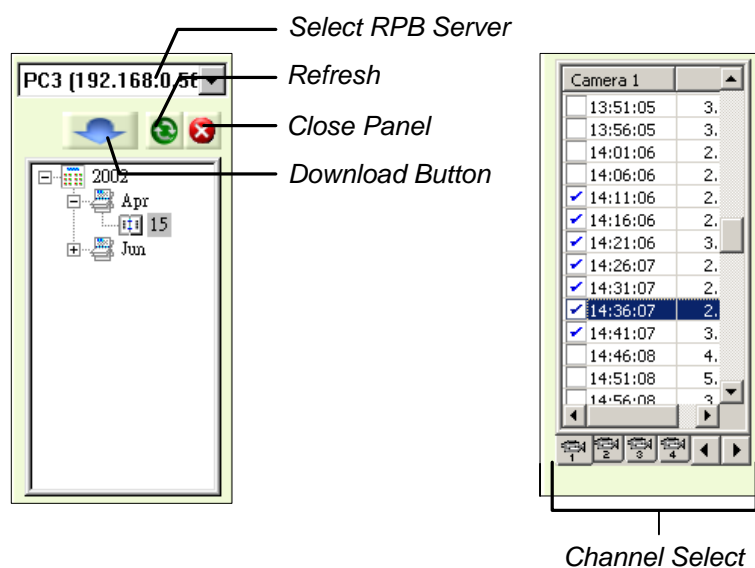
Disconnecting from RPB Server

Click the Disconnect button and select to close all connection by choosing All Connections, or close only the selected connections by choosing Select Disconnection.

Downloading and Playing Remote Video

There are two options to download and play remote video: Normal and Advanced.

[Normal]   Select Normal from the Download (Play) Remote Video button.   This displays the following Search & Download panels.

Select RPB Server

Refresh

Close Panel

Download Button

Channel Select

Follow the steps to search desired files:

1.   Select the desired RPB server from the drop-down selection field.

2.   Choose the required date from tree folder.

3.   Select the required camera from the Channel Select tab, and select the video files from Event List
      Window.

4.   Click the Download button to download by the four available options:

      ■   **Download & Play:**   Play the selected files while downloading into the RPB Client.

      ■   **Just Download:**   Download files only.

      ■   **Just Play:**   Play files without downloading them into the RPB Client.

      ■   **Download & Play (Period):**   Download files by frames.   Select only one file at a time to
            apply this function.

[Advance]   The files can be searched by time and date, and by camera.   Follow these steps to
select cameras to load at specified times:

1.   Select the desired RPB Server from the drop-down selection field.

2.   Select the required camera from Select Camera(s) window, or click Select All Cameras button to
      select all cameras.

3.   Specify the time range.   Click OK to start the search.

Note: A warning message may appear if the downloaded file size is greater than the designated
storage space.

Playing Local Video

After loading the video files from the server PC to the client PC, click the Play Local Video button to
play back the files at the client PC through the RPB Client.

View List

The list keeps record of connection activity, and it is available in four listing options:

[Channel List]   Lists all RPB Servers and their respective cameras.   Click the Up and Down buttons to move up and down the list.   The Disconnect button ends the connection of the selected camera. The Exit button closes the list while all connections remain.

[Connection List]   Indicates the number of files currently engaged in the connecting activity.   The number shown in the Total Works field drops as connection completes.   Click the Work List to show the type of connecting activity engaged, listed in the Type field.   Click the Back button to go back to the list; the Disconnect button to end the connection; the Exit button to close the list.

[Download List]   Displays a list of files that is currently being downloaded to the RPB Client. The Ratio field shows each file's download progress and the Save Path field shows the location where files are downloaded to.

[Download History]   Displays a history list of downloaded files in the RPB Client.   Double click the list will play back related files in the RPB monitoring window.

Connection Record

Connection Record keeps track of the connections, which makes your next connection more easily.

[Save Connective Status]   Saves current connections to a path.   When open the RPB Client next time, click the Connection Record button and then select Load Connective Status (see descriptions below) to look for this path for fast access to current connections.
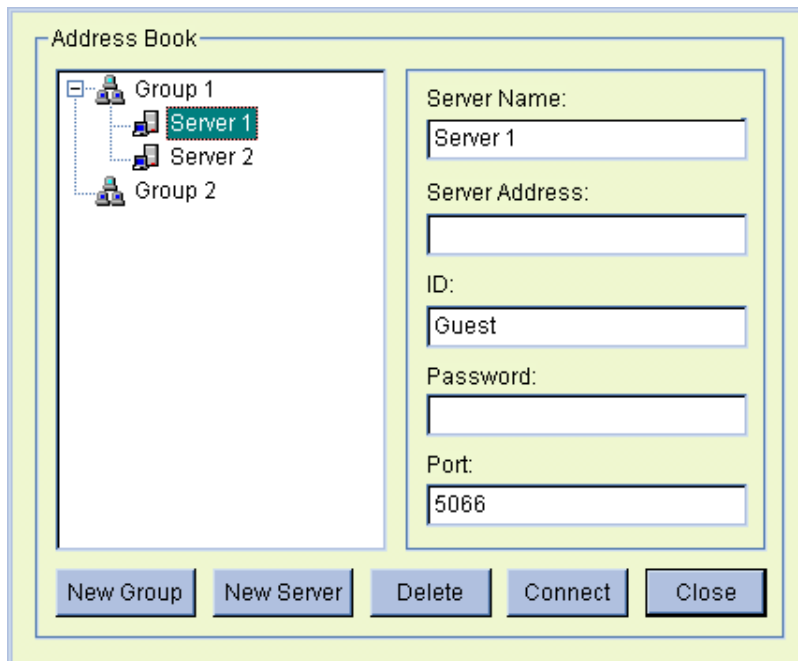
[Load Connective Status]   Loads connection status that was previously saved into a file by Save Connective Status, described as above, into the RPB Client.

[Load Resume File]   If the connections were ended, select this option to continue the downloading process.

Address Book

The Address Book not only keeps connection information about the RPB sever, but also allows quick connection and auto login to the RPB server.   Follow these steps to create an entry in Address Book:

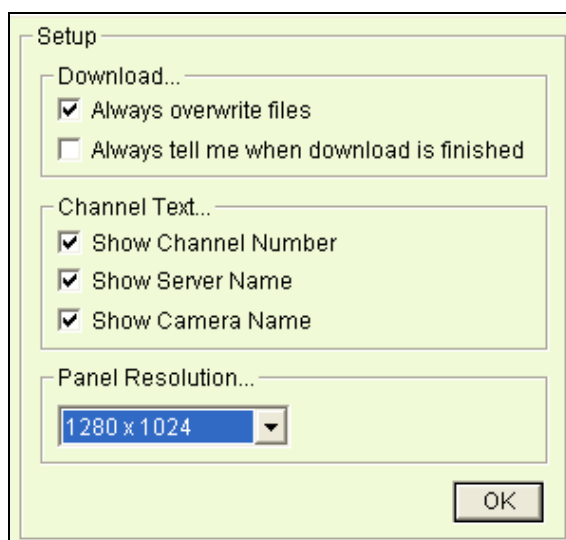Click the Address Book button to bring up the following dialog box.

Click the New Server button and provide information to the fields:

- ■ **Server Name:**   Give a descriptive name to the server.
- ■ **Server Address:**   Enter the IP address or domain name of the server.
- ■ **ID:**   Enter an ID that was already created in the server.
- ■ **Password:**   Enter the password associated with the ID.
- ■ **Port:**   Use the default port 5066, unless otherwise necessary.

You may create a group (click New Group button) before adding any user.   Click on any group, and then click the New Server button to add users to that group.

Click the Close button to finish the setup; Delete removes the entry from Address Book; Connect connects the RPB Client to the RPB Server instantly.

Preference Settings

[Download]   The options allow you to specify how your files are saved when your storage space is full.

[Channel Text]   The selections determine the effect you want your camera view to display.

[Panel Resolution]   Select the screen resolution of the RPB Client window.

RPB Client Playback Control Panel