

## Viewing Live Video Using WebCam

With Microsoft Internet Explorer at the remote PC, it is possible to view live videos, download and play back video files, manage systems within the security network, control PTZ camera and I/O devices via the WebCam server.

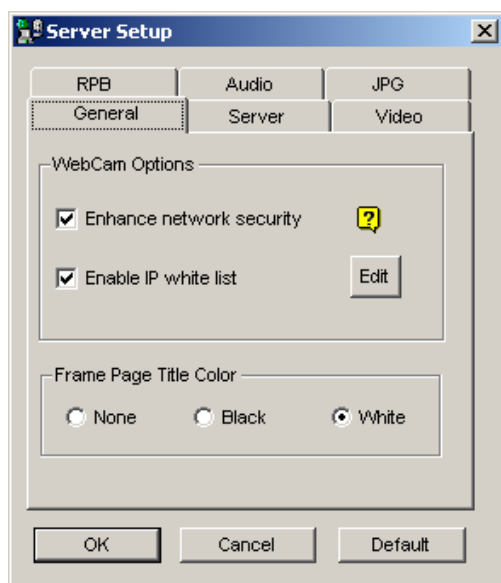
Before starting the WebCam, make sure your system meets the following minimum requirements:

OS	Windows 2000, Windows XP, Server 2003
CPU	Pentium 4, 2.0G
Memory	256MB RAM
Hard Disk	60GB
VGA	NVIDIA GeForce II 32MB, 1024x768 screen resolution
Network	TCP/IP
Web Browser	IE6.0, Netscape Navigator (with limited functionality)
DirectX	Version 9.0 or above

### Configuring the WebCam Server

GV-system is built-in with a web sever. Click the Network button, and then select WebCam Server to display the following Server Setup window. This window contains these tabs: (1) General, (2) Server, (3) Video, (4) RPB, (5) Audio and (6) JPG.

## General Settings



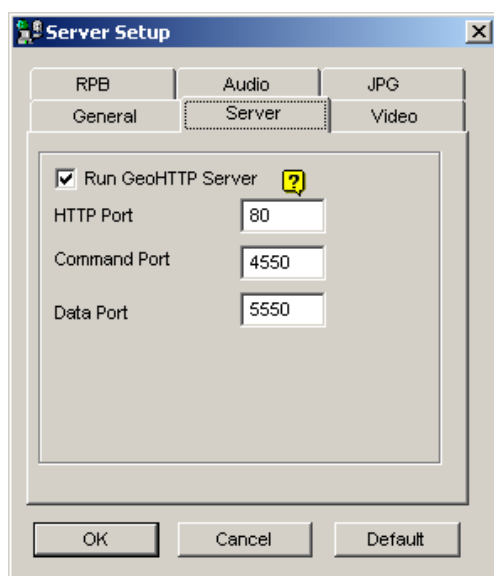
**Figure 6-1** *Server Setup- General*

### [WebCam Options]

- **Enhance network security:** Enable to enhance network security on WebCam. Please note when the feature is enabled, the subscribers using earlier version than 7.0 cannot access WebCam applications any more.
- **Enable IP White List:** Create a list of IP addresses allowed to connect to WebCam. See *IP White List Settings* for details.

**[Frame Page Title Color]** Select the color of date, time and camera stamps on the frame.

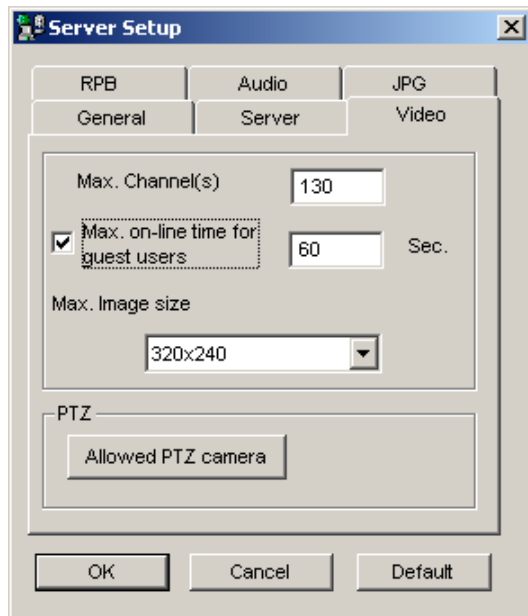
## Server Settings



**Figure 6-2** *Server Setup- Server*

**[Run GeoHTTP Server]** Enable Geo-developed HTTP webpage or use your own HTTP webpage. Command Port is the port used to access WebCam, and Data Port is the port used to transfer data over Internet.

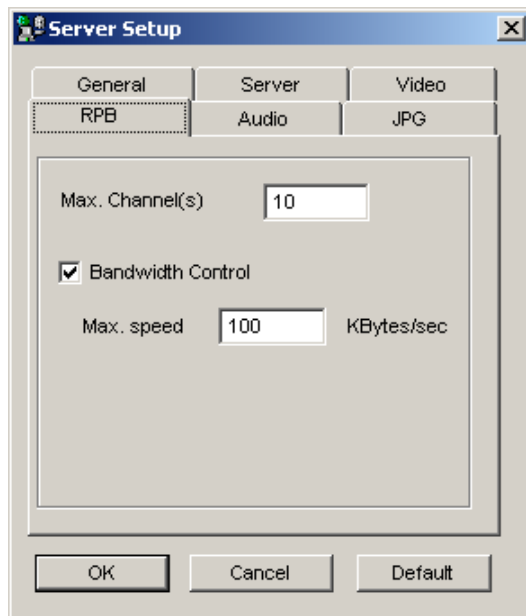
## Video Settings



**Figure 6-3** Server Setup- Video

- **Max. Channel(s):** Specify the number of channels allowed to access WebCam, with the upper limit of 200 channels.
- **Max on-line time for guest users:** Specify the time allowed for a guest user to connect to WebCam.
- **Max Image size:** Select a resolution. The default resolution on WebCam is 320 x 240. If you want to apply the 640 x 480 (De-interlace) or 720 x 480 (De-interlace) resolution, you also have to configure Video Source. Click the Configure button on the menu bar, and then select Video Source. In the Video Resolution field, select 640 x 240 or higher resolutions, and then click OK to apply it.
- **Allowed PTZ camera:** The option allows you to control selected PTZ cameras at a remote PC. Click the button and select the desired PTZ cameras to work on WebCam.

## RPB Settings



**Figure 6-4** Server Setup- RPB

This feature is used to prevent overloading on slower networks.

- **Max. Channel(s):** Specify the number of channels allowed to download to a client PC.
- **Bandwidth Control:** Enable and specify the rate of data to be transferred over network. The option effectively controls the bandwidth being used by the WebCam server.

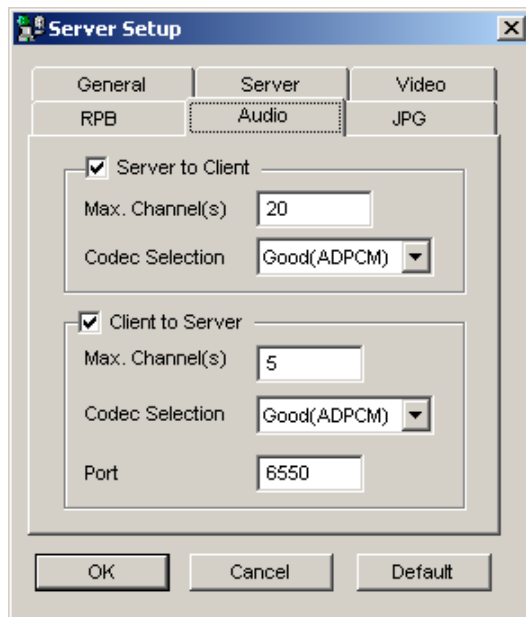
## Audio Settings

### Connecting Audio Devices

Via WebCam, you can access live audio at a remote site and talk to the server site. This feature is useful when the remote site requires speaking to the personnel at the server site in case of emergency. Before using this feature, make sure all the necessary hardware are in place:

1. If you purchase a BNC connector GV-system, connect the audio extend card to the system (see Chapter 1). If you purchase a D-type connector GV-system, audio extension cable lines should come available with the D-Type extension cables. For GV-1000, the audio card must be purchased separately (see Chapter 1 for connecting the 16-channel audio card to the system).
2. Make sure your sound card is already inside the PC. Connect a multimedia speaker to the audio output of your PC sound card.
3. Connect a desktop microphone to the input of the audio extension card (or cable line).

## Audio Setup



**Figure 6-5** Server Setup- Audio

**[Server to Client]** Allows a client PC to access live audio from the server site.

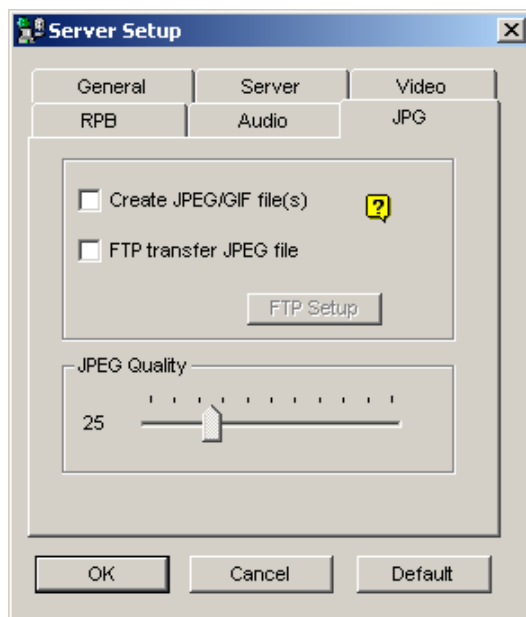
- **Max. Channel(s):** Enter the number of client PCs allowed to access live audio, with the upper limit of 20 PCs.
- **Codec Selection:** Select the audio codec. ADPCM requires 4KByte bandwidth, while G.723 requires only 0.66KByte bandwidth. But ADPCM offers much better audio quality than G.723.

**[Client to Server]** Allows a client PC to speak to the server site.

- **Max. Channel(s):** Enter the number of clients PCs allowed to speak to the server site, with the upper limit of 20 PCs.
- **Codec Selection:** The same as the above Codec Selection.
- **Port:** The default audio port is 6550.

**Note:** If your server site is installed a firewall, configure the port settings in the firewall as 4550, 5550, 6550 and 80.

## JPG Settings



**Figure 6-6** *Server Setup- JPG*

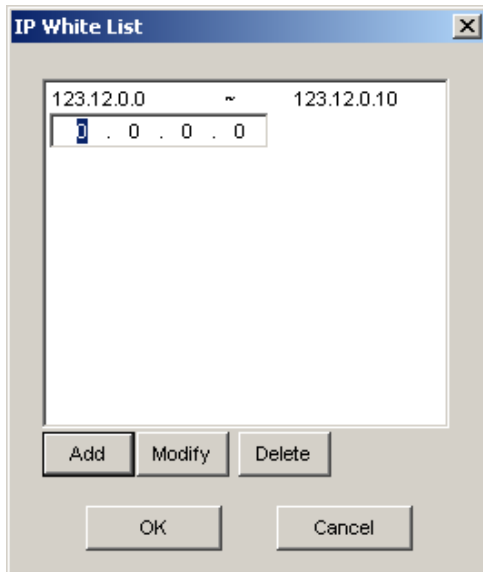
- **Create JPEG/GIF file(s):** Allows the connection to G-View (see page 155), i-Mode (see page 157), and JPEG Image Viewer (see page 149). If the feature is enabled, use the slide bar to adjust JPG image quality. The bigger the number (sliding it towards right), the better the image quality and the bigger image file size.
- **FTP Transfer JPEG file:** Allows you to view the recording files in a folder tree structure. See *FTP Server Settings* for details.

**Note:** The Create JPEG/GIF file(s) item will not be available when you enable Enhance Network Security in Figure 6-1.

## IP White List Settings

The feature lets you create a list of IP addresses only which are allowed to connect to the WebCam server. To enable the function, follow the steps below.

1. Open the Server Setup window. Refer to Figure 6-1.
2. Check the Enable IP white list item, and then click the Edit button. This IP White List window appears.

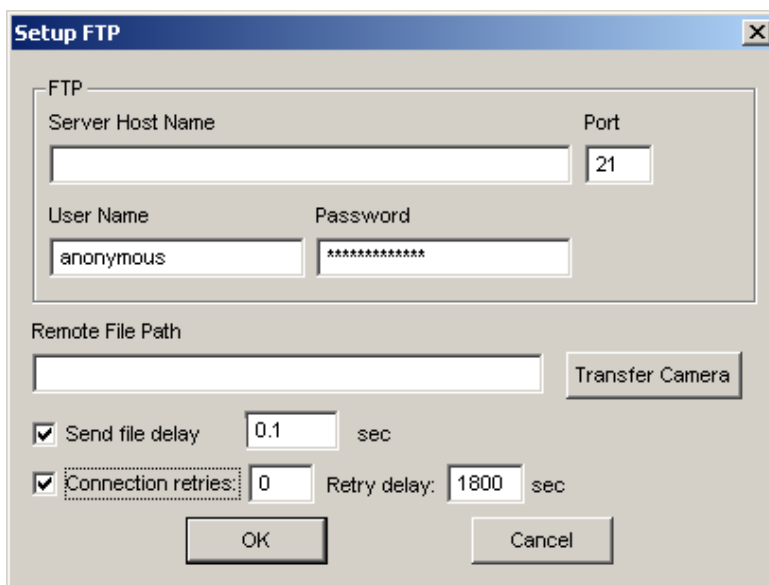


**Figure 6-7** IP White List

3. Click Add to enter an IP address or a range of IP addresses. For this example, only the IP range from 123.12.0.0 to 123.12.0.10 is allowed to connect to WebCam.
4. Click Modify to change a created IP address. Click Delete to delete a created IP address. Click OK to apply the settings.

## FTP Server Settings

The option of FTP transfer JPEG file allows you to access the recording files in a folder tree at a client PC installed with the FTP server. In Figure 6-6, select the FTP transfer JPEG file item, and then click the FTP Setup button to display the following dialog box.



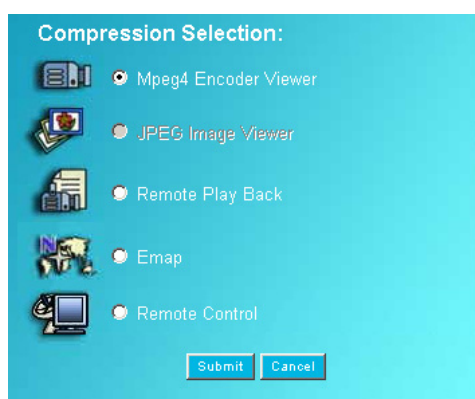
**Figure 6-8** FTP Setup

1. In the Server Host Name field, enter the IP address or domain name of the FTP server. Keep the port setting as default at 21.
2. Enter a valid user name and password to access the FTP server.
3. Specify a file path to save the recording files on the FTP server.
4. Click the Transfer Camera button and assign which camera's files to be transferred to the FTP server.
5. In the Send File Delay field, specify the time of updating JPEG files from the GV-system to the FTP server. The time range is from 0.1 to 10 sec.
6. In the Connection Retries field, specify the number of retries when the FTP connection fails (Max : 999). In the Retry Delay field, specify the interval between each retries (Max : 9999 sec.).
7. Click OK to apply above settings.

## Starting WebCam at the Client PC

Once the WebCam server at the GV-system is enabled, it is then possible to view images using a web browser at a client PC or from a remote site. Microsoft Internet Explorer will be used as the browser through the entire chapter.

1. To start the connection, open an IE browser.
2. Key in the IP address or the domain name of the GV-system to display the following window.



**Figure 6-9** WebCam Compression Selection

- **MPEG4 Encoder Viewer:** Provides the most complete functionality of the WebCam applications, allowing you to view up to sixteen cameras from different GV-systems.
- **JPEG Image Viewer:** Provides least features but is suitable for the users with limited bandwidth, for example, users viewing with Apple Mac, and operating systems using Netscape Navigator.

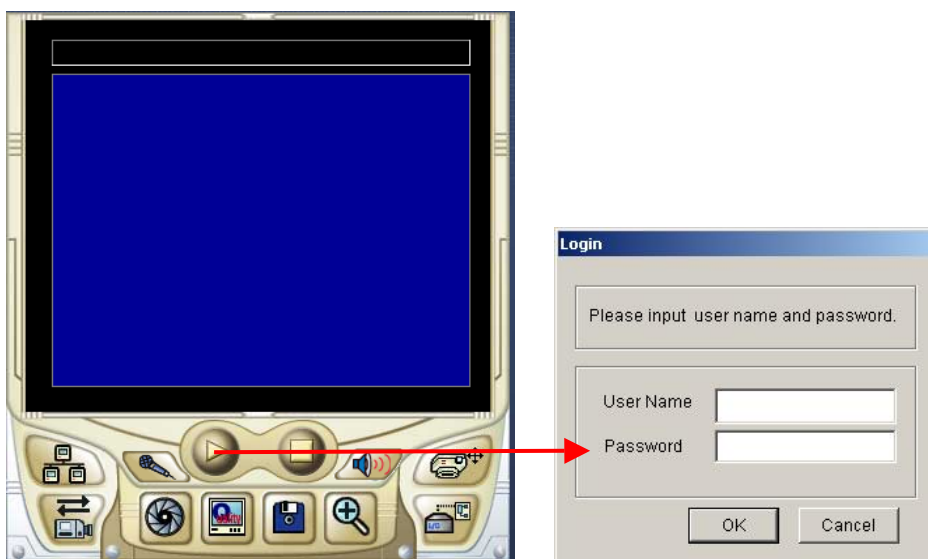


- **Remote Play Back:** Downloads history files from the GV-system onto the client PC.
  - **Emap:** Accesses the Emap files.
  - **Remote Control:** Accesses the GV-system settings.
3. For the purpose of this demo, select MPEG 4 Encoder, and then click the Submit button to display the following window.



**Figure 6-10** Select Internet Connection

4. Select the type of Internet Connection you're using. Modem users are limited to Single Window, while broadband users have the option of 2 Windows or Multi View. For this demo, select Single Window, and then click the Submit button.
5. Your IE browser starts loading the MPEG4 Encoder interface. When the loading is completed, click the Play button and input a valid user ID and password.



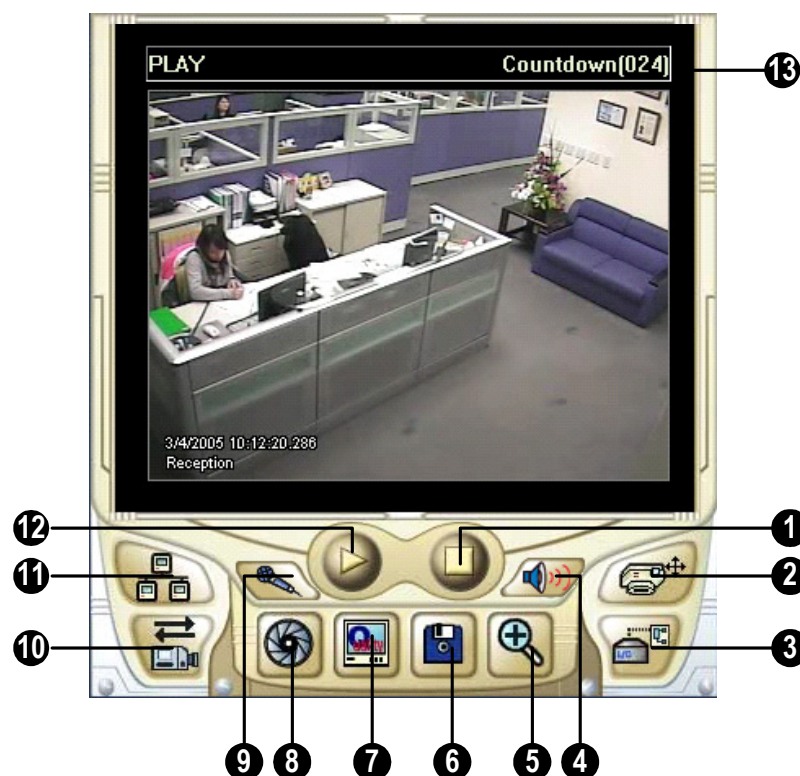
**Figure 6-11** Entering a valid ID and password

6. If the item of Enhance network security was selected in WebCam Options (see Figure 6-1), you will be prompted to enter a security code. In this example, enter *r5dfsw*, and then click OK. If the connection is established, you will see video streaming in the MPEG4 Encoder Viewer.



**Figure 6-12** Enter a security code

## Single View MPEG 4 Encoder Viewer



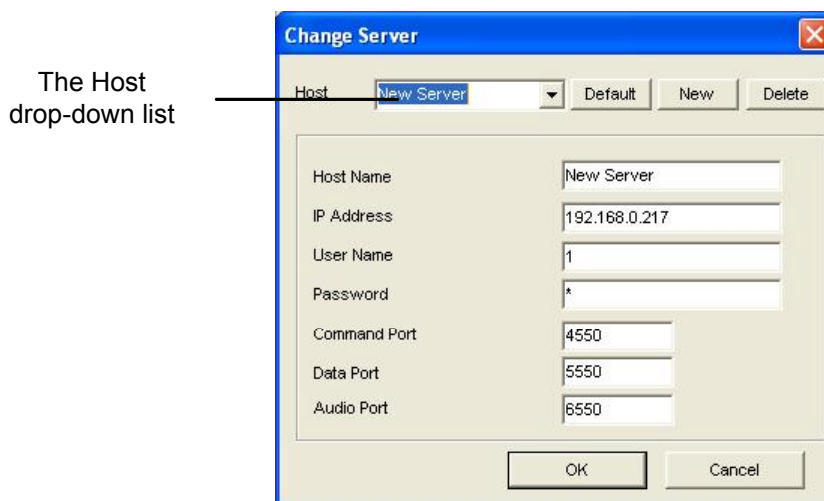
**Figure 6-13** Single View MPEG4 Encoder Viewer

The buttons in the Single View Viewer:

Name	Description
1 Stop	Click to terminate connection from GV Server
2 PTZ Control	Click to bring out the PTZ control panel
3 I/O Control	Click to bring out I/O control panel
4 Speaker	Click to listen to live audio of the server site
5 Full Screen	Click to switch to full screen view. Click [Esc] to switch back
6 File Save	Click to save live video in client PC's HDD
7 Change Quality	Click to adjust video quality in 4 levels
8 Snapshot	Click to take a snapshot from the displayed live video
9 Microphone	Click to speak to the server site
10 Change Camera	Click to select different camera to be displayed in the monitoring window.
11 Change Server	Click for the options of Change Server, Alarm Notify, Data Rate Configure and Enable DirectDraw.
12 Play	Click to connect to GV Server.
13 Time Remaining	A countdown timer that shows the remaining time of your usage

## Administrating Host Server

This option allows you to add, edit, and remove a GV server from the Host drop-down list. The drop-down list is used to switch the connection to a different GV Server listed inside. Click the Change Server button to display the following dialog box.



**Figure 6-14** Change Server

**[Adding Host Server]** To add a host server to the drop-down list, click the New button. In Host Name field, input a name to identify the designated GV server. Input the IP address or domain name of the GV Server. Input a valid user name and password with privilege to use this function. Leave

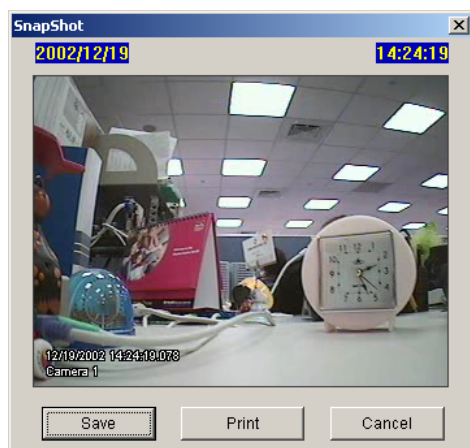
all port settings as defaults at 4550, 5550, and 6550 respectively unless otherwise necessary. Click the OK button. Then the created GV server will appear in the drop-down list.

**[Editing Host Server]** Select the GV Server you wish to edit from the Host drop-down list. All information of the selected server will be displayed. Change the information in the fields as required and click the OK button. Then the information is updated and connection is switched to the edited GV server.

**[Removing Host Server]** Select the GV server you wish to remove from the Host drop-down list, and then click the Delete button to remove it.

## Taking a Snapshot from a Live Video

Click the Snapshot button to display the following Snapshot window. Click the Print button to print out the displayed image. Or click the Save button to save this image in a client PC.

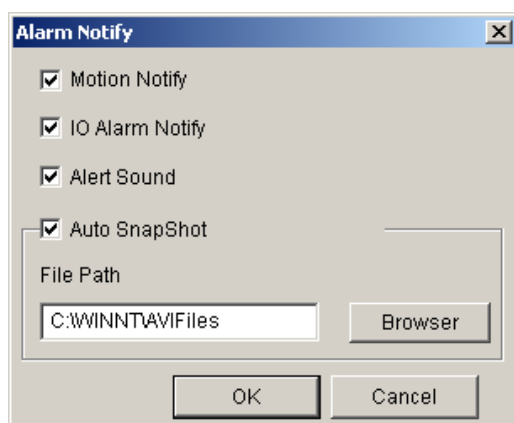


**Figure 6-15** Take a Snapshot

## Pop-up Setup

The Single View MPEG4 Encoder Viewer can be set to pop up as soon as motion is detected or I/O devices are triggered. To enable the function, follow the steps below.

1. Click the Change Server button, and then select Alarm Notify to display the following dialog box.



**Figure 6-16** Alarm Notification

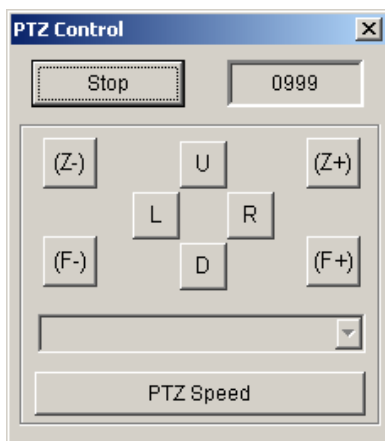
- **Motion Notify:** The Viewer will pop up as soon as motion is detected.
  - **I/O Alarm Notify:** The Viewer will pop up as soon as I/O devices are triggered.
  - **Alert Sound:** Enable the computer noise alarm on motion and alarm activation.
  - **Auto Snapshot:** The program will take a snapshot every 5 seconds on motion and alarm activation.
  - **File Path:** Assign a path to save the snapshots.
2. Click OK to apply the above settings.
  3. Minimize your IE browser to test the pop-up function.

## Exporting Video

Click the File Save button to save video in a client PC. Files saved in AVI format are playable at third party viewers.

## PTZ Control

Click the Camera Select button to select one PTZ camera, and then click the PTZ Control button to bring up the PTZ control panel.



**Figure 6-17** PTZ control panel

One PTZ camera only allows one user to control at a time. If several users are trying to control the same PTZ camera at the same time, the Single View viewer will give the priority to the first login user and then to the next user in queue. Each user will be given 60 seconds to control the PTZ camera. The Timer at the upper right corner serves two meanings: the remaining time of your control or the total waiting time.

The supervisor is given the highest priority to control the PTZ camera and won't be restrained by 60-second time limit. When the supervisor logs in WebCam, the Timer will show up 999.

The PTZ Speed button in the lower part allows you to configure the speed of a PTZ camera up to five levels.

## Output Control

Click on the I/O control button to bring out the I/O control panel. The I/O control panel allows you to review the alarm status of the connected GV-system and to initiate its relay output device. The alarm status is display in a 3 levels file tree. The first level indicates date, second indicates time, and the third indicates alarm ID. Click the Reset button will clear the alarm list.



**Figure 6-18** I/O Control

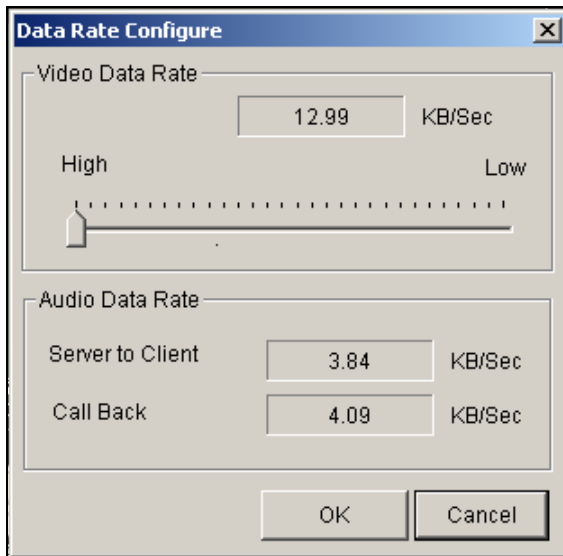
To initiate output device, use the Module drop-down list to select module and use the Pin Name drop-down list to select output pin. Click the Force Output button will initiate device connected to the selected output pin. The Timer serves same meaning as in the PTZ control panel. Each user will be given 60 seconds of control time. Click the Stop button will stops the operation and turn over the control privilege to the next user waiting online.

## Two Way Audio

To make two way audio possible, both hardware and software must be properly set up and installed. For the instructions on setup and installation, refer to *Audio Settings* on page 128. Click the Speaker button to access live audio from the server site, and click the Microphone button to speak to the server site. See Figure 6-13 for button 4 and 9. When both buttons are enabled, you can perform two-way communication between the client PC and the server site.

## Data Rate Configuration

When sounds seem pause or break up, you can configure Data Rate to improve the situation. Click the Change Server button and select Data Rate Configure to display the following window. Moving the slide bar to the Low direction will decrease the frame rate but increase the audio performance; moving the slide bar to the High direction will increase the frame rate but decrease the audio performance.



**Figure 6-19** Data Rate Configuration

## DirectDraw Setup

The DirectDraw setting is enabled by default. Some VGA cards might not support DirectDraw and can produce distorted frames. In this case, disable the function from the Change Server button.

## Multi View MPEG 4 Encoder Viewer

Multi View is a multi-channel MPEG4 Encoder Viewer, allowing users to view 4, 8, and 16 live cameras simultaneously. Because multiple channels require a large amount of data to be transferred over Internet, this function is limited to broadband users only.

To start Multi View, follow these steps:

1. Follow the instructions in the section of *Starting WebCam at the Client PC* on page 132 until the Select Internet Connection window appears.
2. Select DSL/CABLE/T-1, choose Multi View, and then click the Submit button. First time users will be prompted to install the Multi View applications. Select Yes, and then follow the instructions to complete the installation.
3. When the Login dialog box appears, enter a valid user ID and password, and then click OK. This displays the following Multi View window.





**Figure 6-20** The Multi View window

The controls in the Multi View:

Name	Description
1 Monitoring Window	Displays live video of a camera
2 Host Server Window	Displays available servers and their camera channels
3 PTZ	Click to display the PTZ control panel
4 I/O	Click to display the output control panel
5 Channel Status	Shows the status of the selected channel
6 Configure	Click to access the Configure window
7 Edit Host	Click to access the Edit Host window
8 Camera Status	Click to view the status of the connected cameras
9 Host Information	Click to view the general information of the connected servers
10 Zoom in and out	Click to zoom in or out the selected channel
11 Add/Remove Channel	Click to add or delete the channels for video polling; relate to No.13
12 Full Screen	Click to a full screen view
13 Video Polling	Click to scan the selected channels; relate to No. 11
14 Screen Divisions	Select 4, 8, or 16 screen divisions
15 Exit/Minimize	Click to exit or minimize the Multi View



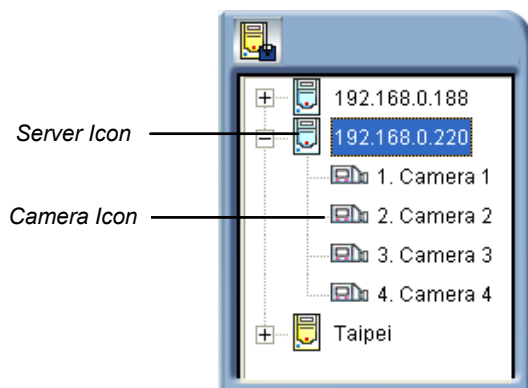
16	Speaker	Click to speak to the server site
17	Microphone	Click to listen to live audio from the server site
18	Stop	Click to terminate connection to a server
19	Play	Click to establish connection to a server
20	Save	Click to save live video
21	Quality	Click to change video resolution
22	Snapshot	Click to take a snapshot of the selected channel
23	Save Camera to Multiple Host	Click to save the selected camera and to create a multiple host

## Working With the Host Server Window

The Host Server window displays a list of available GV servers. The server icons indicate available servers and the camera icons indicate all cameras included in the selected server. To connect to a server site:

1. Click a monitoring window, which will be highlighted in red frame.
2. Double click on a camera icon, and then its corresponding video will be loaded to the selected monitoring window.

First time users will only see one server icon as no additional servers are created yet. For the details of adding new servers to the Host Server window, refer to *Creating a Quick Connection to a Host Server* on page 145.



**Figure 6-21** The Host Server window

## Exporting Video

You can save live video in a client PC. The files in AVI format are playable at the third party viewer. Click the Save button, and then select all or several cameras to start recording. For the folder path, see Figure 6-25.

## Taking a Snapshot from a Live Video

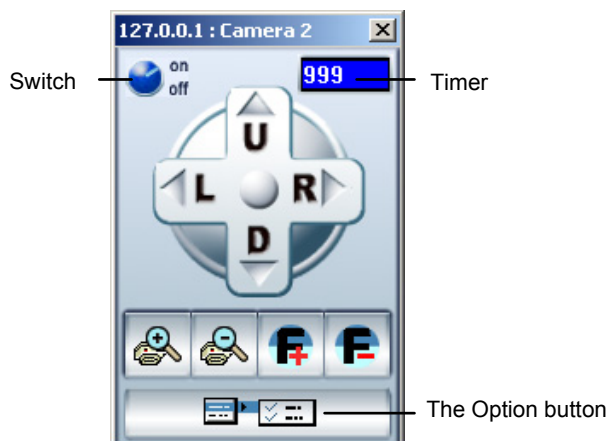
Click a desired channel, and then click the Snapshot button to take a snapshot of live video.

## PTZ Control

1. Select a PTZ capable camera from the monitoring window, or double click it on the Host Server window.
2. Click the PTZ control button. See No. 3 in Figure 6-20.
3. Turn the switch to the ON position.
4. Use the directional, zoom-in, zoom-out, focus-in, focus-out buttons to control the PTZ camera.

The Timer has the same functions as the one in the Single View MPEG4 Encoder Viewer. The supervisor is given the highest priority to control PTZ in Multi View and won't be restrained by 60-second time limit. When the supervisor logs in Multi View, the Timer will show up 999.

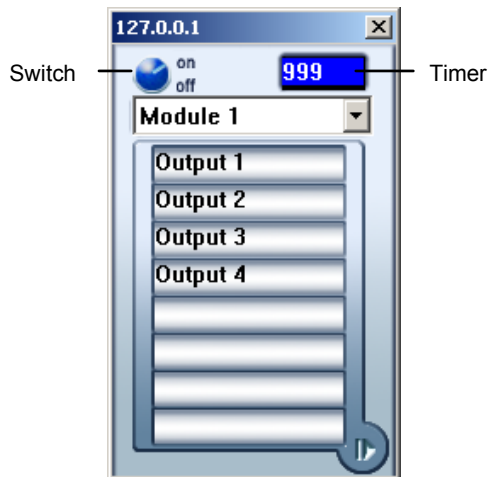
The Option button lets you direct the PTZ camera to a preset position and configure the speed of the PTZ camera up to five levels.



**Figure 6-22** PTZ control panel

## Output Control

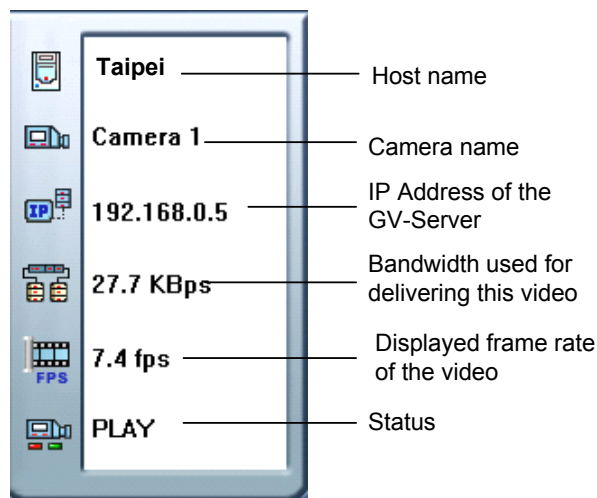
1. Click the I/O control button. See No. 3 in Figure 6-20.
2. Turn the switch to ON position,
3. Select a module from the drop-down list. Each module provides 4~16 connected relay output devices.
4. Click the Output (x) button to enable the output device.



**Figure 6-23** I/O control panel

## Channel Status Information

When choosing a camera from the Host Server window or the monitoring window, the general information of the selected camera will be displayed in the Channel Status Window as shown below.



**Figure 6-24** The Channel Status window

## Camera Polling Function

To add cameras to the polling group:

1. Click the Add Channel button, and then click the monitoring windows. The selected windows will be framed in red color.
2. Click the Video Polling button. The application will rotate the selected cameras in the specified time. To configure the polling time, see Figure 6-25.

To remove one camera from the polling group, click the Remove Channel button, and then click its monitoring window.

## Two Way Audio

The two way audio in Multi Views functions similarly to the one in Single View MPEG4 Encoder Viewer. See page 138 for further details.

## Multi View Configuration

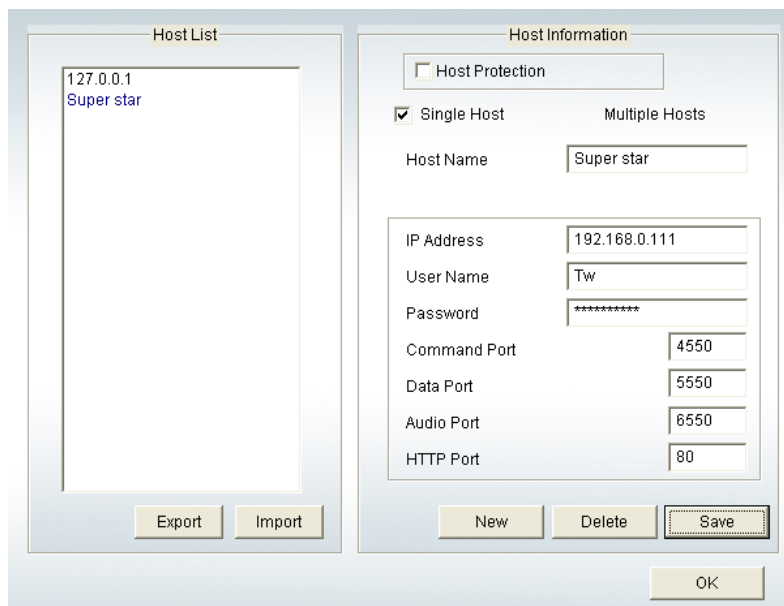
Click the Configure button to display the following window.

**Figure 6-25** The Configure window

- **Initial Screen:** Select screen divisions at startup.
- **Polling Time:** Specify the camera polling time from 1 to 60 seconds.
- **Server Status Refresh Time:** Specify the refresh time to update the host information.
- **Camera Status Refresh Time:** Specify the refresh time to update the camera information.
- **Folder Path:** Specify a path to save recorded files.
- **Caption:** Select what kind of caption to display on the monitoring window.  
ID: camera ID; Name: camera name; No: no display.
- **Enable DirectDraw:** The DirectDraw is enabled by default. Some VGA cards might not support DirectDraw and can produce distorted frames. In this case, disable this function.
- **Fast Key:** Click the View button to display the fast key table of the Multi View. Refer to *Fast Key Reference* on page 162.

## Creating a Quick Connection to a Host Server

To create a quick connection to a new host server, click the Edit Host button. This displays the following window.



**Figure 6-26** The Edit Host window

**[Host List]** When a host server is created, it will appear in the Host List section at the left side. Each server can be identified by its given host name. Click on the host name and its information will be displayed in the Host Information section.

**[Adding Host Server]** Click the New button and all fields in the window will be cleared. In the Host Name field, input a name to identify the designated GV Server. Input the IP address or domain name of the GV Server. Input a valid user name and passwords with privilege to use this function. Leave all port configuration as defaults at 4550, 5550, 6550, and 80 respectively unless otherwise necessary. Click the Save button, and then the GV Server will appear in the Host List section with the given ID name.

**[Editing Host Server]** Select the GV Server you wish to edit in the Host List section. All information of the selected server will be displayed in the Host Information section. Change the information as required and click the Save button.

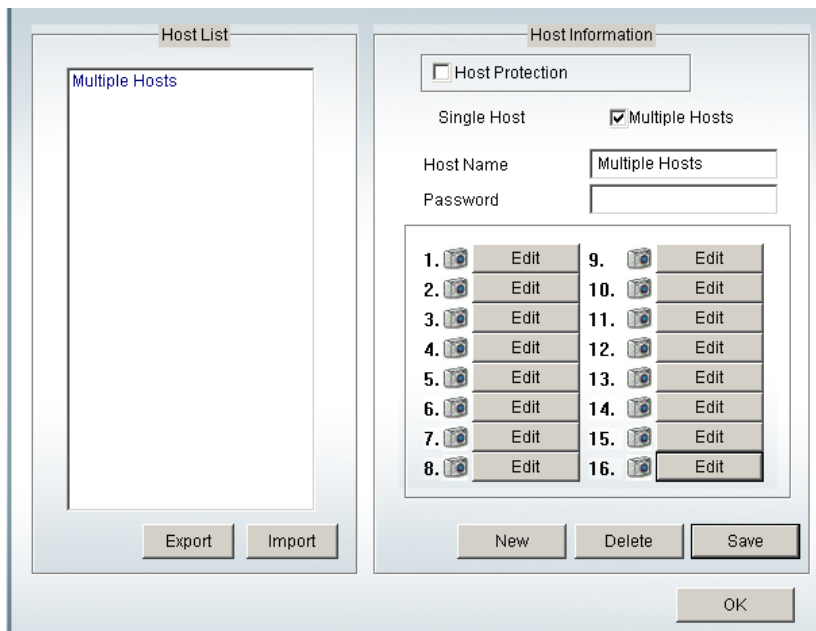
**[Removing Host Server]** Select the GV Server you wish to remove from the Host List section, and click the Delete button.

## Creating a Multiple Host

You can create a multiple host including the camera channels all from different IP addresses. There are two methods to create a multiple host: the manual creation of a multiple host; the quick creation of a multiple host.

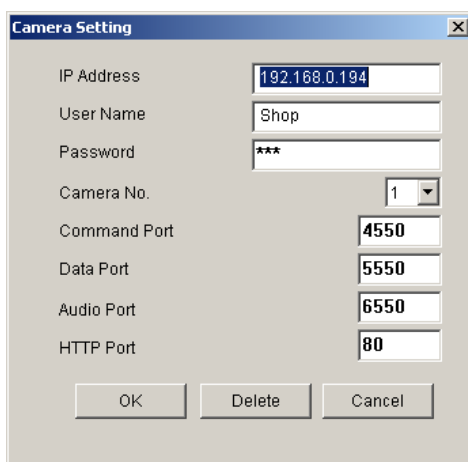
### Manual Creation of a Multiple Host

1. Click the Edit Host button to display the Edit Host window (Figure 6-26), and then click the New button to create a new host.
2. Check Multiple Hosts to display the following window.



**Figure 6-27** Creating a multiple host

3. In the Host Name field, enter a desired name to identify the multiple host.
4. To set up each camera channel of the multiple host, click the Edit tab one at a time.  
Alternatively, you can click and drag the created camera channel from the Host Server window (Figure 6-21) to each Edit tab.
5. When you click the Edit tab, you will see the following window.



**Figure 6-28** Camera Setting

6. Enter the IP address, user name and password of a remote host.
7. In the Camera No. drop-down list, select one desired camera channel from the remote host.
8. Let the port settings match those of the remote host, or keep them as defaults
9. Click OK.

The icon of the created multiple host in the Host Server window is yellow, while others are blue.

### Quick Creation of a Multiple Host

1. Click on a desired monitoring window, which will be highlighted in the red frame.
2. Click and drag a camera from the Host Server window. The selected camera then displays in the highlighted monitoring window.
3. Repeat the step 1 and 2 to configure other monitoring windows for different cameras.
4. Click the Save Camera to Multiple Host button to create the multiple host. See No. 23 in Figure 6-20.

### Camera Status

To show the camera status of the selected GV server, click the Camera Status button to display the following window. “Camera ON” indicates the camera is active. “No Privilege” means you’re not authorized to view this camera. Clicking the View button will bring up a small window displaying the selected camera’s video. Clicking the Refresh button will refresh the information in this window.

Host Informations		
Host Name	2.dipmap.com	
IP Address	2.dipmap.com	
User Name	1	

Camera Status			Refresh
Camera 1	Camera ON	View	
Camera 2	Camera ON	View	
Camera 3	Camera ON	View	
Camera 4	Camera ON	View	
Camera 5	Camera ON	View	
Camera 6	Camera ON	View	
Camera 7	Camera ON	View	
Camera 8	Camera ON	View	
Camera 9	Camera ON	View	
Camera 10	Camera ON	View	
Camera 11	Camera ON	View	
Camera 12	Camera ON	View	
Camera 13	Camera ON	View	
Camera 14	Camera ON	View	
Camera 15	Camera ON	View	
Camera 16	Camera ON	View	

OK

**Figure 6-29** The Camera Status window

## Host Information

Click the Host Information button to display the following window. The Host Information window contains the following three categories. Use the control tabs to toggle among them.

The screenshot shows a window titled 'Host Information' with three tabs: 'Alarm List', 'Host Informations', and 'Log List'. The 'Host Informations' tab is selected. The window is divided into two main sections. The top section, titled 'Host Informations', contains three input fields: 'Host Name' with the value '127.0.0.1', 'IP Address' with the value '127.0.0.1', and 'User Name' with the value '1'. The bottom section contains two text areas. The first, titled 'Host Informations', displays the following text: 'Server Update : 2005/02/22 03:43:30', 'Recycle Log :', 'Camera On : 01 02', 'Camera Off : 03 04', 'Camera Signal Lost : None', and 'IO Device : Normal'. The second, titled 'Web Informations', displays the following text: 'WebCam Update time : 2005/02/22 03:43:56', 'WebCam Server Startup Time : 2005/02/22 03:40:56', 'Mpeg4 Current Channel(s) : 2', 'RPB Current Channel(s) : 0', 'Audio Current Channel(s) : 0', and 'WebCam Version : WebCam 7.0.0.0'. An 'OK' button is located at the bottom right of the window.

Host Informations	
Host Name	127.0.0.1
IP Address	127.0.0.1
User Name	1

Alarm List    Host Informations    Log List

Host Informations

Server Update : 2005/02/22 03:43:30  
Recycle Log :  
Camera On : 01 02  
Camera Off : 03 04  
Camera Signal Lost : None  
IO Device : Normal

Web Informations

WebCam Update time : 2005/02/22 03:43:56  
WebCam Server Startup Time : 2005/02/22 03:40:56  
Mpeg4 Current Channel(s) : 2  
RPB Current Channel(s) : 0  
Audio Current Channel(s) : 0  
WebCam Version : WebCam 7.0.0.0

OK

**Figure 6-30** The Host Information window

**[Alarm List]** Displays a list of alarm events occurred in the selected GV server. Clicking the reset button will clear the listed events. New events will be generated until the alarms of the local site are invoked.

**[Host Information]** The upper section shows the general information of the connected GV Server. The lower section shows the number of MPEG4, RPB, and audio channels currently serving over the Internet.

**[Log List]** Displays a history of login and logout information.

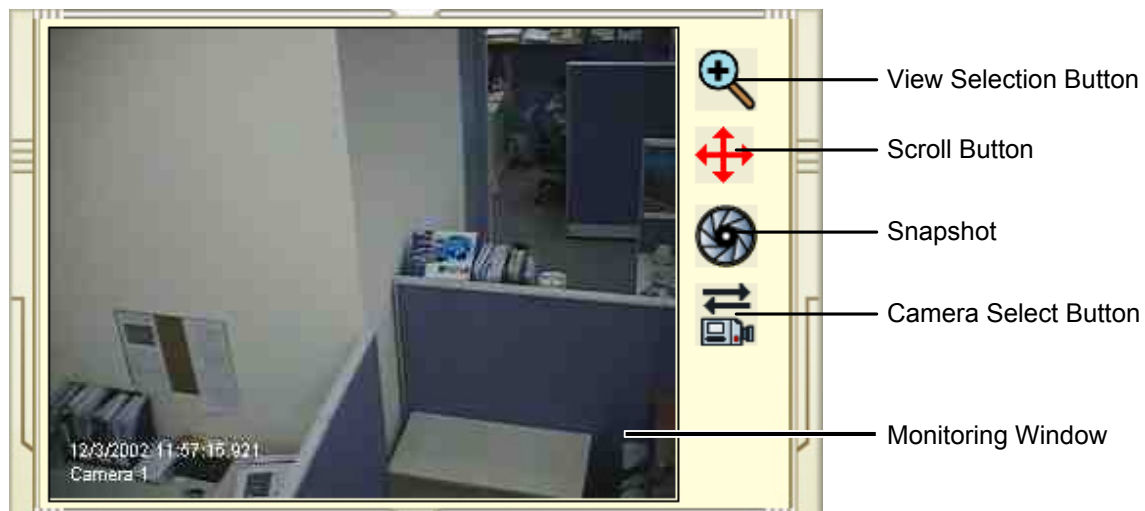


## JPEG Image Viewer

JPEG Image Viewer is a cross-platform viewer, practicable on Mac OS, Netscape, and Microsoft IE browsers. Continuously receiving JPEG images from GV-system and limited to the single camera view, the viewer is an ideal tool for the users with limited Internet bandwidth. For this application, the Create JPEG/GIF File(s) option must be enabled (Figure 6-6), while the Enhance Network Security option must be disabled (Figure 6-1).

To start the JPEG Image Viewer, follow these steps:

1. Open an Internet browser from a client PC.
2. Enter the IP address or domain name of the GV-system to display the WebCam Compression Selection window. See Figure 6-9.
3. Select JPEG Image Viewer, and then click Submit. A valid ID and password are required.
4. The JPEG Image Viewer window appears.



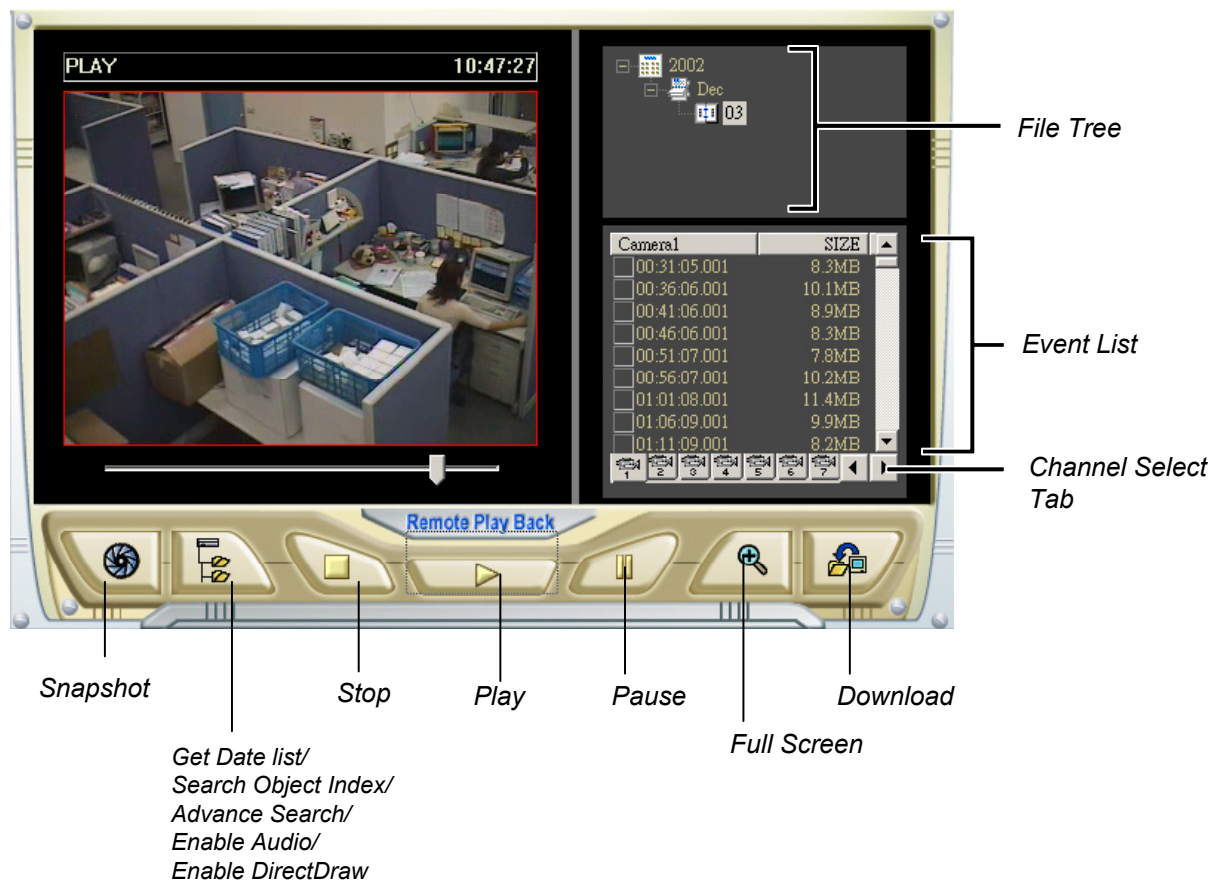
**Figure 6-31** JPGE Image Viewer

## Remote Playback on WebCam

The WebCam Remote Playback (RPB) is a web-based application, allowing you to play back recorded video or audio files of the connected GV-system.

To start WebCam RPB:

1. Follow the steps in *Starting WebCam at the Client PC* on page 132 until the WebCam Compression Selection window appears See Figure 6-9.
2. Select Remote Playback, and then click the Submit button to display the following RPB window.
3. Click the Play button to log in the application. A valid ID and password are required here.



**Figure 6-32** The Remote Playback Window

## Searching and Playing Back Recorded Files

The WebCam RPB allows you to play back video and audio files. Audio files are only available when your system is equipped with the optional audio recording function.

1. Click the Get Data List button and then select Get Date List. This loads the recorded data from the GV-system.
2. Select a date in the File Tree.
3. All video files recorded within the selected date will be listed in the following Event List window.

Camera1	SIZE
<input type="checkbox"/> 16:42:37.001	173.0KB
<input checked="" type="checkbox"/> 16:42:45.001	160.5KB
<input type="checkbox"/> 16:42:51.001	134.5KB
<input type="checkbox"/> 16:42:56.001	178.5KB
<input type="checkbox"/> 16:43:03.001	117.5KB
<input type="checkbox"/> 16:43:18.001	142.0KB
<input type="checkbox"/> 16:43:23.001	163.0KB
<input type="checkbox"/> 16:43:29.001	145.0KB
<input type="checkbox"/> 16:43:34.001	96.0KB

**Figure 6-33** Event List

4. Select one camera or audio channel from the Channel Select tabs.
5. Select one video file from the Event List, and then click the Play button to play it.

## Synchronizing Audio with Video Playback

To synchronize audio with video playback, click the Get Data List button and then select Enable Audio.

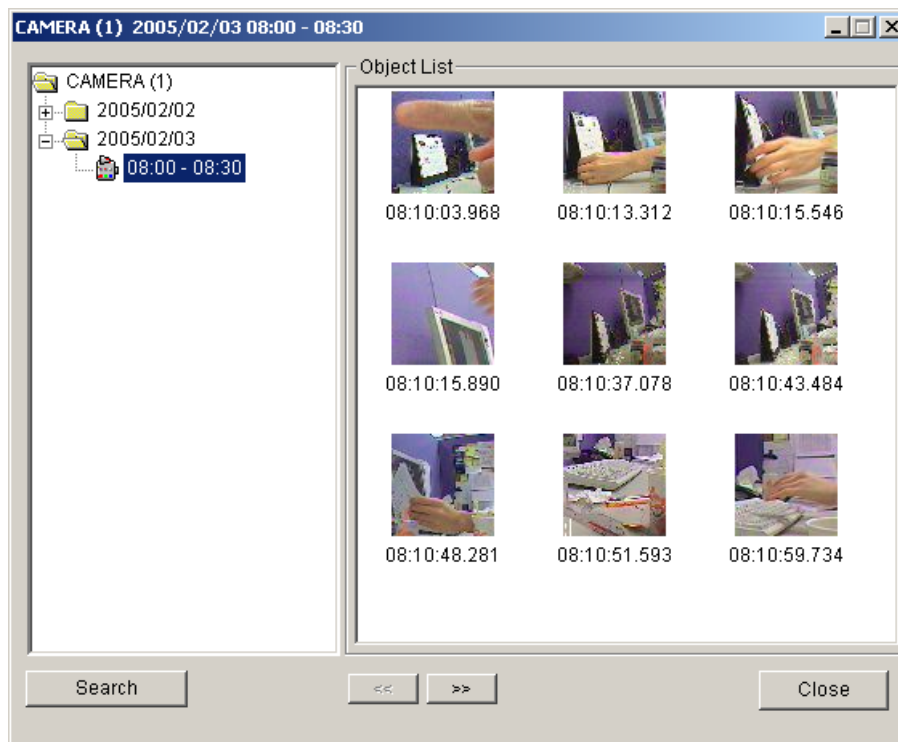
## DirectDraw Setup

The DirectDraw setting is enabled by default. Some VGA cards might not support DirectDraw and can produce distorted frames. In this case, disable the function from the Get Data List button.

## Searching Object Index

You can locate and play back the Object Index files through the WebCam RPB. For the details of Object Index, refer to page 60.

1. Click the Get Data List button, and then select Search Object Index. This window appears.

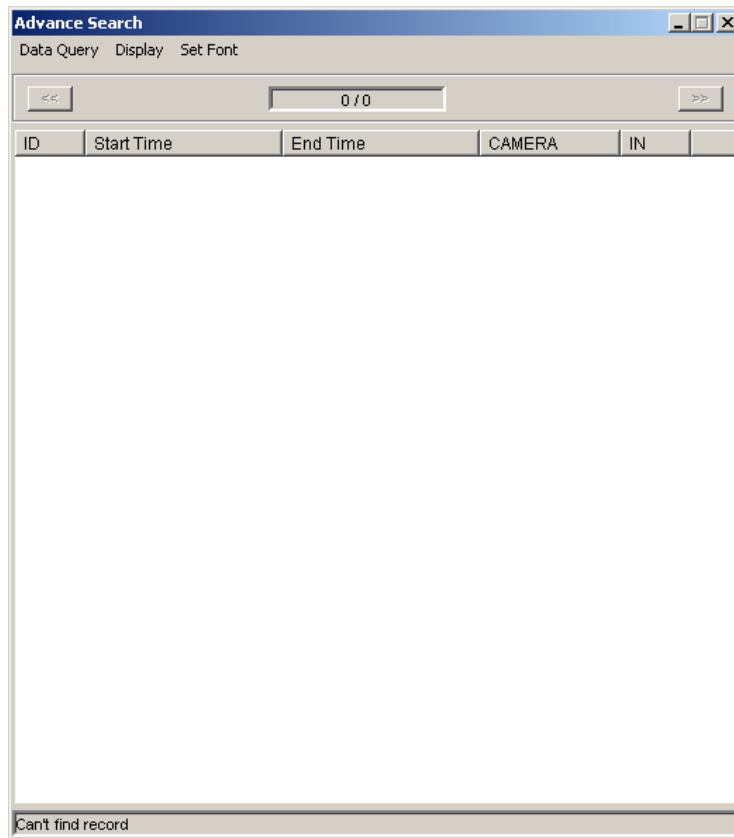


**Figure 6-34** The Search Object Index window

2. Click the Search button. The Search window appears.
3. Select the desired cameras, and then click Search. The found files will display in the left side of the Search Object Index window.
4. Expand the files to access the thumbnail view.
5. Double click one displayed image. The related video will play on the RPB.

## Advanced Search

The advanced search function in the WebCam RPB lets you easily locate an event by search criteria. The search results can be displayed in a text form and/or a statistic chart. Click the Get Data List button, and select Advance Search to open the following advanced search window.

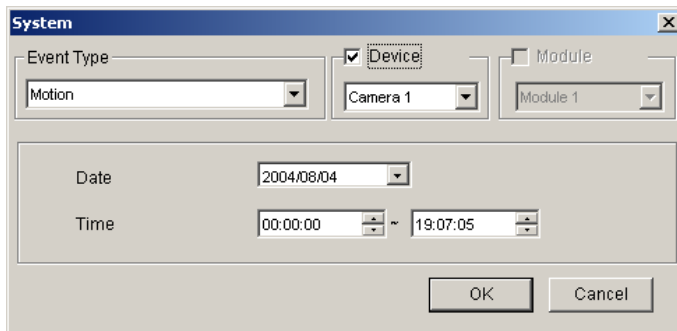


**Figure 6-35** Advanced Search

**[Data Query]** To locate an event, click Data Query on the menu bar. The selections included inside are: (1) Monitor, (2) System, (3) Login, (4) Counter and (5) POS. The five categories are based on those of System Log in the main system (refer to page 51), so that you can locate any event type recorded in System Log.

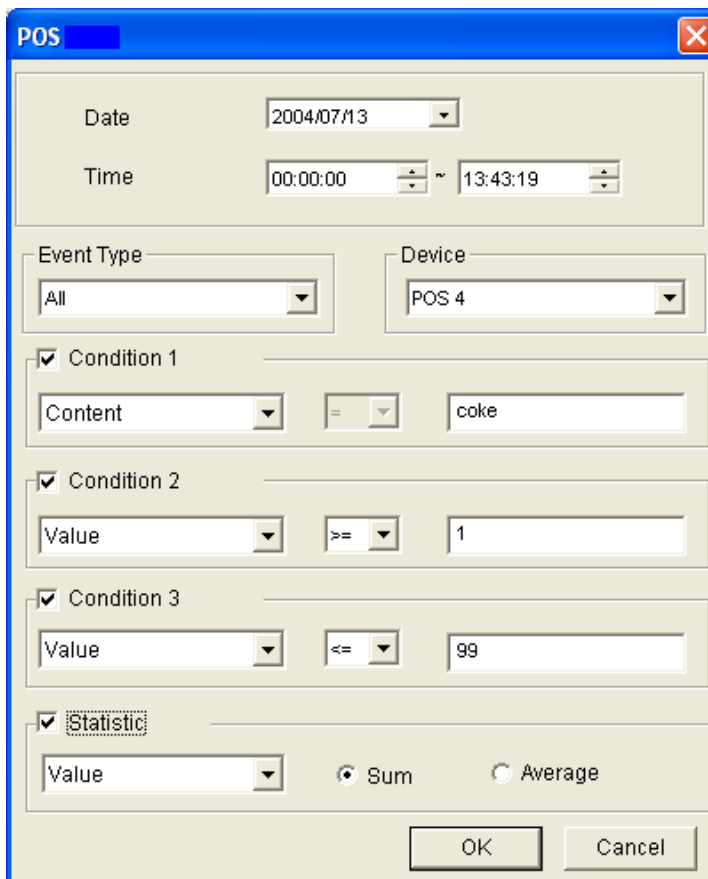
- **Monitor/System/Login/Counter:** The four selections let you locate an event about monitoring, system, login/logout and counter status. The dialog boxes of the four selections are similar, so we take Monitor as an example below.

Click Data Query on the menu bar, and select Monitor to display the following window. Define your search condition in each field, and click OK to start searching.



**Figure 6-36** Locating a system event

- **POS:** The selection lets you locate a desired POS transaction event. Click Data Query on the menu bar and select POS to display the following window.



**Figure 6-37** Locating a POS event

Restrict your search to a certain date, time, event type, POS system, transaction item (content), and price amount (value). Then click OK to start searching. For this example, we like to search all the transaction types related to Coke, registered in the device POS 4, from 00:00:00 to 13:43:19 on 2004/07/13. Its price amount may be *greater than or equal to* ( $\geq$ ) 1 and *less than or equal to* ( $\leq$ ) 99.

If we select the Statistic option and click OK here, we will get the sum or the average price of all the discovered transaction events, not a list of these events.

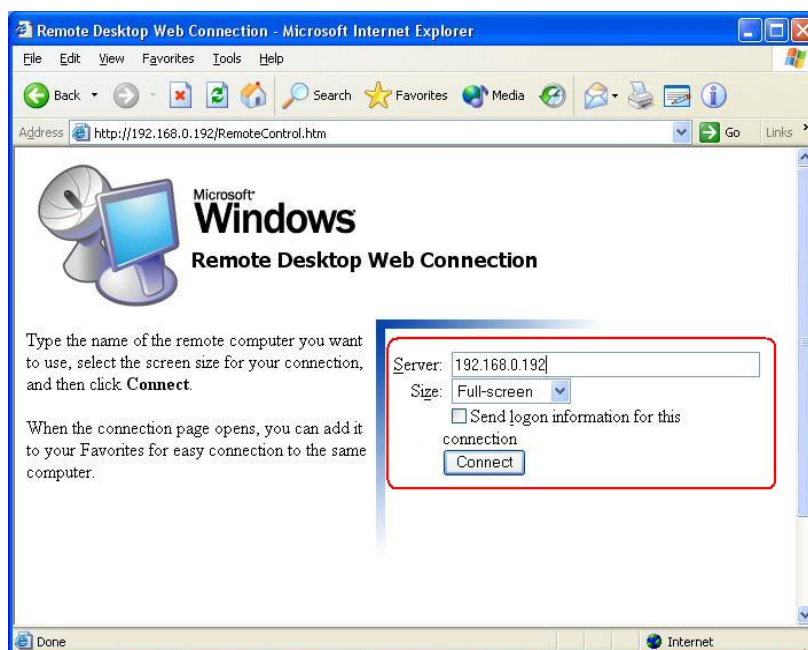
**[Display]** This option on the menu bar lets you choose which way to display search results: a text form or a statistic chart.

## Remote Control Using Remote Desktop

The WebCam Remote Control function is based on Microsoft's Remote Desktop platform. To start this feature, your GV-system must be run on Windows XP Professional with Microsoft Remote Desktop properly set up. The client PC can be Windows XP, Windows 2000, or Windows Server 2003.

To use the Remote Control:

1. Follow the steps in *Starting WebCam at the Client PC* on page 132 until the WebCam Compression Selection window appears. See Figure 6-9.
2. Select Remote Control, and then click the Submit button. This screen appears.



**Figure 6-38** Remote desktop control

3. Input the IP address or domain name of the GV-system you wish to control, and then click the Connect button. A valid user name and password are required.

If logging in successfully, you will see the desktop of the GV-system you want to control.

**Note:**

1. The Enable Directdraw Overlay option in the main system must be disabled.
2. The DSP card cannot support this function.

## Remote Viewing with PDA

G-View is a remote view application for Pocket PC device. It can run on PDA using Windows CE or Microsoft Pocket PC operating system.

### G-View Installation

G-View is included in the installation CD. This application should be installed in a PDA device with Microsoft Pocket PC operating system.

1. Plug your PDA via USB or COM port to a PC installed with Microsoft ActiveSync.
2. Run Microsoft ActiveSync in the connected PC. Make sure both the PDA and PC are synchronized.
3. Insert the installation CD to the PC. It will run automatically and pop up a window.
4. Select the item of Install Version 7.0 system, and then click PDA Viewer for WinCE. See Figure 1-15.
5. Follow the on-screen instructions to complete the installation.

### Connecting G-View to GV-Server

Once G-View is installed into your PDA, you can use it to monitor your GV-server (GV-system). Make sure your PDA has wireless LAN adapter properly in place with access to the Internet.

1. Execute G-View in your PDA.
2. Click the Connect button located at the lower left corner. This displays the Login screen.
3. Input the IP address of the GV-server you wish to connect, enter a valid username and password, and then click the OK button.

If logging in successfully, you will see video streaming to your PDA. Clicking the Stop button can exit the G-View application.

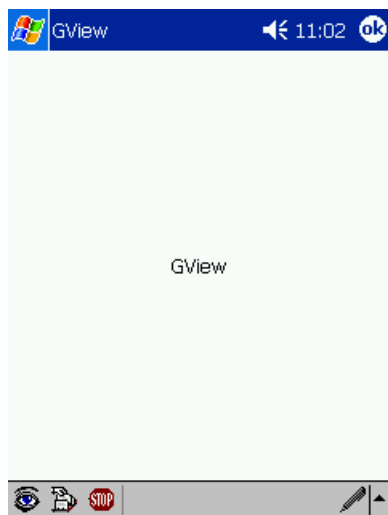


Figure 6-39 Starting GView

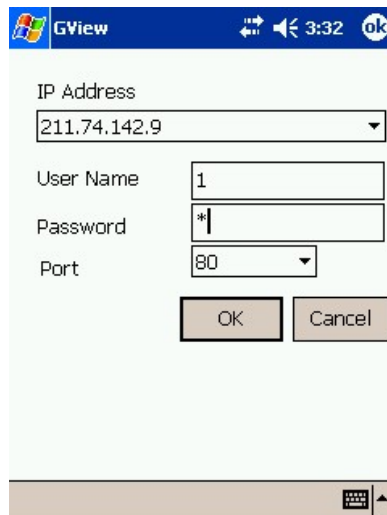


Figure 6-40 Entering GV-server Info

## Other Functions

The major functions of G-View include live video monitoring, PTZ control, zooming control, and snapshot.

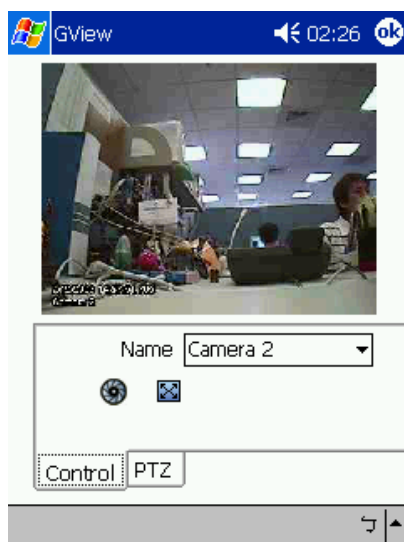


Figure 6-41 View Screen

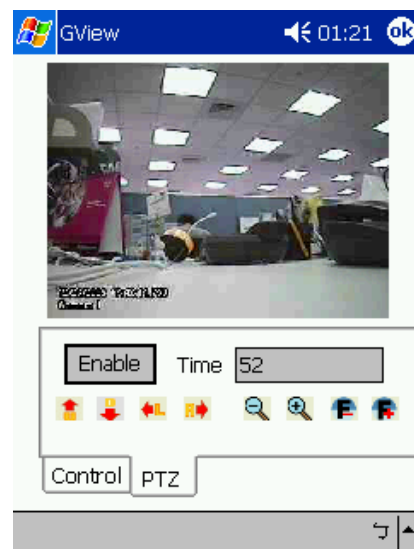


Figure 6-42 PTZ Screen

Buttons	Description
	Click to take a snapshot from the video image.
	Use this drop-down list to switch cameras.
	Use the two buttons for focus-in and focus-out control
	Use the two buttons for zoom-in and zoom-out control.
	Use these buttons to control left, up, down, and right of the PTZ camera.
	Click to switch to a full-screen view.



## Viewing GV-Server Information

Click on the Server Information button to bring up the Server Info screen, which contains the following four categories of information. You may use the control tabs to toggle between them.

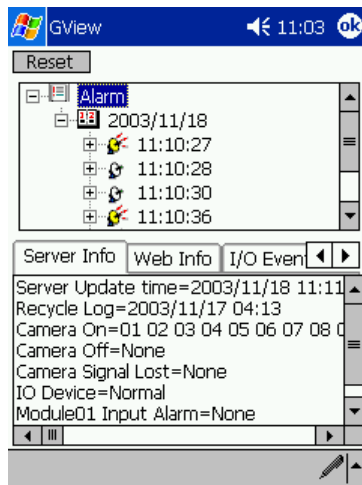


Figure 6-43 Server Info

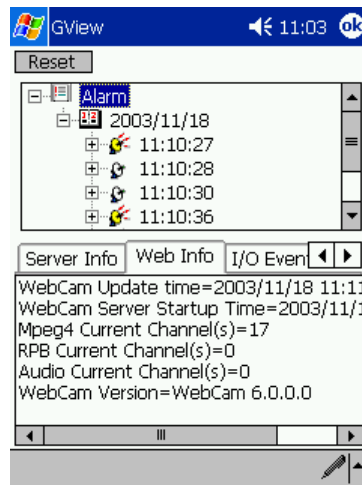


Figure 6-44 Web Info

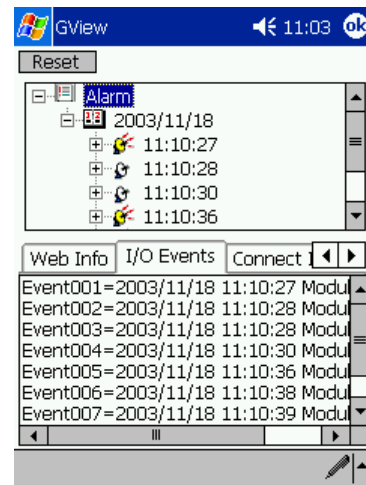


Figure 6-45 I/O Events

**[Server Info]** Displays general information of the connected server. Information in this section includes: Server update time, last data recycle date and time, which cameras are online, which cameras are off line, which camera lost video signals, the status of the connected I/O device, and connected I/O module's alarm status.

**[Web Info]** Displays information of the connected WebCam server. Information in this section includes: WebCam update time, WebCam server start time, how many MPEG4, RPB, and audio streaming channels are currently serving over the Internet, and the software version of the WebCam.

**[I/O Event]** Displays a list of alarm events occurred in the selected GV Server. The alarm status is displayed in a 3 levels file tree in the upper section of the screen. Click Reset will clear the list.

**[Connect Info]** Displays a history of login and logout information.

## Remote Viewing with Mobile Phone

With the mobile phone capable of GPRS, you can receive live video images from your GV-server (GV-system). There are three types of mobile phones supporting this application: (1) I-Mode Phone, (2) Windows-based Phone, and (3) Symbian-based Phone.

## I-Mode Phone

You can monitor your GV-server remotely with

- I-Mode phone, or
- Mobile phone supporting xhtml, chtml, or html and capable of GPRS

When using i-Mode services, you do not pay for the time you connected online, but will be charged by the volume of data transmitted and/or received. Therefore, i-Mode will NOT receive live video streaming; instead, it will receive one image at a time and will not receive another unless it is requested to do so. To request another image, simply press the Enter key on your i-Mode phone. The images are in GIF or JPEG format with resolution of 96x72 pixels.

### Activating the i-Mode Function

In the main system, click the Network button, select WebCam Server, click the JPG tab, and check the Create JPEG/GIF file(s) item as shown in Figure 6-6. Your GV-system must use a global IP address and be accessible from the Internet.

### Connecting to GV-Server

After activating the i-Mode function, you can now receive live images from the GV-server via an i-Mode phone. The interface and operation of your i-Mode phone may be different from the following example since the interface may vary from model to model.

1. Open the i-Mode menu, and select Input Web Address.
2. Enter the IP address of your GV-system in the Address column, and then press OK.



**Figure 6-46** Opening the menu

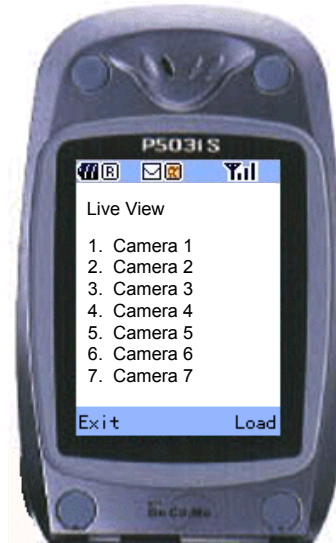


**Figure 6-47** Entering the IP address of GV-server

3. Input a valid user name and password, and then press Submit.
4. Select the desired camera channel, and then press Enter.



**Figure 6-48** Entering the use name and password



**Figure 6-49** Selecting a camera for live view

If you log in successfully, the i-Mode phone will start receiving live images from the GV-server.

## Windows Smartphone

With the MSView application, you can monitor your GV-server remotely via Windows-based smartphone edition 2002 and 2003. You will experience live view when continuously receiving JPEG format images with the 160x120 resolution.

### Installing MSView

1. Insert the installation CD. It will run automatically and pop up a window.
2. Select the item of Install Version 7.0 system.
4. Select Smart Phone Viewer in the Install Program 2<sup>nd</sup> menu. Refer to Figure 1-15.
5. Click Next, and then follow the on-screen instructions.
5. Copy MSView.exe in the Smart Phone Viewer folder created in your PC to your smartphone.

### Activating the MSView Function

You must activate the MSView function in the main system to allow the smartphone application. The activation is the same as that in *Activating the I-Mode Function* on page 158.

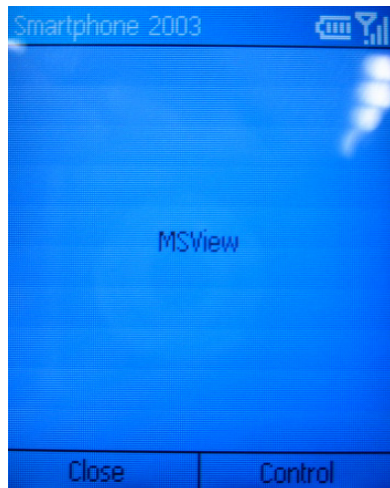
### Connecting to GV-Server

The following operations may vary slightly for different modules.

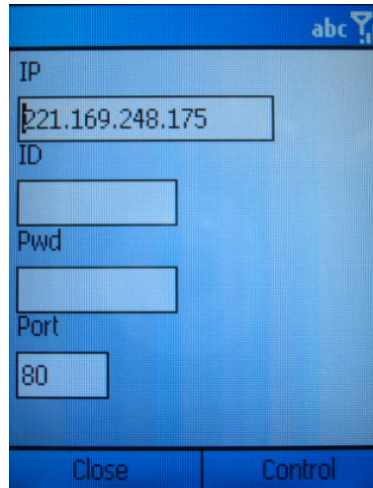
1. Execute MSView.exe in your smartphone. Figure 6-50 appears.
2. Select Control and then Connect. Figure 6-51 appears.

3. Enter the IP address and port number of your GV-server, a login ID and password. Select Control and then Connect.

Once the connection is established, the live image will appear. You can use the scroll key on your smartphone to navigate camera channels. See Figure 6-52.



**Figure 6-50** MSView main screen



**Figure 6-51** Entering GV-server info



**Figure 6-52** Viewing live camera

## Symbian Smartphone

With the SSView application, it's also possible to monitor your GV-server remotely via Symbian-based smartphone edition 7.0. You will experience live view when continuously receiving JPEG format images with the 160x120 resolution.

### Installing SSView

1. Insert the installation CD. It will run automatically and pop up a window.
2. Select the item of Install Version 7.0 system.
3. Select Symbian Phone Viewer in the Install Program 2<sup>nd</sup> menu. Refer to Figure 1-15.
4. Click Next, and then follow the on-screen instructions.
5. Locate SSView.jar in the Symbian Phone Viewer folder created in your PC, and install it to your smartphone.

### Activating the SSView Function

You must activate the SSView function in the main system to allow the smartphone application. The activation is the same as that in *Activating the I-Mode Function* on page 158.

### Connecting to GV-Server

The following operations and screens may vary slightly for different modules.

1. Execute SSView in your smartphone.
2. When the message *V1.0.0.0* appears, select Login. The Login screen appears.
3. Enter the IP address and port number of your GV-server, login username and password.
4. Select Connect. When the message *Host Connected* appears, it means you have connected to your GV-server successfully.
5. Select Image View. The Camera List screen appears.
6. Highlight one camera, and then select Open Camera for live view.

### **My Server**

You can create, edit and remove a list of servers for a quick connection. Select the My Server option, and then select SSView to have these features.

### **Other Functions**

In addition to live view, SSView offers other useful functions, such as changing camera channels, zooming in a camera view, seeing Server and WebCam information. Select the SSView option to have these features.

## Fast Key Reference

### The Multi View Window

Esc	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	Print	Scroll	Pause					
~	1	2	3	4	5	6	7	8	9	0	-	=	←Back	Insert	Home	Page Up	Num	/	*	-
Tab	Q	W	E	R	T	Y	U	I	O	P	[	]		Delete	End	Page Down	7	8	9	+
Caps	A	S	D	F	G	H	J	K	L	;	"		Enter				4	5	6	
Shift	Z	X	C	V	B	N	M	<	>	?	Shift	\			↑		1	2	3	
Ctrl		Alt	Space Bar							Alt		Ctrl	←	↓	→		0	.	Enter	

Key	Function
Ctrl+Z	Minimize the MultiView window
Ctrl+I	Open the Host Information window
Ctrl+E	Open the Edit Host window
Ctrl+C	Open the Configure window
Ctrl+H	Open the Camera Status window
Ctrl+X	Close the MultiView
Ctrl+Q	Switch screen divisions
Ctrl+F	Switch to full screen view
Ctrl+S	Take a snapshot
Ctrl+M	Turn the microphone on and off
Ctrl+L	Turn the speaker on and off
F7	Start all recording
+	Zoom in the selected monitoring window
-	Zoom out the selected monitoring window

**PTZ Control in Multi View**

Esc	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	Print	Scroll	Pause					
													Insert	Home	Page Up	Num	/	*	-	
~	1	2	3	4	5	6	7	8	9	0	-	=	←Back	Delete	End	Page Down	7	8	9	+
Tab	Q	W	E	R	T	Y	U	I	O	P	[	]					4	5	6	
Caps	A	S	D	F	G	H	J	K	L	;	"		Enter				1	2	3	Enter
Shift	Z	X	C	V	B	N	M	<	>	?		Shift	\							
Ctrl		Alt	Space Bar							Alt		Ctrl	←	↓	→	0	.			

Key	Function
Home	Zoom in
End	Zoom out
Insert	Focus in
Delete	Focus out
→	Right
←	Left
↑	Up
↓	Down

