GeoVision inc.

The Vision of Security

GV-CMS Series

User's Manual V8.3

User's Manual for
Central Monitoring Station

Welcome to the User's Manual for Central Monitoring Station (CMS).
This Manual provides these solutions for your CMS installation and
management:

- Center V2
- Dispatch Server
- Vital Sign Monitor (VSM)
- Control Center
- GV-GIS

A simple comparison of these solutions:

Application	Feature
Center V2	Live videos and text alerts; Display up to 42 screen divisions; Serve up to 500 subscribers and 800 channels (professional edition); Remote playback.
Dispatch Server	Solve the problem of network overload on Center V2 Server by distributing subscribers' monitoring requests to other Center V2s; Remote playback.
Vital Sign Monitor (VSM)	Live text alerts and playback of videos, ideal for low bandwidth network; Notify video log storage and hard disk space; Serve up to 1,000 subscribers.
Control Center	Access subscribers' systems and desktops remotely; Display up to 96 screen divisions x 6 monitors; Remote playback; I/O Central Panel.

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Chapter 1
Center V2

With Center V2, central monitoring station (CMS) can be deployed immediately because it brings multiple GV-Systems together into an integrated interface, allowing the operator to manage several systems from one point of control. The basic feature of Center V2 is to view live video, and receive video evidence (in an attachment format) when any alerts are sent to Center V2. This helps the remote-end operator easily determine the nature of the alarm.

1.1 System Requirements

There are two versions of Center V2. The standard version, coming with
system software, can serve up to 5 subscribers and 80 channels at a time.
The professional version can serve up to 500 subscribers and 800
channels.

Before installation, make sure your computer meets the following minimum
requirements.

Standard Version

OS	Windows 2000 / XP / Server 2003 / Vista
CPU	Pentium 4, 2.6 GHz, 800MHz FSB
Memory	2 x 256 MB Dual Channels
Hard Disk	60 GB
VGA	NVIDIA GeForce 4 MX440 64 MB
Network	TCP/IP

Professional Version

OS	Windows 2000 / XP / Server 2003 / Vista
CPU	Core 2 Duo E6600, 2.4 GHz, 1066 MHz FSB
Memory	2 x 1 GB Dual Channels
Hard Disk	250 GB
VGA	NVIDIA 8600GT / ATI X1650
Network	TCP/IP

Note: Currently the 64-bit Windows operating system is not supported.

1.2 Installing Center V2

1. Insert the CMS Software CD to your computer. It will automatically run and a window appears.

2. Select **Install V8.3.0.0 Central Monitoring System**.

3. Click **Center V2 System**, and follow the on-screen instructions.

Note: The Center V2 Pro application is provided with a USB dongle. Make sure the dongle is tightly attached to your computer.

1.3 The Center V2 Window

Figure 1-1

The controls on the Center V2 window:

No.	Name	Description
1	Monitoring Window	Displays live video.
2	Status Panel	Indicates the date, time, remaining disk space, and the total number of online channels versus available channels.
3	Find A Subscriber	Type the desired ID in the Current Subscriber field and click this button to search.

4

4	Subscriber List	Displays subscribers' ID names and online status. **Blue Icon:** Indicates the subscriber is online. **Gray Icon:** Indicates the subscriber is off-line. **Alarm Icon:** Indicates either motion has been detected or the I/O has been triggered at the subscriber's site.
5	Tools	Accesses Event Log, Event List, audio and microphone control, SMS Server configuration, and short message notification.
6	Host Information	Displays the connection status of subscribers.
7	Accounts	Adds, deletes or modifies subscriber accounts.
8	Preference Settings	Brings up these options: System Configure, Event Log Settings, Notification, Password Setup, E-mail Setup, Customize Alarm Report, SMS Setup, I/O Device, Automatic Failover Support and Version Information.
9	Previous Page	Displays the previous page of camera views.
10	Next Page	Displays the next page of camera views.
11	Refresh Channel	Refreshes the connection status.
12	Split Mode	In the 1024 x 768 resolution, select 6, 15, or 24 screen divisions for a single monitor; 9, 25, or 36 screen divisions for dual monitors. In the 1280 x 1024 resolution, select 6, 12, or 24 screen divisions for a single monitor; 9, 20, or 42 screen divisions for dual monitors. In the 1600 x 1200 resolution, select 6, 12, or 24 screen divisions for a single monitor; 9, 16, or 36 screen divisions for dual monitors. In the 1680 x 1050, 1920 x 1200 and 1440 x 900 resolutions, select 6, 15, or 28 screen divisions for a single monitor; 9, 20, or 42 screen divisions for dual

		monitors.
		n the 1920 x 1200 resolution, select 6, 15, or 28 screen divisions for a single monitor; 9, 20, or 42 screen divisions for dual monitors.
		In the 1920 x 1080 resolution, select 6, 15, or 28 screen divisions for a single monitor; 6, 20, or 35 screen divisions for dual monitors.
		In the 1280 x 800 resolution, select 6, 12, 24 screen divisions for a single monitor; 9, 16, 30 screen divisions for dual monitors.
		For resolution, see *Layout Settings* later in this chapter.
13	Exit	Closes or minimizes the Center V2 window.
14	Flag	Flags an event for later reference.
15	Clipboard	Displays the Alarm Report dialog box.
16	Clip	Indicates an event coming with an attachment. Double-click the event to open the attached video file.
17	ID	Indicates a subscriber's ID.
18	Event Type	Indicates the event type: Alarm, Attachment, Connection, Login/Logout, Motion, System, and Trigger.
19	Message	Indicates associated information for each event type.
20	Message Time	Indicates when Center V2 receives an event.
21	Start Time	Indicates when an event happens at the subscriber's site.

A list of Types and Messages will be displayed on Center V2:

Type	Message
Motion	Camera xx detected motion.
Trigger	Module xx triggered.
Connection	Camera xx video lost; Module xx I/O lost; Network abnormal; Fail to login to dispatch server; Dispatch server is shutdown; Video signal of xx has resumed; Module xx has returned to normal; Failed to login SMS server; Failed to send short message; SMS server is shutdown.
Alarm	Disk Full; Restarted Failed; Multicam Closed; There isn't enough space for recording; Multicam Surveillance System has been closed; An unexpected error occurred in Multicam Surveillance System. (Error Code: 1 or 2); There is an intruder; Object Missing; Unattended Object; Alert Message of POS; Scene Change.
System	Start/end service; IP change; Record failed; Status change of monitoring camera. On: xx Off: xx / (By Schedule); Stop/start all cameras monitoring; Start/stop I/O Monitoring. / (By Schedule); Schedule start; Schedule stop. All monitoring devise are stop too. Start monitoring all type events; Stop monitoring all type events; Subscriber session is not established. Wait-time expired; Unexpected logout before subscriber session is completed; Can't find USB Protection Key.
Attachment	Record file of Camera xx.

Note: Error Code 1 indicates a codec error; Error Code 2 indicates that users can't write or record any data due to HD failure or user privilege.

1.4 Creating a Subscriber Account

Create at least one subscriber before starting Center V2 services. On the Center V2 window, click the **Accounts** button (No. 7, Figure 1-1). The Address Book window appears.

Figure 1-2

The buttons on the Address Book:

No.	Name	Description
1	Add A Group	Adds a group.
2	Add A Subscriber	Adds a subscriber.
3	View / Edit Subscriber Address Book	Highlight one subscriber and click this button to open Subscriber Address Book for viewing and editing.
4	Delete A Group / Subscriber	Highlight a group or a subscriber and click this button to delete it.
5	Find A Subscriber	Searches a subscriber account.
6	Import / Export Address Book	Imports or exports the address book data.
7	Subscriber Settings	Highlight one subscriber and click this button to configure the settings of video and alert formats.
8	Subscriber Schedule	Sets up subscription schedules.

Creating a Subscriber

1. Click the **Add A Group** button (No. 1, Figure 1-2) to create a group.

2. Click the **Add A Subscriber** button (No. 2, Figure 1-2). The Subscriber Address Book dialog box appears.

Figure 1-3

3. Enter a Login ID and Password (required). Those will be the ID and Password for the subscriber to log in to the Center V2.

4. Enter the subscriber's contact information in the rest of fields (optional).

   ➢ If you wish to send e-mail alerts to this subscriber, type its e-mail address. For e-mail settings, see *E-Mail Alerts* later in this chapter.

   ➢ If you wish to send SMS alerts to this subscriber, type its country code and mobile number. For SMS Server settings, see *SMS Alerts* later in this chapter.

5. Click **OK** to save the above settings. This dialog box appears.
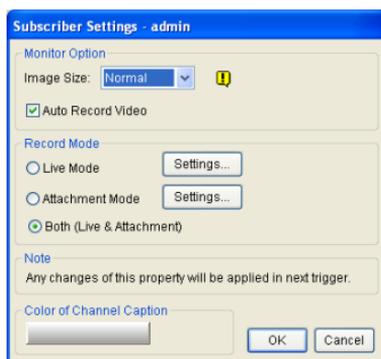
Figure 1-4

6. The options in the dialog box are discussed below. You may accept the default settings here, and edit them later by clicking the **Subscriber Settings** button (No. 6, Figure 1-2) on the toolbar. When you click **OK**, the subscriber account then is created.

Subscriber Settings

[Monitor Option]

■ **Image Size:** Sets the video size from the subscriber. The following chart shows how the image size set at the subscriber corresponds to different settings at Center V2. For example, if the video stream from a subscriber is 720 x 576 and Center V2 operator selects **Middle**, the size of displayed image on Center V2 is 720 x 288.

Subscriber / Center V2	320 x 240	360 x 240	360 x 288	640 x 240	640 x 480	720 x 240	720 x 480	720 x 576	1280 x 960
Normal	320 x 240	360 x 240	360 x 288	320 x 240	320 x 240	360 x 240	360 x 240	360 x 288	320 x 240
Middle	320 x 240	360 x 240	360 x 288	640 x 240	640 x 240	720 x 240	720 x 240	720 x 288	640 x 240
Large	320 x 240	360 x 240	360 x 288	640 x 240	640 x 480	720 x 240	720 x 480	720 x 576	640 x 480
Actual Size	320 x 240	360 x 240	360 x 288	640 x 240	640 x 480	720 x 240	720 x 480	720 x 576	1280 x 960

Center V2 supports mega pixel resolution. If the subscriber sets the resolution to mega pixel and the Center V2 operator wishes to view the videos of the same size, the Center V2 operator can select **Actual Size**. Note this setting will require a lot of bandwidth. It is recommended to select the option in LAN environment.

Note: For the client GV-System, it is required to activate the **Enable hardware-compressed data FIFO** function so that Center V2 can receive megapixel streams. For this function, see *Advanced Settings*, Chapter 2 in *User's Manual* on the Surveillance System Software CD.

■ **Auto Record Video:** Center V2 automatically records events based on the following Record Mode.

[Record Mode]

- **Live Mode:** Streams live video to Center V2. Make sure you have enough bandwidth to receive video in live. To set the maximum duration of a video file recorded on Center V2, click the **Settings** button.

- **Attachment Mode:** A defined time of event will be recorded before sending to Center V2. The attachment will be sent out immediately once your subscriber is connected to Center V2. The Attachment Mode also provides several options associated with the attachment. Click the **Settings** button to bring up the Record Settings – Attachment Mode dialog box. See *Attachment Mode Settings* below for further setup.

- **Both (Live & Attachment):** Sends both live video and attachment files.

[Color of Channel Caption]

Changes the color of channel headings. For further setup, see *Changing the Color of Channel Heading* later in this chapter.

Attachment Mode Settings

In the Subscriber Settings dialog box (see Figure 1-4), select **Attachment Mode**, and click the **Settings** button beside. This dialog box appears.
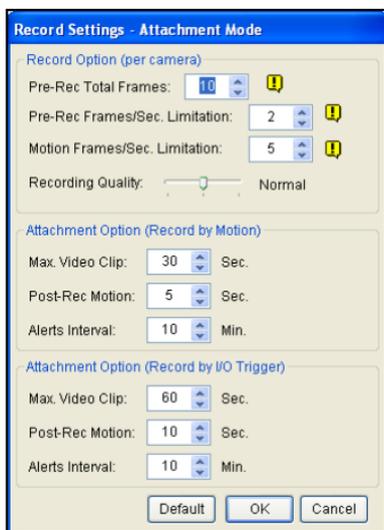
Figure 1-5

[Record Options (per camera)]

■ **Pre-Rec Total Frames:** Determines the total pre-recorded frames in a video attachment.

■ **Pre-Rec Frames/sec Limitation:** Determines the frame rate in the pre-recorded period.

Note: Dividing the Pre-Rec Total Frames by Pre-Rec Frames/Sec Limitation, you will get the total time of the video attachment.

- ■ **Motion Frames/sec Limitation:** Determines the frame rate of the video to be sent as an attachment.
- ■ **Recording Quality:** Use the slider bar to adjust the video quality in 3 levels.

[Attachment option (Record by Motion)] Defines the duration of the video attachment delivered upon motion.

- ■ **Max video Clip:** Determines the duration of the video attachment.
- ■ **Pos-Rec Motion:** Determines how many more seconds of video to be sent when motion stops.
- ■ **Alerts interval:** Determines the interval between sent motion events.

[Attachment option (Record by I/O trigger)] Defines the duration of the video attachment delivered upon I/O trigger.

Changing the Color of Channel Heading

For easy identification, the channel headings can be as colorful as you wish. In addition to the change of color and font of the channel headings, its background color can be customized as well.

1. On Center V2 window, click the **Accounts** button (No.7, Figure 1-1), highlight a subscriber, and click the **Subscriber Setting** button on the toolbar. The Subscriber Settings dialog box (see Figure 1-4) appears.
2. Click the **Color of Channel Caption** button. The color dialog box appears.
3. Select a color you wish to use, and click **OK**. The **Color of Channel Caption** button now displays the color you selected.
4. On the Center V2 window, click the **Preference Setting** button (No. 8, Figure 1-1) and select **System Configure**. The Preference dialog box (see Figure 1-38) appears.
5. Click the **General** tab, and check the **Use the subscriber setting color as background** option. Now the background color of the channel heading will be in the color you selected.

Figure 1-6

1.5 Connecting to Center V2

A single DVR can connect up to two Center V2 centers simultaneously for central monitoring. To configure GV-System in order to access Center V2 remotely through a network connection, follow these steps:

1. In the Main System, click the **Network** button, and select **Connect to Center V2**. This dialog box appears.

Figure 1-7

2. Type the IP address, ID and password of a Center V2. Modify the default port if necessary. Click **OK**. This dialog box appears.
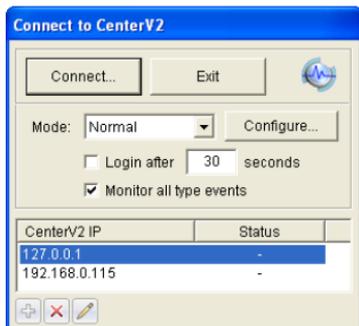
Figure 1-8

3. If you want to establish the connection to the second Center V2, click the ⊕ button.
4. If you want to modify the login information of the established Center V2, select the desired Center V2 in the dialog box, and click the 🖉 button.
5. If you want to delete the established Center V2, select the desired Center V2 in the dialog box, and click the ✕ button.
6. When you finish the settings, click the **Connect** button to start. When the connection is established, Center V2 will start receiving video or attachments from the subscriber.

![GeoVision logo] **C GeoVision**

Setting Normal Mode

To further define the communication conditions between the subscriber and Center V2, select **Normal Mode** in the Connect to Center V2 dialog box (Figure 1-8), and then click the **Configure** button for setup. A menu includes two options of **General Settings** and **Advance Settings**. The Advance Settings dialog box includes these tabs: (1) Camera, (2) Other and (3) I/O Device.

General Settings

The settings define the retry modes and communication ports between GV-System and Center V2.
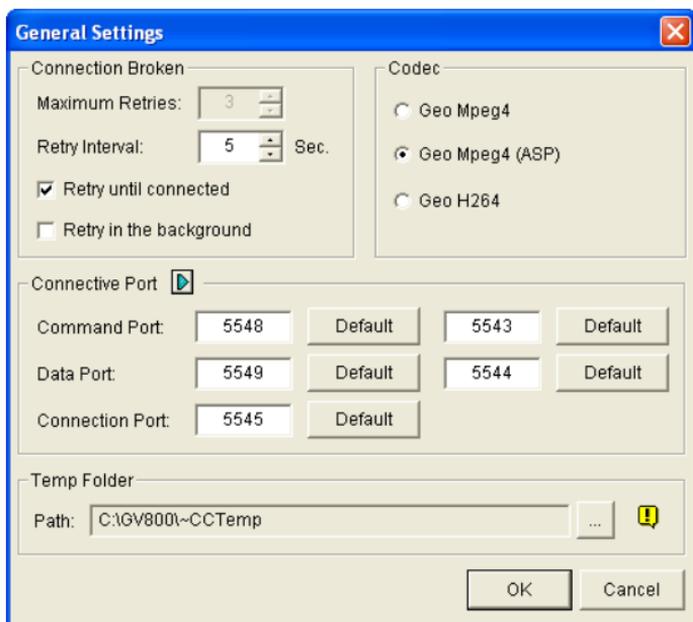
Figure 1-9

[Connection Broken]

■ **Maximum Retries:** Sets the number of retries if connection is not immediately available.

■ **Retry Interval:** Sets the interval between retries.

■ **Retry until connected:** Keeps GV-System on trying until connected to Center V2.

■ **Retry in the background:** Hides the retries in the background.

[Codec] Selects **Geo Mpeg 4** (default), **Geo Mpeg 4 (ASP)** or **Geo H264** as the compression method for video sent to Center V2.

[Connective Port] Displays ports used for communication. It is recommended to keep the default settings, unless otherwise necessary. Note that there are two sets of Command Ports and Data Ports for those who wish to establish the connection to two Center V2 centers.

To automatically configure these ports on your router by UPnP technology, click the **Arrow** button. For details, see *UPnP Settings*, Chapter 8, *User's Manual* on the Surveillance System Software CD.

[Temp Folder] Attachments are temporarily stored in this folder while waiting to be sent to Center V2. In case the connection is broken, attachments meant to be sent to Center V2 could be found here. Once the connection is back to normal, events saved in the Temp Folder will be sent out immediately.

Advanced Settings

[Camera]

The settings define which camera condition to notify Center V2. To configure the event type, first disable the **Monitoring all type events** option in Figure 1-8.
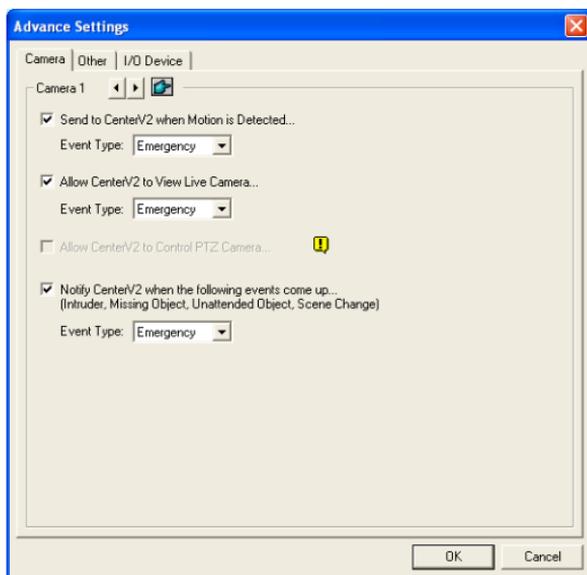
Figure 1-10

■ **The Arrow buttons:** Click the left or right arrow button to select the camera to be configured. Or you can click the **Finger** button to apply the settings to all cameras.

■ **Send to Center V2 when Motion is Detected:** Sends video to Center V2 when motion is detected. Click the **Set Camera(s)** button to assign cameras for the application.
   Event Type: If the subscriber wants Center V2 always to get notified of motion detection, select **Emergency**. If the subscriber wants Center V2 to get notified of motion detection only when an assigned input is triggered, select **Normal**.

■ **Allow Center V2 to View Live Camera:**   Gives Center V2 the privilege to view your cameras at any time. Click the **Set Camera(s)** button to assign cameras for the application.

■ **Allow Center V2 to Control PTZ Camera:**   Gives Center V2 the privilege to control your PTZ cameras. Remember to properly set up camera mapping first. See *Mapping PTZ Cameras,* Chapter 1, *User's Manual* on the Surveillance System Software CD.

■ **Notify Center V2 when the following events come up:**   Notifies Center V2 when any of these alert events occur: Intruder, Missing Object, Unattended Object and Scene Change.

Event Type: If the subscriber wants Center V2 always to get notified of these alert events, select **Emergency**. If the subscriber wants Center V2 to get notified of these alert events only when an assigned input is triggered, select **Normal**.

Note: To set an input trigger for the notification of **Normal** events, see *Security Service, [I/O Device]* later in this chapter.

![GeoVision logo]

[Other]

Define other communication conditions between GV-System and Center V2.
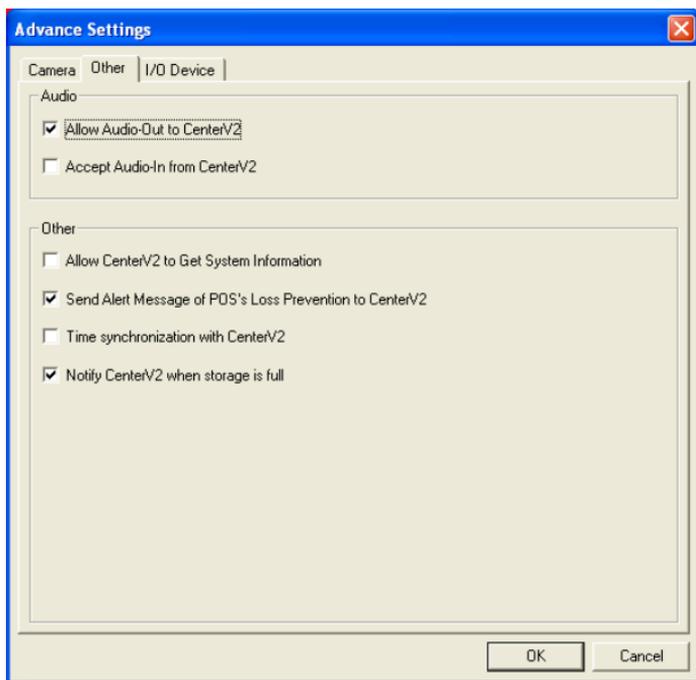
Figure 1-11

[Audio]   Applies any of these options here may generate privacy issues. Think before you make any selection.

- ■ **Allow Audio-Out to CenterV2:**   Allows Center V2 to listen to the audio from GV-System.
- ■ **Accept Audio-In from CenterV2:**   Allows Center V2 to use the talkback feature when emergency occurs.

[Other]

- **Allow Center V2 to Get System Information:** Allows Center V2 to get system information on your GV-System.
- **Send Alert Message of POS's Loss Prevention to Center V2:** Notifies Center V2 about the events of POS Loss Prevention.
- **Time synchronization with Center V2:** Enables the time increment/decrement of minutes and seconds at the subscriber site to match the time at the Center V2.
- **Notify Center V2 when the storage space was full:** Notifies the Center V2 when the subscriber's storage space is insufficient.

[I/O Device]

The settings define which I/O condition to notify Center V2. To configure these settings, first disable the **Monitoring all type events** option in Figure 1-8.
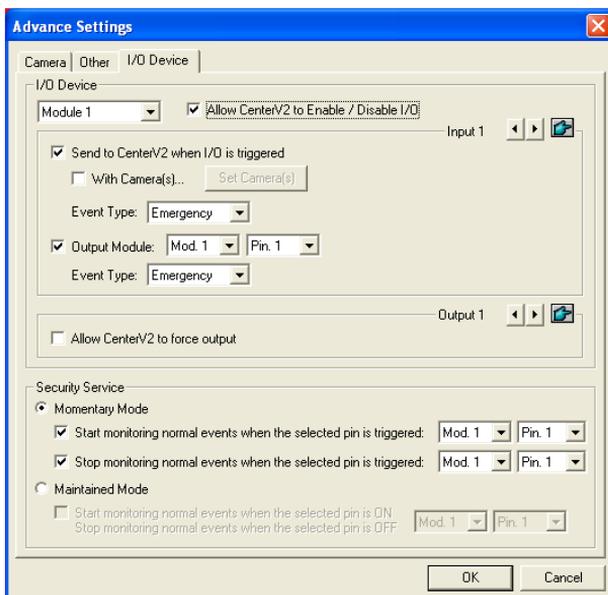
Figure 1-12

[I/O Device] Notifies the Center V2 of when I/O devices are triggered. Use the **Arrow** buttons to configure each I/O device, or click the **Finger** button to apply to all I/O devices.

■ **Allow Center V2 to Enable / Disable I/O:** Allows Center V2 manually arm/disarm any I/O devices at the subscriber's site without interrupting the monitoring.

For example, when an alarm is triggered at the subscriber site, the Center V2 can turn it off remotely before arriving at the site. Meanwhile, GV-System still remains on monitoring.

■ **Send to Center V2 when I/O is Triggered:**   Notifies Center V2 when any selected input is triggered.

With Camera(s):   Sends the camera video to Center V2 when the selected input is triggered. Click the **Set Camera(s)** button to assign cameras for the application.

Event Type: If the subscriber wants Center V2 always to get notified of the input trigger, select **Emergency**. If the subscriber wants Center V2 to get notified of the input trigger only when an assigned input is triggered, select **Normal**.

Right Arrow button: Sets the delay time to notify Center V2 of input trigger. This feature is only available when the **Normal** type is chosen.

⊙ **Exit Delay:**   While the system is activated, this feature provides an interval of time for the subscriber to exit the premises. During this time, the specified input (e.g. an exit/entry door) is inactive. Once the exit delay expires, the input will be fully armed.

⊙ **Entry Delay:**   While the system is activated, this feature provides an interval of time for the subscriber to entry the premises. During this time, the specified input (e.g. an exit/entry door) is inactive so that the subscriber can disarm the system. If the subscriber fails to do, once the entry delay expires, Center V2 will get notified of the input trigger.

■ **Output Module:**   Enables the assigned output module when the selected input module is triggered.

For this example, when the I/O Device (Module 1, Input 4) is triggered, the Output (Module 1, Pin 3) will be activated simultaneously.

Right Arrow button: Sets the delay time to trigger the assigned output module.

Event Type: If the subscriber wants Center V2 always to get notified of the output trigger, select **Emergency**. If the subscriber wants Center V2 to get notified of the output trigger only when an assigned input is triggered, select **Normal**.

Note:

1. To set an input trigger for the notification of **Normal** events, see *[Security Service]* below.

2. The delay settings in **Send to Center V2 when I/O is triggered** and **Output Module** allow you to enter your premises and disable input/output module before it is activated.
    To disable prior I/O settings, the subscriber may exit the connection to Center V2 or use the **Stop monitoring normal events when selected pin is triggered** feature in Figure 1-12.

■ **Allow Center V2 to Force Output:** Allows Center V2 to manually force output devices installed at the subscriber's site.

[Security Service] Supports two types of access control systems: Momentary and Maintained Mode.

■ **Momentary Mode:** Pushbutton switches that are normally open and stay closed only as long as the button is pressed. Momentary switches allow turn-on or turn-off from multiple locations.
For example, certain premises have a designated entry/exit door. When the staff enters the entry door, the system starts monitoring. When the staff leaves from the exit door, the system stops monitoring.

■ **Maintained Mode:** Push-on/push off button switches that stay open until thrown, and then stay closed until thrown again. Maintained switches are convenient for only one switch location.
For example, in the business hour when the door is opened, the system stops monitoring; in the non-business hour when the door is closed, the system starts monitoring.

Setting Panic Button

You may set up a panic alarm button at your GV-System. In case of emergency, press the button immediately to send the associated video to Center V2.

To set up a panic alarm, select **Panic Button** in the Connect to Center V2 dialog box (see Figure 1-8), click the **Configure** button and select **Advanced Settings**. This dialog box appears.
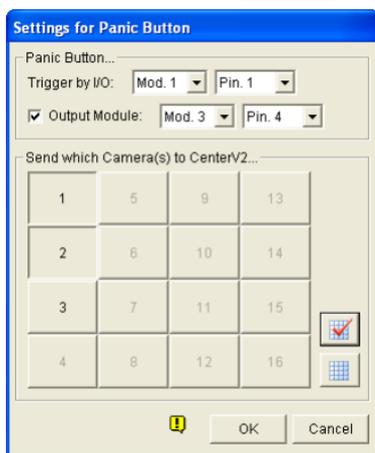
Figure 1-13

[**Panic Button**]   Assigns an input device to be the panic alarm button.

■   **Trigger by I/O:**   Assigns an input module and a pin number.
■   **Output Module:**   Enables an assigned output module when the panic button is pressed.
      For this example, when the panic button (Module 1, Pin 1) is pressed, the output module (Module 3, Pin 4) will be triggered simultaneously.

[**Send which Camera(s) to Center V2**]   Select which camera video should be sent to Center V2 when the panic alarm button is pressed.

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Detecting Input Status

The feature is designed to monitor all inputs for a change of state whenever the subscriber starts the live monitoring through Center V2. A change from the previously defined state (N/O to N/C or N/C to N/O) will activate an alarm condition.

Click ![icon] in the Connect to Center V2 dialog box (see Figure 1-8). For details, see *Detecting Input Status*, Chapter 6, *User's Manual* on the Surveillance System Software CD.

1.6 Instant Recording and Playback

You can instantly access the live video of a camera, start and stop recording, and play back any video attachments.

Enabling Live View

- You can enable live view of any camera by right-clicking it in the Subscriber List, and then selecting **Live View**.

Figure 1-14

- When a subscriber is in focus, you can enable live view to all its cameras. Click a subscriber in the list and select **Focus on this subscriber only**. When the subscriber is in focus, click the subscriber again and then select **View All Cameras (Live)**. All cameras of this focused subscriber display live view.
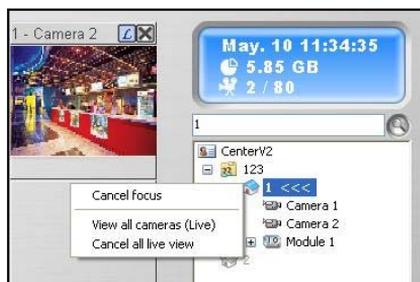
Figure 1-15

Recording and Playing Back

- When a camera is enabled for live view, you can start and stop recording by clicking the 🔲 button on the channel heading.
- As soon as you stop recording, you can double-click the attachment of the event in the Event List for instant playback.

Playing Back with EZ Player

When you click the attachment of an event, the EZ player will appear for playback operations.

Figure 1-16

No.	Name	Description
1	Tools	Adds effects to the image, including the options of Brightness, Contrast, Smooth, Sharpen, Grayscale and Undo. The other options include Copy, Save As (an image or an .avi file), Print and Setup.
2	Zoom In	Zooms in the video.
3	Zoom Out	Zooms out the video.

4	Move	Moves the EZ Player window by clicking and holding on this button.
5	Play	Plays the video file.
6	Pause	Pauses the video file.
7	Stop	Stops the video file.
8	Previous Frame	Goes to the previous frame of the video file.
9	Next Frame	Goes to the next frame of the video file.
10	Top Frame	Goes to the beginning of the video file.
11	End Frame	Goes to the end of the video file.
12	Speed Control	Controls the play speed.

Changing Playback Mode

You can choose to play back video one by one in the same player or separate players simultaneously.

1. Click the **Tools** button on the EZ player (No.1, Figure 1-16), and click **Setup** from the pop-up menu. This dialog box appears.
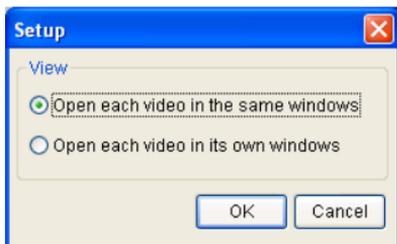
Figure 1-17

2. To play back one video at one time in the same player, select **Open each video in the same windows**.

3. To play back multiple videos in separte players simultaneoulsy, select each video in its own windows.

1.7 Monitoring and Managing Subscribers

This section describes how to monitor and manage subscribers in these parts: (1) Showing I/O Status, (2) Controlling I/O Devices (3) Camera/Audio Control, (4) Simple Microphone and Audio Panels (5) Camera Monitor (6) Viewing Subscriber Information (7) Subscription Control.

Showing I/O Status

You can view the status of input devices at the subscriber's site, as well as forcing the outputs.

On the Subscriber List (No. 4, Figure 1-1), right-click one online subscriber, and then select **Show I/O Status** to display this window.
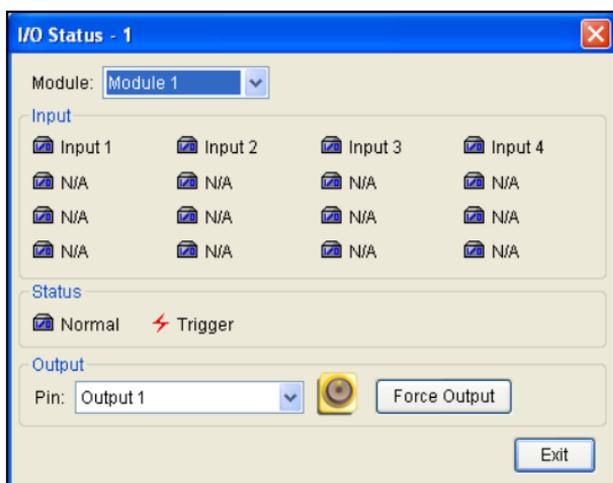
Figure 1-18

[Module]   Select a module from the drop-down list.

[Input]   Indicates the status of input devices of the selected module. The blue icon means the input is deactivated; the red lightening icon means the input is activated.

[Output]   To force an output installed at the subscriber site, select a desired output pin from the drop-down list and then click the **Force Output** button.

For this, the subscriber must grant the privilege to Center V2 first. See the **Allow Center V2 to Force Output** option in Figure 1-12.

Controlling I/O Devices

The Center V2 operator can manually arm or disarm the physical I/O devices from subscribers without interrupting the monitoring. For this, the subscriber must give the privilege first. See the **Allow Center V2 to Enable/Disable I/O** option in Figure 1-12.

Note: This function also supports the client GV IP devices of these firmware versions:

GV-Compact DVR: Firmware V1.43 or above

GV-IP Camera: Firmware V1.05 or above

GV-Video Server: Firmware V1.45 or above

Arming/disarming I/O devices

1. On the Subscriber List (No. 4, Figure 1-1), right-click one online subscriber and select **I/O Enable Setting**.
2. To arm the I/O devices, select the desired ones. To disarm the I/O devices, clear the selections or leave the options empty.

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Camera/Audio Control Window

This feature allows two-way audio communication between CenterV2 and the subscriber, as well as PTZ control.

On the Subscriber List (No. 4, Figure 1-1), right-click one online subscriber and then select **Camera/Audio Control** to display this window.

Figure 1-19

The controls on the Camera/Audio Control:

No.	Name	Description
1	Change Camera	Switches to another camera of the same subscriber.
2	Change Size	Changes the size of the Live View. The size choices depend on the video size the Center V2 operator defined for the subscriber (see *Image Size* in *Subscriber Settings*).
3	Audio	Accesses the audio from the subscriber.
4	Microphone	Enables speaking to the subscriber.
5	Setting	Changes the audio and video settings

6	PTZ	Activates the PTZ control by selecting PTZ Panel or PTZ Automation.
7	Snapshot	Takes the snapshot of the displayed live video.
8	Zoom	Enlarges the video by selecting 1.0x, 2.0x and 3.0x.

Note: If the subscriber uses GV-System version 8.2 or earlier, an older style of Camera /Audio Control window will appear. If the GV-System version V8.3 or later is in use, a new window will appear.

Window for V8.2 or earlier   Window for V8.3 or later

Figure 1-20

Simple Audio and Microphone Panels

The simple audio and microphone panels allow you to perform two-way audio communication between Center V2 and the subscriber without providing live video, other than the **Camera/Audio Control** window with live video. For this function to work, subscribers must use GV-System version 8.0 or later.

1. To speak to a connected subscriber, right-click that subscriber in the Subscriber List or one of its channels on the window, and select **Microphone**. This panel appears.

Subscriber's ID

Microphone status
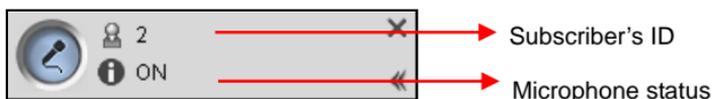
Figure 1-21

2. To access the audio from a connected camera, right-click that camera in the Subscriber List or on the window, and select **Audio**. This panel appears.
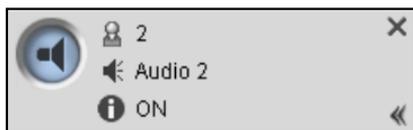
Figure 1-22

3. To switch to another subscriber, click the subscriber icon [icon] in the panel, type that ID in the Search Account dialog box and then click **GO**.

Note: To enable this two-way communication, the subscriber must grant the privilege first. See the **Allow Audio-Out to Center V2** and **Accept Audio-In from Center V2** options in Figure 1-11.

Camera Monitor

Use the Camera Monitor window to define the following:

- Enable and disable live display
  (The subscriber must give the privilege first. See the **Allow Center V2 to View Live Camera** option in Figure 1-10)
- Define the interval between incoming events triggered by motion detection and video lost

1. On the Subscriber List (No. 4, Figure 1-1), right-click one online subscriber and select **Camera Monitor**.
2. The Camera Monitor window appears.

Figure 1-23

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- ■ **Live drop-down list:** Highlight one camera, and select **Play** (enable live display) or **Stop** (disable live video).
- ■ **Suspended Motion Monitoring:** Highlight one camera, and set the interval between incoming events triggered by motion detection. Alternatively, you can right-click one live camera channel on the monitoring window and select **Suspend** for the same setting.
- ■ **Suspend Video Lost Monitoring:** Highlight one camera, and set the interval between incoming events triggered by video lost.
- ■ **Status column:** Displays the status of video lost from cameras or disconnection.

3.   Click **OK** to apply the settings.

If the camera is enabled for live display, you will see in the upper right corner of its monitoring window; otherwise, you will see .

Viewing Subscriber Information

To view the general information about your subscribers, click the **Host Information** button (No. 6, Figure 1-1) on the Center V2 window to display the Host Information window. Choose a subscriber from the list, and click the **View Information** button to view its related information.
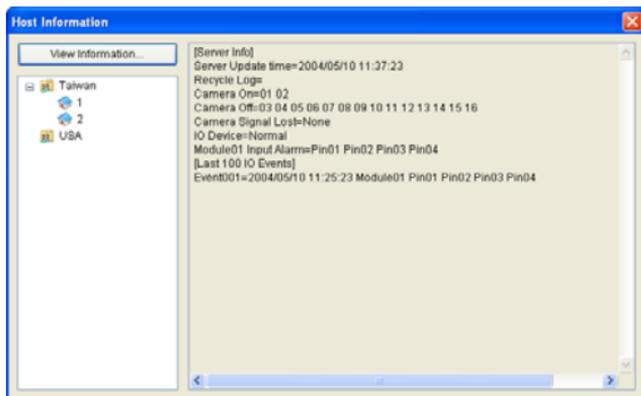
Figure 1-24

Subscription Control

The Center V2 operator can disable its services to an individual subscriber when subscription expires. In the Address Book (Figure 1-2), right-click one subscriber and select **Disable**. To restore the subscription, right-click that subscriber again and select **Enable**.

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1.8 Subscriber Schedule

The Center V2 operator can create schedules to monitor subscription status. When subscribers don't log in Center V2 on the programmed time, the operator and subscribers will get notified.

- When a subscriber doesn't log in Center V2 on time, this message will appear on the Event List: Service hour engaged; still waiting for subscriber to log in.
  When a subscriber logs out suddenly during a service time, this message will appear: Unexpected subscriber logout during service times.
- To activate the computer and output alarm to notify the operator while a SMS and E-mail message being sent out to a subscriber, use the **Notification** feature. For details, see Notification Settings later in this chapter.

Setting a Schedule

1. On the Center V2 window, click the **Accounts** button (No. 7, Figure 1-1). The Address Book window appears.
2. Highlight one subscriber, and click the **Subscriber Schedule** (No. 7, Figure 1-2). The Schedule window appears.
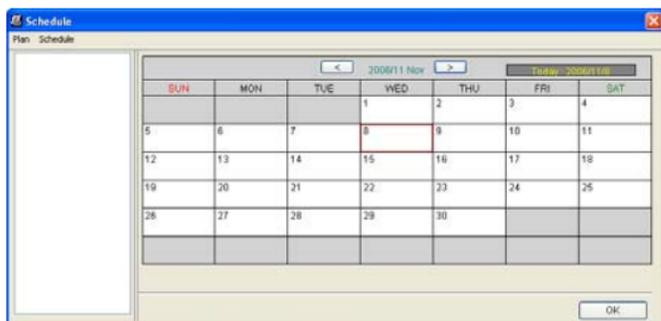
Figure 1-25

3. On the Schedule window menu, click **Schedule**, select **Setup Wizard** and follow the Wizard instructions.

4. When the following dialog box appears during the instructions, drag the mouse over the Login timeline to define the Start and End time.
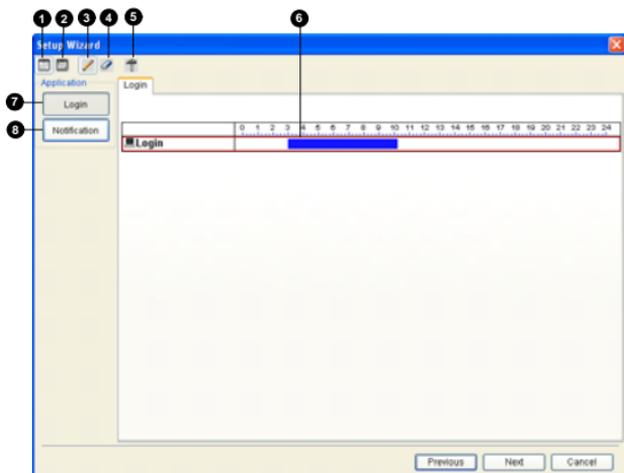
Figure 1-26

The controls on the Setup Wizard:

No.	Name	Description
1	Include	Displays task time.
2	Exclude	Displays non-task time.
3	Add	Draws task time.
4	Erase	Erases task time.
5	Advanced Setting	Selects alert notification methods. See *Scheduling Alert Notification* later.
6	Timeline	Defines the time periods.
7	Login	Displays the Login timeline.
8	Notification	Displays the E-mail and SMS timelines.

5. Click **Next** when you finish the schedule. The Setup Wizard dialog boxes pops up again, and then click **Finish** to exit.

Scheduling Alert Notification

E-mails and SMS messages can be sent out within the scheduled period of time. The Schedule will work with your E-Mail and SMS settings to all alert conditions. To set up alert conditions, see *Notification Settings* later in this chapter.

Note: Once you enable the schedule function, you will not be notified when events occur outside the scheduled period of time.

---

1. On the Schedule window, double-click an established plan. A plan dialog box similar to Figure 1-26 appears.
2. Click the **Advanced Setting** button (No. 5, Figure 1-26). The Advanced Setting dialog box appears.
3. Expand the **Notification** folder, and select **SMS** or **E-Mail** to be scheduled.
4. On the plan dialog box, click the **Notification** button (No. 8, Figure 1-26), drag the mouse over SMS and / or E-mail timelines to define the Start time and End time to send out alerts.

1.9   Alarm Report

For every event, the Center V2 operator can generate a report to evaluate certain conditions.

Creating an Alarm Report

1. In the Event List window, select an event and click on the report column. This dialog box appears.

Figure 1-27

2. In the Reporter field, type the name, and click **Start** to begin the report.

3. There are 6 report categories. Click the desired category tabs for report.

    ■   **Event Type:**   Select a type to classify the event.

    ■   **Description:**   Select a description for the event.

    ■   **Notification:**   Select the authority being notified, and enter the notified time.

■ **Arrival:** The button becomes available after you select a notified authority. Enter the arrival time of the authority.

■ **Measures:** Select the measure taken to deal with the event.

■ **Other:** The button is available only when the e-mail and /or SMS alert are configured.

4. When you finish the report and will not change the contents, click the **End Report**. Or click **Save** to edit later.

Editing Alarm Report Categories

The items in each category of the Alarm Report can be customized and edited to meet your needs. The changes made here will be available for each report.

1. On the Center V2 window, click the **Preference Settings** button (No.8, Figure 1-1), and select **Customize Alarm Report**. This dialog box appears.
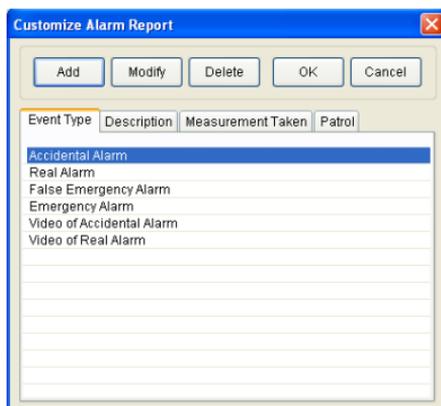
Figure 1-28

2. Click the desired category tab (**Event Type**, **Description**, **Measurement Taken**, and **Patrol**) to make the necessary changes.

3. Click **OK** to save the changes.

Printing Alarm Reports

You can print out the alarm reports along with filtered logs.

1. To filter the logs with alarm reports, click the **Tools** button (No.5, Figure 1-1), select **View Event Log**, and click the **Filter** button. The Filter window appears.

2. Click the **Clipboard** icon and select the type of alarm report from the drop-down list. For details, see *Filtering the Event Log* in *1.11 Event Log Browser.*

3. Click **OK**. The search results will be displayed in the Event Log Browser window.

4. To print out the alarm reports along with the search results, click the **Page Setup** button (No.7, Figure 1-31), select **Print Managing Alarm Report** and click **OK**.

5. Click the **Print** button (No. 8, Figure 1-31). Find the alarm reports in the last part of the printouts.

Also see *Printout Settings* in *1.11 Event Log Browser.*

1.10 Colorful Flags

The flags of various colors are provided to distinguish different events. You will find them useful not only when browsing in the Event List but also when using the Filter function to search the desired events.
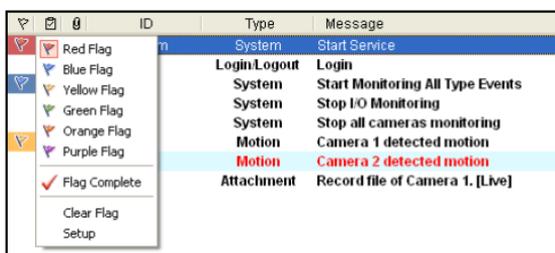
Figure 1-29

Marking the Events with Colorful Flags

You can flag any events in the Event List for later reference. There are 6 kinds of flags and one check mark for you to signify the events.

1. On the Event List window, select one event, and right-click on the flag column. A list of 6 kinds of flags in different colors (Red Flag, Blue Flag, Yellow Flag, Green Flag, Orange Flag and Purple Flag), one check mark (Flag Complete) and two setting options appears.

2. Select the desired flag or check mark for the event.

To unmark the events, simply click the flag icon. Or right-click the flag icon and select **Clear Flag**.

Editing Colorful Flags

You can name the colorful flags with the provided texts or change the texts to meet your needs.

1. On the Event List window, select one event, and right-click in the flag column. The flag list appears (see Figure 1-29).

2. Select **Setup**. This dialog box appears.
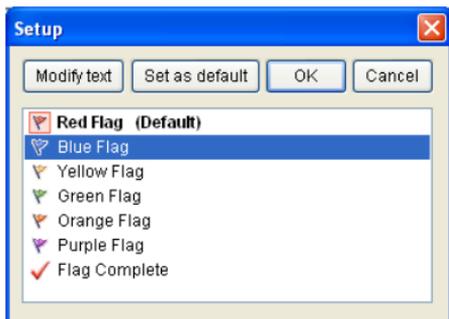
Figure 1-30

3. Select the desired flag, and then click the **Modify text** button. A list of text options appears.

4. Select one desired text (Pending, Assigned, In Process, Progressed, Resolve and Reject) or select **User Define** to customize your own flag text.

1.11 Event Log Browser

The Event Log Browser allows you to locate a desired event coming from subscribers. On the Center V2 window, click the **Tools** button (No. 5, Figure 1-1) and select **View Event Log** to display the following window.

Tip: You can quickly access the Event Log of a specific subscriber, instead of filtering all events. Right-click one subscriber on the Subscriber list (No. 4, Figure 1-1), select **Event Log** and then click a desired log type.
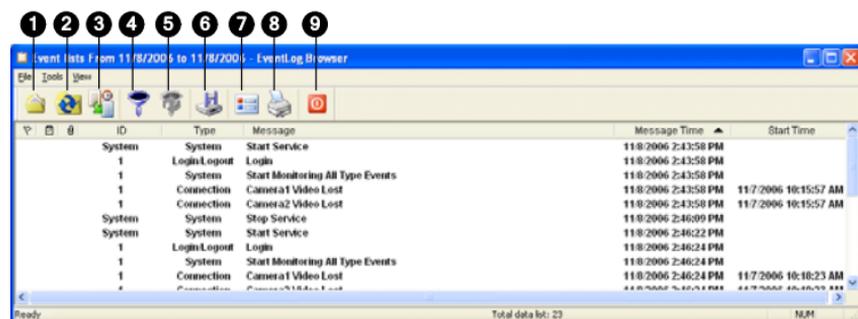
Figure 1-31

The buttons on the Event Log Browser:

No.	Name	Description
1	Open	Opens an event log.
2	Reload	Refreshes the event log manually
3	Start / Stop Synchronous EventLog	Refreshes the event log automatically.
4	Filter	Defines the search criteria.
5	Refresh the Filter Result	Refreshes the filter result.
6	Backup	Exports the current event list and video files.

7	Page Setup	Creates a header and footer for the printout of the event list.
8	Print	Prints the current event list.
9	Exit	Exits the browser.

Opening the Event Log

Click the **Open** button (No. 1, Figure 1-31) to launch the following Open Database dialog box. Define a time period and select the type of database. If you want to open the logs created by the system, select **System Log**; if you want to open the logs you have backed up in a local drive or CD/DVD, select **Backup Log**. Then assign the log path. After clicking **OK**, the events matching the search criteria will be loaded to the Event Log Browser.
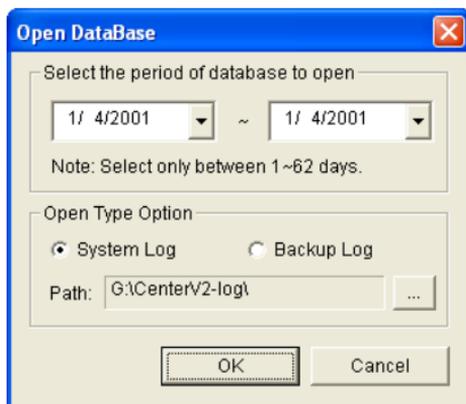
Figure 1-32

For details on backing up logs, see *Backup Settings* later in this chapter.

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Filtering the Event Log

You can filter log events on the defined criteria. Click the **Filter** button (No. 4, Figure 1-31) to bring up the Filter window.
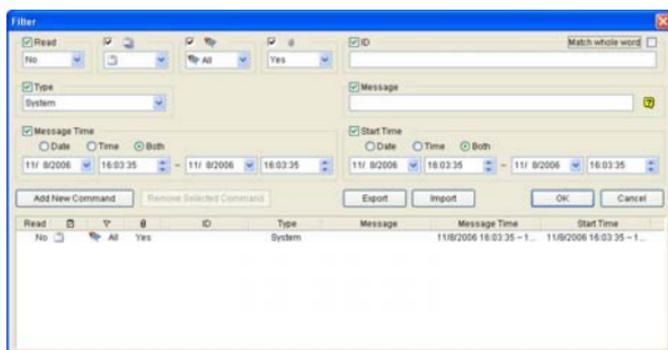
Figure 1-33

Filters

■ **Read:** Searches for the events you have opened on the Event List that is at the bottom of the Center V2 window.

■ **Clipboard:** Searches for the events with alarm reports. The 📋 icon indicates the report has been completed. The 📋 icon indicates the report has not been completed or ended. The 📋 All icon indicates the above two types of reports.

■ **Flag:** Searches for the flagged events.

■ **Clip:** Searches for the events containing video attachments.

■ **ID:** Searches for the events from a specific subscriber.

■ **Type:** Searches for the events based on the nature of events.

■ **Message:** Searches for the events by keywords.

■ **Message Time:** Searches for the events by the arriving time or date to Center V2.

■ **Start Time:** Searches by the starting time of the events occurred at the subscriber site.

Applying Multiple Filters

This option allows you to define several filter commands for search. Click the **Add New Command** button to add a new filter command. When you click **OK**, all events matching the defined commands will be listed on the Event Log Browser.

Removing Filters

Select the filter command you wish to remove from the filter list, and then click the **Remove Selected Command** button to remove it.

Backing up the Event Log

You can back up logs to a local drive, or export them to CD and DVD.

1. On the Event Log Browser, click the **Backup** button (No.6, Figure 1-31). This dialog box appears.
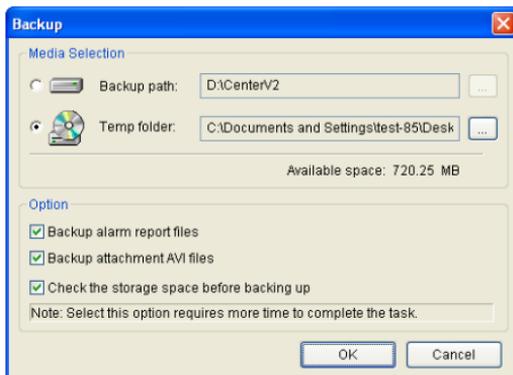
Figure 1-34

2. To back up logs to a local drive, select **Backup Path**, click the **[…]** button and assign a location wehere you want to save the files.

3. To export logs to CD and DVD, select **Temp folder**, click the **[…]** button and assign a location for temporary storage of backup data.

4. Select whether you want to back up alarm reports and AVI files along with logs.

5. Click **OK**.

6. If you select **Temp folder**, this dialog box appears for further setup.
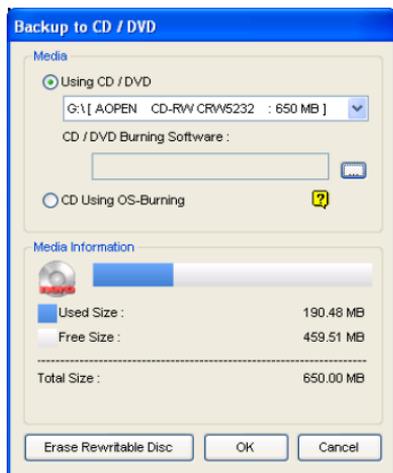
Figure 1-35

■ **Using CD/DVD:**   Click to back up files to the CD or DVD using the third-party software. Click the **[…]** button to assign the desired burning software (.exe file).

■ **CD Using OS-Burning:**   This option is only available when you use Windows XP, Server 2003 or Vista. It burns files to the CD or DVD using the inbuilt software of the operating system.

Setting the Event Log

On the Center V2 window, click the **Preference Settings** button (No. 8, Figure 1-1), and select **Event Log Setting** to display the following dialog box:
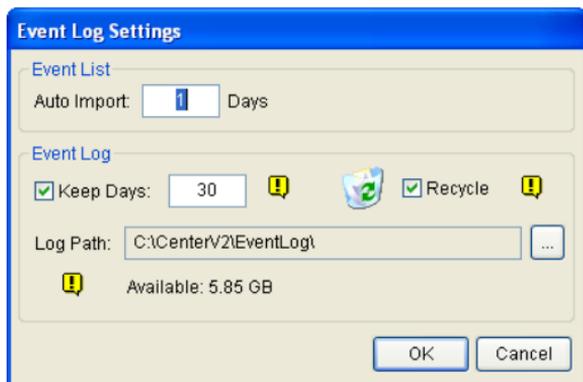
Figure 1-36

[Event List]
■ **Auto Import:** Specify the logs of the number of days to be loaded to the Event List that is at the bottom of the Center V2 window.

[Event Log]
■ **Keep Days:** Select this option and enter the number of days to keep log files. Otherwise clear the option to keep log files until the Recycle starts or the storage space is full.
■ **Recycle:** Delete the files of the oldest day when storage space is lower than 500 MB.
■ **Log Path:** Click the **[...]** button to assign a storage path.

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Setting the Printout

You can create the Footer and Header for the printout of the event list.

1. On the Event Log Browser, click the **Page Setup** button (No. 7, Figure 1-31) to display this dialog box.

2. Check the items and type the information you want to print out.

3. Click **OK** to apply the settings.

4. Click the **Print** button (No.8, Figure 1-31) to start.
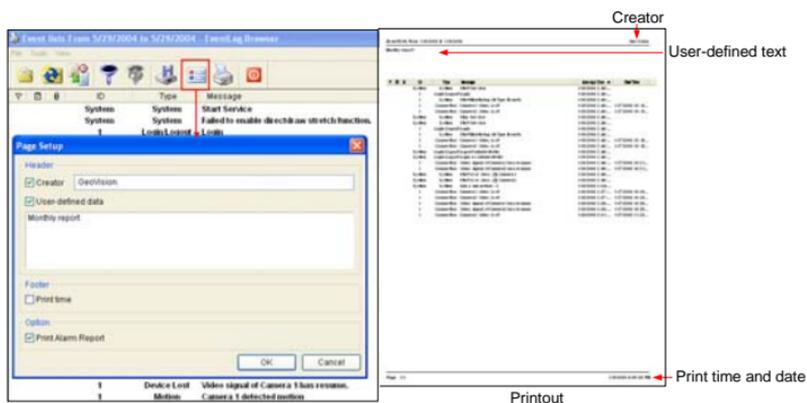
Figure 1-37

1.12 System Configuration

On the Center V2 window, click the **Preference Settings** button (No. 8, Figure 1-1), and select **System Configure** to display the following Preference window. This window contains these tabs: (1) General, (2) Layout, (3) Network, (4) Record and (5) Dispatch Server.

General Settings
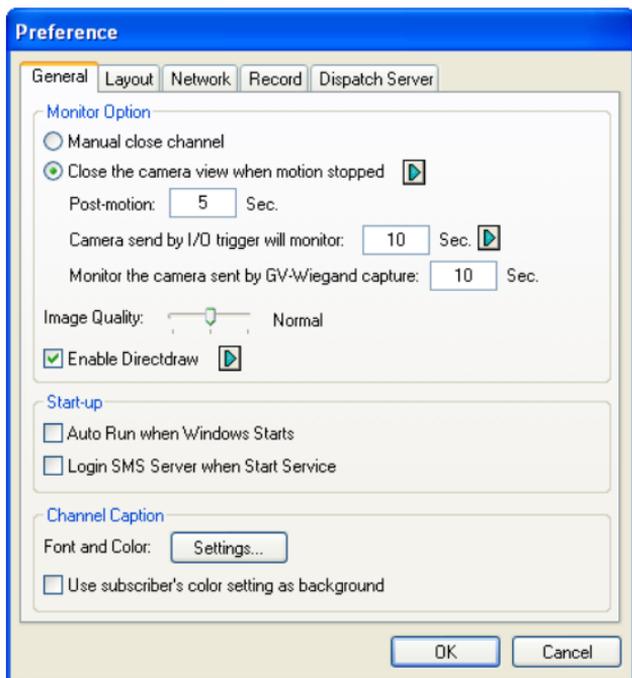
Figure 1-38

[Monitor Option]

- **Manual close channel:** Closes the triggered camera view manually.
- **Close the camera view when motion stopped:** Closes the triggered camera view automatically when motion stops.
- **Post Motion:** Specifies the duration of the camera view remaining on the monitoring window after motion stops.
- **Camera send by I/O trigger will monitor:** Specifies the duration of the camera view remaining on the monitoring window when an I/O device is triggered.
  To keep the camera view remaining on the monitoring window even after the alarm is finished, click the right-arrow button, and uncheck **Latch Trigger**. Then the camera view will remain on the monitoring window for the specified time. For example, the alarm is triggered for 5 minutes and you set 10 minutes, which means the total display time will be 15 minutes.
- **Monitor the camera sent by GV-Wiegand Capture:** Specifies the duration of the camera view remaining on the monitoring window when the access control system, connected to GV-Video Server, is triggered. For details, see *Chapter 8 CMS Configurations* in the *GV-Video Server User's Manual*.
- **Image Quality:** Adjusts the video quality. Moving the slide bar to the right side for the better quality and the bigger image size.
- **Enable Directdraw:** Enables an enhanced image performance for live video. To enhance coloring, click the right-arrow button, select **Use Colorful Mode** and restart the Center V2 program to take it effect.

[Start-up]

- **Auto Run when Windows Starts:** Automatically runs Center V2 when Windows starts.
- **Login SMS Server when Start Service:** Automatically logs in SMS Server when Center V2 starts. You will be prompted to enter the IP address, Port, ID and Password of the SMS server.

[Channel Caption]

■ **Font and Color:**   Click the **Settings….** button to change the font and color of the captions.

■ **Use the subscriber setting color as background:**   Checks the option to apply the caption settings.

For details, see *Changing the Color of Channel Heading* earlier in this chapter.

Layout Settings

This feature transfers the Event List window to a separate computer while the monitoring windows are displayed in the current computer. For the application, your VGA card needs to support Twin View, and your Windows desktop must be properly set up for the display across two computer monitors.
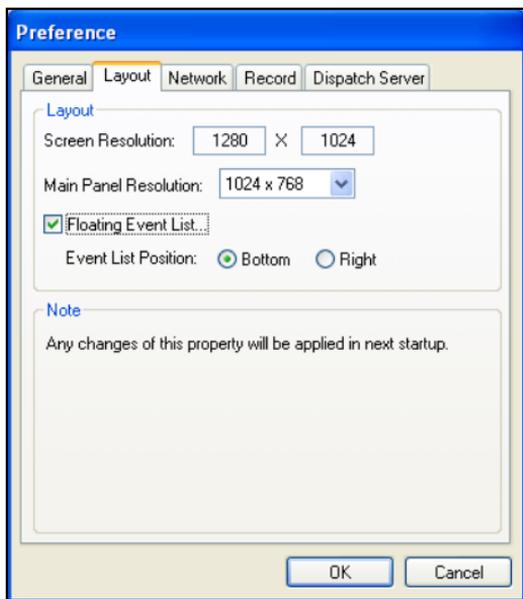
Figure 1-39

- **Screen Resolution:** Detects the current screen resolution on your PC.
- **Main Panel Resolution:** Sets the Center V2 panel resolution to 1024 x768, 1280 x1024, 1600 x 1200, 1680 x 1050, 1920 x 1200, 1920 x 1080, 1280 x 800 or 1440 x 900. The new resolution is effective after next login.
- **Floating Event List:** Moves the Event List window to a separate monitor at the bottom or right side.

Network Settings
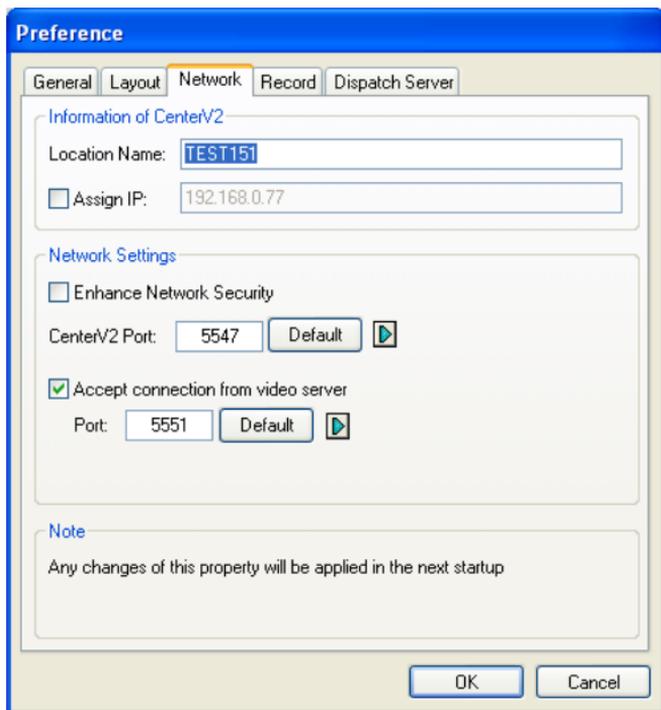
Figure 1-40

- **Location Name:** Indicates the name of the PC where Center V2 is installed.
- **Assign IP:** When your router or system has more than one IP address, you can assign an IP address for the communication between DVR and Center V2.
- **Enhance Network Security:** Applies enhanced security for Internet. When the feature is enabled, all subscribers using earlier version than version 7.0 cannot access the Center V2 anymore.
- **Center Port:** Indicates the communication port used by the Center V2. The port should match the one in Figure 1-7. To automatically configure the port on your router by UPnP technology, click the **Arrow** button. For details, see *UPnP Settings*, Chapter 8, *User's Manual* on the Surveillance System Software CD.
- **Accept the Connection of Video Server:** Enables the connection to the GV-Video Server. The default port is **5551**, or you can modify it to match the Center V2 port on the GV-Video Server. For details, see *GV-Video Server User's Manual*.

Recording Settings

The feature allows you to assign a path to store video files.
Click the **Add New Path** button 🔆 to assign a path; click the **[X]** button to delete a path.

If the **Recycle** item is checked, the system will delete old files when storage space falls short of 800 MB; if not checked, Center V2 will stop recording when storage space falls short of 800 MB.

If you like to enlarge the default recycle threshold, select **Enlarge recycle threshold** and specify a size.
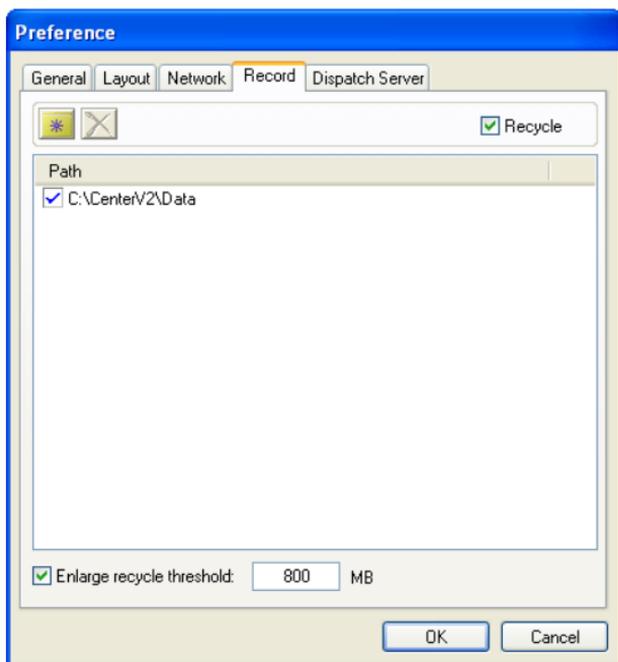
Figure 1-41

Note: Every 400 MB of old files will be deleted upon reaching the recycle threshold.

Dispatch Server Settings

See *2.6 Connecting Center V2 to Dispatch Server*.

1.13 Notification Settings

Center V2 can automatically activate the assigned computer and output alarm to notify the operator while a SMS and an e-mail message are being sent out to subscribers, when alert conditions occur. For this application, click the **Preference Settings** button (No. 8, Figure 1-1) on the Center V2 window and select **Notification** to display this window.
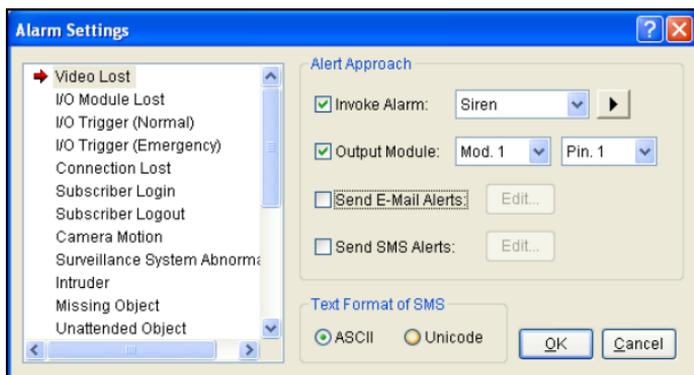
Figure 1-42

[List box] Select an alert condition for configuration. The alert conditions include: (1) Video Lost, (2) I/O Module Lost, (3) I/O Trigger (Normal), (4) Trigger (Emergency), (5) Connection Lost, (6) Subscriber Login, (7) Subscriber Logout, (8) Camera Motion, (9) Surveillance System Abnormality, (10) Intruder, (11) Missing Object, (12) Unattended Object, (13) Scene Change, (14) POS Loss Prevention, (15) Disk Full, (16) Stop all camera monitoring, (17) Stop I/O Monitoring, (18) Start Monitoring All Type Events, (19) Stop Monitoring All Type Events, (20) Wait-Time Expired and (21) Unexpected Logout.

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[Alert Approach]

■ **Invoke Alarm:** Select a computer alarm from the drop-drown list. Or, select **User Define** from the list to import one desired .wav sound. Click the **Arrow** button beside to test the assigned alarm.

■ **Output Module:** Select an installed output model and pin number to alert the Center V2 operator.

■ **Send E-Mail Alerts:** Enables e-mail alerts to send e-mails to subscribers. Click the **Edit** button to edit a message. For E-Mail settings, see *E-Mail Alerts later* in this chapter.

■ **Send SMS Alerts:** Enables SMS alerts to send SMS messages to subscribers. Click the **Edit** button to edit a message. For SMS Server settings, see *SMS Alerts* later in this chapter.

[Text Format of SMS] ASCII for English text, limited to 160 characters. Unicode for other languages, limited to 70 characters.

Note: For E-mail and SMS alerts, ensure to set up e-mail addresses and mobile numbers for each subscriber in the Subscriber Address Book (see Figure 1-3).

1.14   Output Alerts

When alert conditions occur, you can activate the output devices installed at the Center V2 site and/or at the subscriber site.

Forcing Outputs of Center V2

To configure output devices at the Center V2 site, click the **Preference Setting** button (No.8, Figure 1-1) and select **I/O Device** on the Center V2 window. Currently the application only supports GV-IO modules. For setup details, see *Setting Up I/O Devices,* Chapter 6, *User's Manual* on the Surveillance System Software CD.

To automatically force outputs when alert conditions occur, see *Notification Settings* later in this chapter.

To manually force outputs, click the **Tools** button (No.5, Figure 1-1) on the Center V2 window, and then select **Force Output** to display the Force Output of Local I/O Device window. Select a desired module and then click **Finger** buttons to activate outputs.

Forcing Outputs of a Subscriber

See *Showing I/O Status* earlier in this chapter.

1.15 SMS Alerts

You can send SMS messages to subscribers when alert conditions occur.

Setting SMS Server

Before sending SMS messages to an individual subscriber, you need to define SMS Server correctly.

1. On the Center V2 window, click the **Tools** button (No. 5, Figure 1-1), and then select **Connect to SMS Server** to display this dialog box.
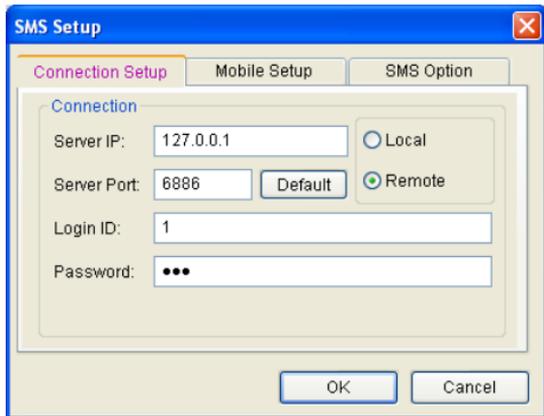
Figure 1-43

2. Type the IP address, communication port, Login ID and Password of the SMS Server.

3. If the SMS Server is installed at the same computer with the Center V2, select **Local.** If not, select **Remote**.

4. To set up three mobile numbers of Center V2 operators to get notified when Center V2 loses connection to SMS Server, click the **Mobile Setup** tab to display this window.
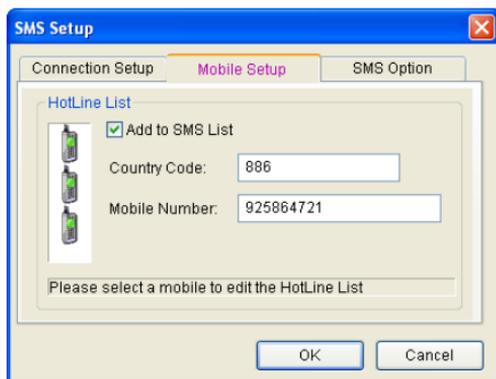
Figure 1-44

5.   Select one mobile icon, check **Add to SMS List**, and type country code and mobile number.

6.   To set time intervals between each SMS message when alert occurs, click the **SMS Option** tab to display this window.
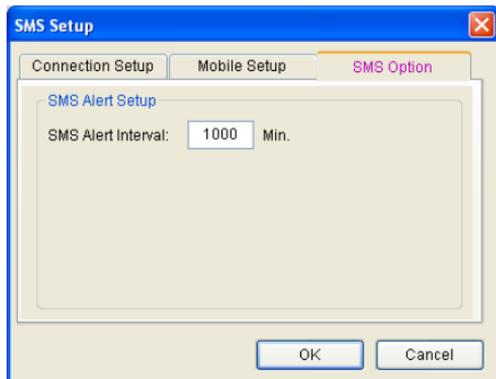
Figure 1-45

7.   In the SMS Alert Setup field, set the interval between 0 and 1440 minutes.

For details on SMS Server, see Chapter 10, *User's Manual* on the Surveillance System Software CD.

Connecting to SMS Server

In the Center V2 window, click the **Tools** button (No.5, Figure 1-1), and then select **Connect to SMS Server** for connection.

Sending SMS

Once the connection of SMS Server and Center V2 is established, there are several ways to send SMS messages to subscribers. See the Center V2 window for the following selections.

1. Click the **Tools** button (No.5, Figure 1-1) and select **Send Short Message**. This sends SMS to an individual subscriber manually.

2. On the Subscriber List (No. 4, Figure 1-1), right-click one subscriber and select **Send Short Message**. This sends SMS to an individual subscriber manually.

3. On the Event List, double-click one Event Type, except Attachment, to call up a message window. Click the **Send Short Message** icon on the window. This sends SMS to an individual subscriber manually.

4. Right-click one display channel and select **Send Short Message**. This sends SMS to an individual subscriber manually.

5. Click the **Preference Settings** button (No. 8, Figure 1-1), and select **Notification** to display the Alarm Settings window. Check the **Send SMS Alerts** item. This sends SMS to subscribers automatically when set alert conditions occur. For details, see *Notification Settings* earlier in this chapter.

1.16 E-Mail Alerts

You can send e-mails to subscribers when alert conditions occur.

Setting Mailbox

Before you can send e-mails to a separate e-mail account, you need to define your mailbox correctly.

Setting up the mailbox

1. On the Center V2 window, click the **Preference Settings** button (No. 8, Figure 1-1), and then select **E-Mail Setup**. This dialog box appears.

Figure 1-46

2. In the Charset field, select the set of characters and symbols that the e-mail uses.

3. In the E-Mail From field, enter your e-mail address.

4. In the SMTP Server field, enter the outgoing server address.

5. If your e-mail service provider requires authentication for sending e-mails, check **SMTP Server requires authentication**, and type the account ID and password of your SMTP.

6. If you want to set time intervals between each e-mail message when alert occurs, in the Alert Setup field, set the interval between 0 and 60 minutes.

7. Click **OK**.

Sending a test e-mail

After setting up your mailbox, you can use the Test section and send a message to your own e-mail account for testing.

1. Enter your own e-mail address in the E-Mail To field.
2. Enter a subject for the e-mail.
3. Type the desired message in the Mail Content field.
4. Click the **Test Mail** button.

Sending E-Mail

There are several ways to send e-mail alerts. See the Center V2 window for the following selections.

1. On the Subscriber List (No. 4, Figure 1-1), right-click one subscriber, and then select **Send E-Mail**. This sends the e-mail to an individual subscriber manually.

2. Right-click one display channel, and then select **Send E-Mail**. This sends the e-mail to an individual subscriber manually.

3. On the Event List, double-click one Event Type, except Attachment, to call up a message window. Click the **Send E-Mail** icon on the window. This sends the e-mail to an individual subscriber manually.

4. Click the **Preference Settings** button (No. 8, Figure 1-1), and select **Notification** to display the Alarm Settings window. Check the **Send E-Mail** item. This sends e-mails to subscribers automatically when set alert conditions occur. See *Notification Settings* earlier in this chapter.

1.17   E-Map Alerts

You can configure an instant E-Map alert to lay out the locations of triggered cameras, sensors and alarms within a floor plan.

For this application, subscribers must already create their own E-Maps using the E-Map Editor and activate **WebCam Server**.

To configure E-Map alert at the Center V2, right-click one online subscriber on the Subscriber List (No. 4, Figure 1-1) and select **E-Map**.

For details on E-Map, see *E-Map Application,* Chapter 9, *User's Manual* on the Surveillance System Software CD.

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1.18   Backup Servers

You can configure up to two backup servers in case of the primary Center V2 server failure. Whenever the primary fails, the backup server takes over the connection from subscribers, providing uninterrupted monitoring services.

1.   To import the subscribers' accounts from the primary server to the backup server, click the **Import / Export Address Book** button (No. 6, Figure 1-2) on the Address Book toolbar, and select **Import** to transfer the address book data.

2.   On the Center V2 window, click the **Preference Settings** button (No. 8, Figure 1-1), and select **Automatic Failover Support**. This dialog box appears.
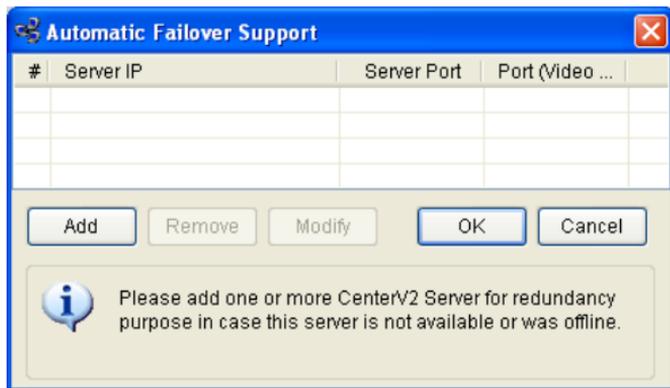
Figure 1-47

3. Click the **Add** button to add one server. This dialog box appears.
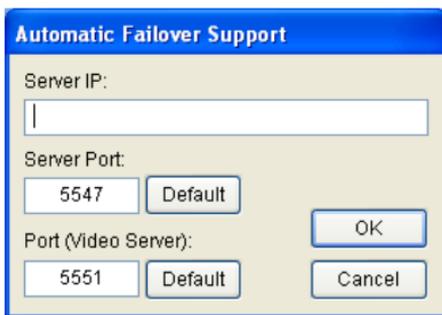
Figure 1-48

4. Type the IP Address of the backup server. Keep the default port settings or modify them if necessary.
5. Click **OK**.

Note: Once the primary server is ready to resume the services, it is required to close the backup server so the connection from subscribers can move back to the primary.

C GeoVision

1.19 Assigning a Subscriber to Another Center V2

You can assign one subscriber to another Center V2 without ending the current connection. For this function to work, subscribers must also use GV-System version 8.3 or later.

Note: The function is not available for the subscribers of GV-Video Server, GV-Compact DVR and GV-IP Camera.

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1. In the Subscriber List, right-click the desired subscriber, and select **Dispatch to other Center V2**. This dialog box appears.
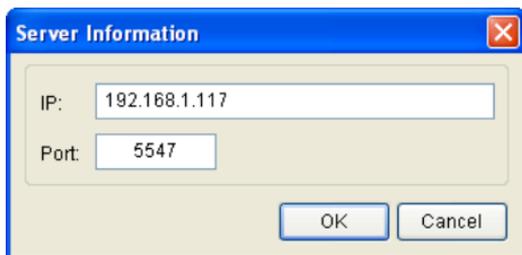
Figure 1-49

2. Type the IP address of another Center V2. The default port value is 5547. Modify it if necessary.

3. Click **OK**. The subscriber will be therefore assigned to the designated Center V2. In the Subscriber List of the local Center V2, that subscriber's icon shows offline.

Chapter 2
Dispatch Server

The availability of Center V2 Servers may be threatened by network overload. Thru Dispatch Server, the concern can be settled by arranging and distributing subscribers' requests to the least busy Center V2 Servers. With Dispatch Server, a central monitor station can run several Center V2 Servers and serve a large number of subscribers with the fastest responding time. If any of Center V2 Servers needs maintenance, Dispatch Server can automatically redistribute subscribers' requests to other Center V2 within a server farm or to servers in another location.

![GeoVision logo]

2.1 System Requirements

Before installation, make sure that your computer meets the following minimum requirements:

Standard Version

OS	Windows 2000 / XP / Server 2003 / Vista
CPU	Pentium 4, 2.6 GHz, 800 MHz FSB
Memory	2 x 256 MB Dual Channels
Hard Disk	60 GB
VGA	NVIDIA GeForce4 MX440 64MB
Network	TCP/IP

Advanced Version (Connections to more than 100 DVR subscribers)

OS	Windows 2000 / XP / Server 2003 / Vista
CPU	Core 2 Duo E6600, 2.4 GHz
Memory	2 x 1 GB Dual Channels
Hard Disk	80 GB
VGA	NVIDIA 8600GT / ATI X1650
Network	TCP/IP

Note: Currently the 64-bit Windows operating system is not supported.

2.2   Installing Dispatch Server

1. Insert the CMS Software CD to your computer. It will automatically run and a window appears.
2. Select **Install V8.3.0.0 Central Monitoring System**.
3. Click **Dispatch Server System**, and follow the on-screen instructions.

Note: The Dispatch Server application is provided with a USB dongle. Make sure the dongle is tightly connected to the computer.

![GeoVision logo]

2.3 The Dispatch Sever Window
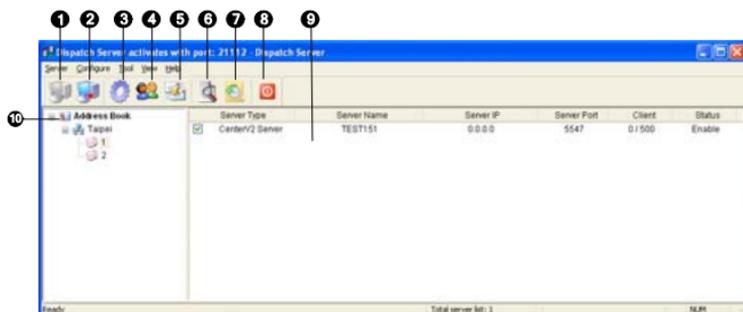
Figure 2-1

The controls on the Dispatch Server window:

No.	Name	Description
1	Start Server	Starts Dispatch Sever.
2	Stop Server	Stops Dispatch Sever.
3	Server Setting	Configures Dispatch Sever.
4	Account	Adds, edits and deletes the accounts of Center V2 Servers and subscribers.
5	Subscriber Notification Setting	Sets the alert conditions and methods
6	Stop/Start Query Center V2 Event	Specifies an event query.
7	Real-time CenterV2 Event	Views real-time events occurring on Center V2 Servers.
8	Exit	Closes the Dispatch Server window.
9	Center V2 Status	The window displays the status of Center V2 Servers. A check appearing on the check box indicates the Center V2 Server is allowed to connect to Dispatch Server. Unchecking will disable the connection.
10	Tree View	The list displays all created group folders, servers and subscribers. You can right click any online subscriber to call up Subscriber Address Book and Camera/Audio Control Panel.

2.4 Creating a Subscriber Account

Dispatch Server can serve up to **50** Center V2 Servers and **25,000** subscribers at the same time. Before starting the services, create at least one subscriber on the Dispatch Server. To create an account, click the **Account** button (No. 4, Figure 2-1) to display this Address Book window.

Figure 2-2

The toolbar on the Address Book window:

No.	Name	Description
1	Add A Group	Adds a group folder.
2	Add A Server	Adds a server.
3	Add A Subscriber	Adds a subscriber.
4	View/Edit Subscriber Address Book	Opens Subscriber Address Book for viewing and editing.
5	Subscriber Setting	Highlight one subscriber and click this button to configure the settings of video and alert formats.
6	Subscriber Schedule Setting	Sets up subscription schedules
7	Delete A Group/Server/Subscriber	Highlight a group, a server or a subscriber and click this button to delete it.
8	Import / Export Address Book	Imports or exports the address book data.
9	Find A Subscriber	Searches a subscriber account.
10	Find A Server	Searches a server account.

The creation of a subscriber account is similar to that in Center V2. See *1.4 Creating a Subscriber Account*.

Note:

1. You can create sub-groups beneath a group; every sub-group can only include one server; every server can include up to **500** subscribers.
2. When one server stops running, its own subscribers will be distributed to available servers at the same or higher level of the hierarchical file system.
3. If you don't arrange servers and subscribers into groups, they will be distributed to the least busy servers randomly.

2.5　Starting Dispatch Server

After subscriber accounts are created, Dispatch Server is ready to provide services. Click the **Start Server** button (No. 1, Figure 2-1) on the Dispatch window to start the services.

2.6　Connecting Center V2 to Dispatch Server

Follow these steps to connect Center V2 to Dispatch Server:

1.　Start the Dispatch Server service.

2.　At Center V2, click the **Preference Settings** button (No. 8, Figure 1-1), select **System Configure** to display the Preference window, and then click the **Dispatch Server** tab. This dialog box appears.
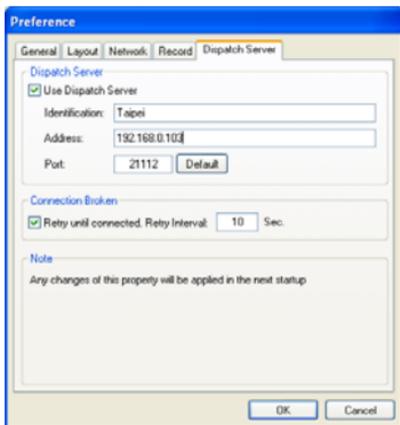
Figure 2-3

[Dispatch Server]   Check the **Use Dispatch Server** item to make other settings available. Enter the identification code, IP address, and port of the Dispatch Server. See Figure 2-8.

[Connection Broken]   Enable and specify the interval between connection retries.

3.   If you have arranged Center V2 servers and subscribers into groups in Dispatch Server, click the **Network** tab in Figure 2-3 and check the **Location Name** of the Center V2. The location name should match the server name created on Dispatch Server.

4.   After above settings, click **OK** and restart Center V2.

2.7   Connecting GV-System to Dispatch Server

By default, GV-System is set to connect to Center V2. You need to reset GV-System so that it can connect to Dispatch Server. Follow these steps to connect GV-System to Dispatch server:

1.   On the main screen of GV-System, click the **Network** button, and then select **Connect to Center V2**. The Login Information dialog box appears. See Figure 1-13.

2.   In the Center IP field, type the IP address of the Dispatch Server.

3.   Type a valid user ID and password created in the Dispatch Server.

4.   Change the port number from 5547 (Center V2 port) to **21112** (Dispatch Server port).

5.   Click the **OK** button. The Connect to Center V2 dialog box appears.

6.   Click the **Connect** button to enable connecting to the Dispatch Server.

Note: If you want to modify the login information of the Center V2, on the Connect to CenterV2 dialog box click the listed Center V2 IP and then select **Modify**.

2.8 Event Query

This feature lets you locate a desired event by posing a query on Center V2 Servers. Click the **Stop/Start Query Center V2 Event** button (No. 6, Figure 2-1) on the toolbar to display the following dialog box. Check the desired query items (Type, ID, Date and/or Time), define your query condition under each item, and then click **OK** to display the query results.

Figure 2-4

The Query feature supports the remote playback when file sharing on Center V2 Server is enabled. Double-clicking any found event with video attachment can play it back on Dispatch Server.

![GeoVision logo]

2.9   Event List

The feature lets you view the real-time events occurred on Center V2 Servers. For the application, make sure the **Enable Real-Time CenterV2 Event** option is enabled; see Figure 2-8. Then click the **Real-Time Event** button (No. 7, Figure 2-1) on the toolbar to display the following window.
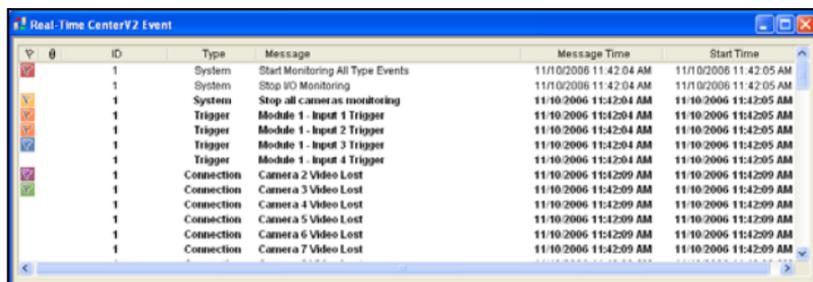
⚑	🛈	ID	Type	Message	Message Time	Start Time
		1	System	Start Monitoring All Type Events	11/10/2006 11:42:04 AM	11/10/2006 11:42:05 AM
		1	System	Stop I/O Monitoring	11/10/2006 11:42:04 AM	11/10/2006 11:42:05 AM
		1	System	Stop all cameras monitoring	11/10/2006 11:42:04 AM	11/10/2006 11:42:05 AM
		1	Trigger	Module 1 - Input 1 Trigger	11/10/2006 11:42:04 AM	11/10/2006 11:42:05 AM
		1	Trigger	Module 1 - Input 2 Trigger	11/10/2006 11:42:04 AM	11/10/2006 11:42:05 AM
		1	Trigger	Module 1 - Input 3 Trigger	11/10/2006 11:42:04 AM	11/10/2006 11:42:05 AM
		1	Trigger	Module 1 - Input 4 Trigger	11/10/2006 11:42:04 AM	11/10/2006 11:42:05 AM
		1	Connection	Camera 2 Video Lost	11/10/2006 11:42:09 AM	11/10/2006 11:42:09 AM
		1	Connection	Camera 3 Video Lost	11/10/2006 11:42:09 AM	11/10/2006 11:42:09 AM
		1	Connection	Camera 4 Video Lost	11/10/2006 11:42:09 AM	11/10/2006 11:42:09 AM
		1	Connection	Camera 5 Video Lost	11/10/2006 11:42:09 AM	11/10/2006 11:42:09 AM
		1	Connection	Camera 6 Video Lost	11/10/2006 11:42:09 AM	11/10/2006 11:42:09 AM
		1	Connection	Camera 7 Video Lost	11/10/2006 11:42:09 AM	11/10/2006 11:42:09 AM

Figure 2-5

The controls on the Real-Time Center V2 Event window:

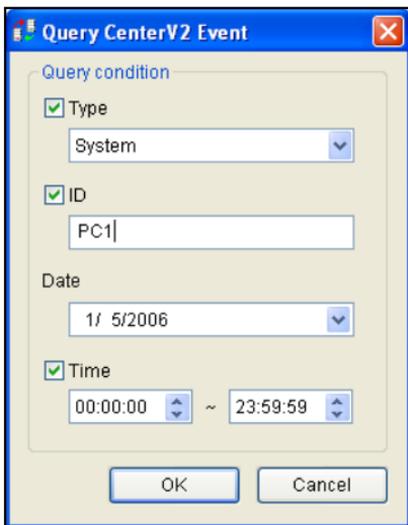1. The window supports the remote playback when file sharing on the Center V2 Server is enabled. Double-clicking any event with video attachment can play it back on Dispatch Server.

2. You can flag an incoming event for later reference. Click in the flag column to flag an event. Click the flag icon to remove it.

A list of Types and Messages from Center V2 will be displayed:

Type	Message
Motion	Camera detected motion
Trigger	I/O Trigger; Module xx Trigger Resume; Video of Camera xx (By: Module xx)
Connection	Video Lost; Module Lost; The network connection is lost; The connection of (client xx) is abnormal; Camera cannot be controlled; Ping Timeout; Failed to establish the connection; Video signal of Camera xx has resume; Module xx has returned to normal; Failed to Login SMS Server; Failed to send short message; SMS Server is shutdown.
Alarm	There isn't enough space for recording; There isn't enough space for recording; The storage for Event Log is low, Event Log will not take any new entries; An unexpected error occurred in Multicam Surveillance System (Error Code: 1 or 2); There is an intruder; Object Missing; Unattended Object; Alert Message of POS.
Attachment	Record file of Camera xx [Live, Attachment or offline].
System	Start Recycle; Recycle Event Log; Status change of monitoring cameras. On: (camera no.) Off: (camera no.) / (By Schedule); Stop all cameras monitoring; Start all cameras monitoring; Start I/O Monitoring. / (By Schedule); Stop I/O Monitoring. / (By Schedule); Schedule Start; Schedule Stop. All monitoring devices are stop too; Start monitoring all type events; Stop monitoring all type events; Subscriber session is not established. Wait-time expired; Unexpected logout before subscriber session is completed.

Note:　Error Code 1 indicates a codec error; Error Code 2 indicates that users can't write or record any data due to HD failure or user privilege.

Colorful Flags

The flags of various colors are provided to distinguish different events. You will find them useful not only when browsing in the Real-Time CenterV2 Event List window but also when using the Filter function to search the desired events.
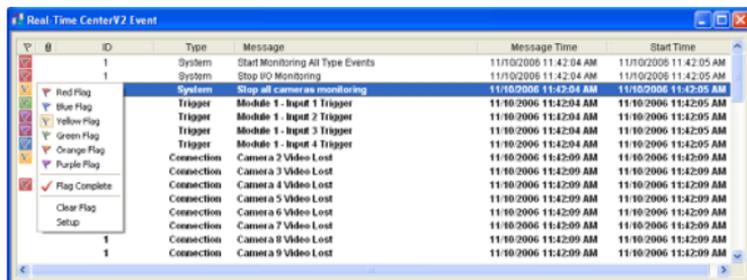
Figure 2-6

This feature is the same as that of the Center V2. For details, see *1.10 Colorful Flags*.

2.10 Subscription Schedule

The Dispatch Server operator can create schedules to monitor subscription status. When subscribers don't log in Dispatch Server on the programmed time, the operator and subscribers will get notified.

- To set up a schedule, see *1.8 Subscription Schedule*.

- When a subscriber doesn't log in Dispatch Server on time, this message will appear on the Event List: *Service hour engaged; still waiting for subscriber to log in.*
  When a subscriber logs out suddenly during a service time, this message will appear: *Unexpected subscriber logout during service times.*

- To notify subscribers by SMS and E-Mail, see *2.14 SMS Alerts* and *2.15 E-Mail Alerts*.

2.11 Colorful Mode of Live Video

You can enhance the coloring to have more vivid and saturated images. Click **Configure** on the menu bar, select **DirectDraw Configuration**, select **Use Colorful Model**, click **OK** and restart the Dispatch Server program for the mode to take effect. Right-click any online subscriber and select **Camera/Audio Control** to see the enhaced live video.

2.12   Log Browser

The following two log browsers let you locate the events of Dispatch Server and Center V2 Servers easily.

Dispatch Log Browser

The browser lets you view and locate the system status of Dispatch Server, the login/out status of Center V2 Servers. Click **View** on the window menu and then select **Dispatch Log** to display the following log browser. For details on Log Browser, see *1.11 Event Log Browser*.

Figure 2-7

A list of Status and Messages will be displayed:

Status	Message
System	Start Dispatch Server; Failed to start Dispatch Server; Stop Dispatch Server; Can't find KeyPro; Start to recycle the Dispatch Server; Start to recycle the CenterV2 Event Log.
Login/logout	CenterV2 Server (IP: CS_IP) connects to Dispatch Server; CenterV2 Server (IP: CS_IP) disconnects from Dispatch Server;CenterV2 Server (IP: CS_IP) disconnects from Dispatch Server abnormally; CenterV2 Client login; CenterV2 Client logout
Connection	CenterV2 Server (IP: CS_IP) is disconnected by Dispatch

	Server; CenterV2 Server changes IP from (CS_old_IP) to (CS_new_IP); CenterV2 Server (IP: CS_IP) is transferred to another Dispatch Server (DS_IP:DS_Port).
Control	CenterV2 Server [CS_Name] is enabled; CenterV2 Server [CS_Name] is disabled.
Dispatch	ID: login_ID is dispatched to [CS_Name] (IP: CS_IP); Invaild login ID; Invaild login Password; This account has already logged in; There is no server online for CenterV2 Client; All online CenterV2 Servers have utmost service.

Event Log Browser

The browser lets you view and locate the real-time events from Center V2 Servers. Click **View** on the window menu, and then select **Event log** to display Event Log Browser. For details on Log Browser, see *1.11 Event Log Browser.*

2.13   System Configuration

To configure Dispatch Server, click the **Server Setting** button (No. 3, Figure 2-1) on the toolbar to display the following dialog box.
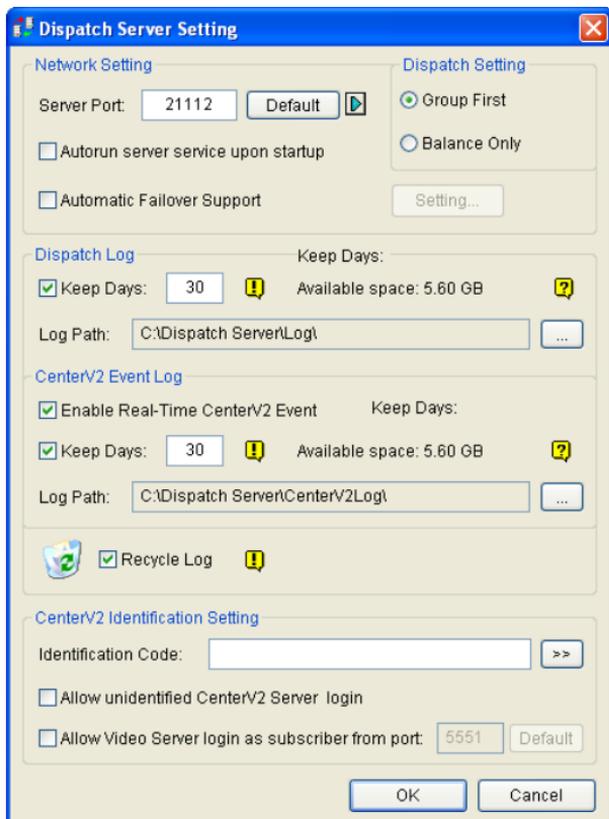
Figure 2-8

[Network Setting]

- **Server Port:** The port should match with the Center Port of the subscriber (Figure 1-7) and Dispatch Server Port of Center V2 (Figure 2-3) (All the three ports should match with each other). Or, keep the port setting as default.
- **Autorun server service upon startup:** Automatically starts the Dispatch service when its program starts.
- **Automatic Failover Support:** Distributes Center V2 Servers to another Dispatch Server when the serving Dispatch Server breaks down. Enabling this item, you will be prompted to enter the IP address and port of another Dispatch Server.
  For details, see *2.15 Backup Servers.*

[Dispatch Setting]

- **Group First:** Distributes subscribers to the Center V2 Servers according to the assigned groups and servers.
- **Balance Only:** Distributes subscribers to the Center V2 Servers with fewer subscribers randomly.

[Dispatch Log]

- **Keep Days:** Select the option and specify the number of days to keep Dispatch Logs. Otherwise clear the option to keep log until the Recycle starts or storage space is full.
- **Log Path:** Click the button next to the item to assign a storage path.

[CenterV2 Event Log]

- **Enable Real-Time CenterV2 Event:** Allows real-time event messages coming from Center V2 Servers.
- **Keep Days:** Select the option and specify the number of days to keep Center V2 event logs. Otherwise clear the option to keep log until the Recycle starts or storage space is full.
- **Log Path:** Click the button next to the item to assign a storage path.

[Recycle Log] Deletes the files of the oldest days when storage space is lower than 500 MB.

[CenterV2 Identification Setting]

■ **Identification Code:** The code protects Dispatch Server against unauthorized Internet access. Center V2 will need the code to log in Dispatch Server.

■ **Allow unidentified CenterV2 Server login:** Allows Center V2 to access Dispatch Server without entering the Identification Code.

■ **Allow Video Server login as subscriber from port:** Enables the connection to the GV-Video Server, GV-IP Camera, and GV-Compact DVR. The default port is 5551, or you can modify it to match the Center V2 port on the GV IP devices.
For details, see *GV-Video Server User's Manual*, *GV-IP Camera User's Manual or GV-Compact DVR User's Manual.*

2.14   SMS Alerts

This feature automatically sends SMS messages to subscribers when they don't log in on the programmed time. For this, ensure to type a mobile number for each subscriber in the Subscriber Address Book (Figure 2-2).

To set up SMS Server, click **Configure** on the window menu and select **SMS Setup**. For details, see *1.15 SMS Alerts*.

To define alert conditions to send SM messages, click the **Subscriber Notification Setting** button (No. 5, Figure 2-1) on the toolbar to display the Notification Setting dialog box. For setup details, see *1.13 Notification Settings*.

2.15   E-Mail Alerts

This feature automatically sends e-mails to subscribers when they don't log in on the programmed time. For this, ensure to type an e-mail address for each subscriber in the Subscriber Address Book (Figure 2-2).

To set up mailbox, click **Configure** on the window menu and select **E-Mail Setup**. For details, see *1.16 E-Mail Alerts*.

To define alert conditions to send e-mails, click the **Subscriber Notification Setting** button (No. 5, Figure 2-1) on the toolbar to display the Notification Setting dialog box. For setup details, see *1.13 Notification Settings.*

2.16 Backup Servers

You can configure up to two backup servers in case of the primary server failure. Whenever the primary fails, the backup server takes over the connection from subscribers, providing uninterrupted services.

1. To import the subscribers' accounts from the primary server to the backup server, click the **Import / Export Address Book** button (No. 8, Figure 2-2) on the Address Book toolbar, and select **Import** to transfer the address book data.

2. On the Dispatch Server window, click the **Server Setting** button (No. 3, Figure 2-1). The Dispatch Server Setting dialog box (Figure 2-8) appears.

3. Check the **Automatic Failover Support** option. The Automatic Failover Support dialog box appears.
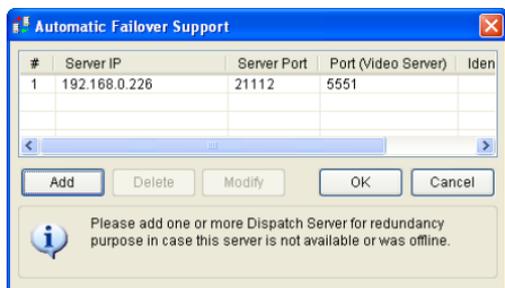
Figure 2-9

4. Click the **Add** button. The Setting dialog box (Figure 2-10) appears.

5. Type the IP address of the backup server, and change the default port settings if necessary.

6. Type the Identification Code matching to that in CenterV2 Identification Setting. If the information is inconsistent, the connection to the backup server cannot be established.

Type the same Code here.
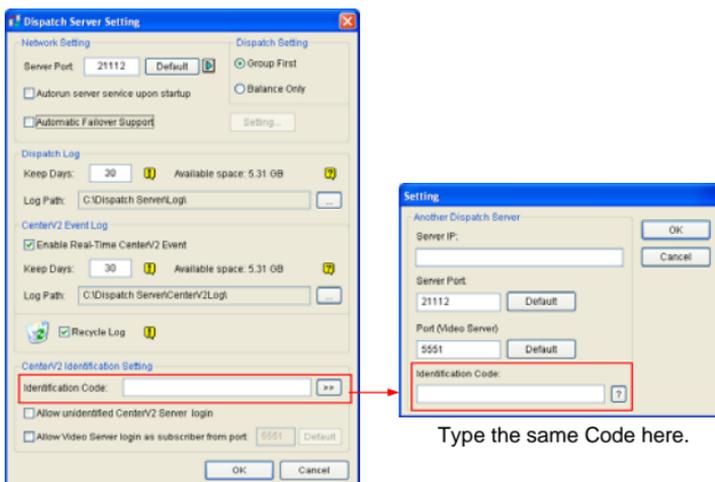
Figure 2-10

Note: Once the primary server is ready to resume the services, it is required to close the backup server so the connection from subscribers can move back to the primary

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Chapter 3
Vital Sign Monitor

Vital Sign Monitor (VSM) applies to the center monitoring station where multiple GV-Systems are being monitored. When alert events occur in a GV-System, VSM will receive alert text messages, computer alarms and/or output alarms, while a SMS message and an E-Mail are sent out to subscribers.

3.1 System Requirements

Before installation, make sure your PC meets the following minimum requirements:

Standard Version

OS	Windows 2000 / XP/ Server 2003 / Vista
CPU	Pentium 4, 2.6 GHz, 800 MHz FSB
Memory	2 X 256 MB Dual Channels
Hark Disk	60 GB
VGA	NVIDIA GeForce4 MX440 64 MB
Network	TCP/IP

Advanced Version (Connections to more than 100 DVR subscribers)

OS	Windows 2000 / XP/ Server 2003 / Vista
CPU	Core 2 Duo E6600, 2.4 GHz
Memory	2 X 1 GB Dual Channels
Hark Disk	80 GB
VGA	NVIDIA 8600GT / ATIX 1650
Network	TCP/IP

Note: Currently the 64-bit Windows operating system is not supported.

To ensure the quality of downloading when multiple GV-Systems connect to the VSM, see the list below for the recommended bandwidth:

Number of Subscribers	Recommended Bandwidth
100	512 Kbps
500	2 Mbps
1000	4 Mbps

3.2   Installing VSM

1.   Insert the CMS Software CD to your computer. It will automatically run and a window appears.
2.   Select **Install V8.3.0.0 Central Monitoring System**.
3.   Click **Vital Sign Monitor System**, and follow the on-screen instructions.

Note: The VSM application is provided with a USB dongle. Make sure the dongle is tightly connected to the computer.

3.3 The VSM Window
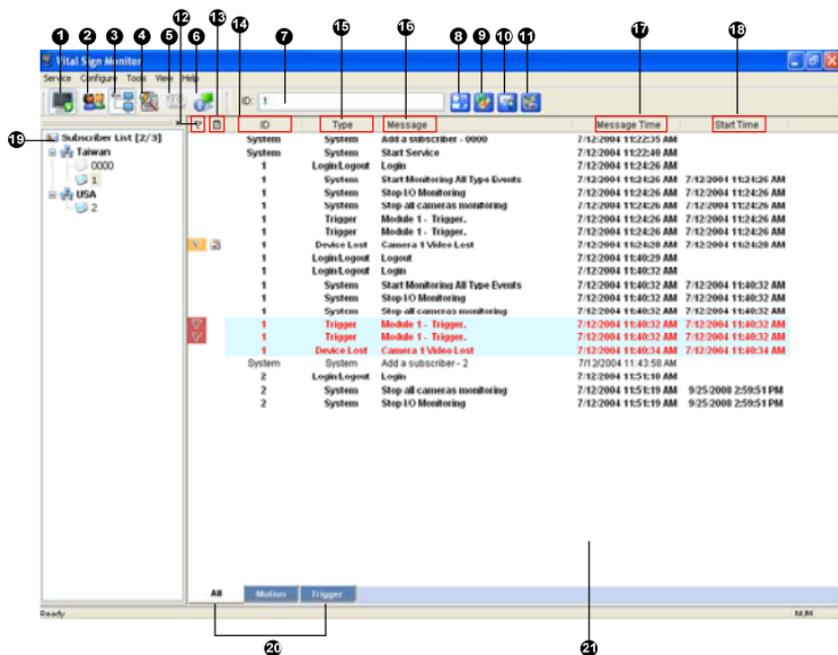
Figure 3-1

The controls on the VSM window:

No.	Name	Description
1	Start / Stop Service	Starts or stops the VSM service.
2	Account	Adds, deletes or modifies subscribers.
3	Show / Hide Subscriber List	Shows and hides the Subscriber List.
4	View Event Log	Launches Event Log Browser.
5	Force Output	Activates manually output devices to alert the VSM operator.

6	View Subscriber Information	Accesses the subscriber's storage and monitoring information.
7	ID	Enter an ID for further search.
8	View Subscriber Address Book	Enter an ID, and then click this button to view the subscriber's address book.
9	View Subscriber Status	Enter an ID, and then click this button to see the subscriber's status.
10	Send E-Mail	Sends e-mails to subscribers.
11	Send Short Message	Sends SMS to subscribers.
12	Flag	Flags an event for later reference.
13	Clipboard	Displays the Alarm Report dialog box.
14	ID	Indicates the subscriber's ID.
15	Type	Indicates the event types, including System, Connection, Login/Logout, Motion, Trigger, and Alarm.
16	Message	Indicates associated information for each event type.
17	Message Time	Indicates the VSM's time when receiving the event message.
18	Start Time	Indicates the subscriber's time when sending out the event message.
19	Subscriber List	Displays all created groups and subscribers. Right clicking any subscriber can call up a menu to select the control No. 8, 9, 10 and 11. An indicator beside shows the numbers of total subscribers and currently online subscribers.
20	Event Categories	Events can be sorted in these categories: System, Motion, Trigger, Connection, Alarm, Login/Logout, Wiegand Data, Device Lost and Offline Event. To sort the events, click **View** from the menu bar and select **My Favorite Events.**
21	Event List	Displays a list of events occurred.

A list of Types and Messages will be displayed on VSM:

Type	Message
Motion	Camera xx detected Motion.
Trigger	Module xx-Input xx Triggered; Module xx-Input xx Trigger Resume.
Connection	Camera xx Video Lost; Video Signal of Camera xx has resumed; Module xx Lost; Module xx has resumed to normal.
Alarm	There isn't enough space for recording; Connection Lost; Multicam Surveillance System has been closed; Status change of monitoring cameras: on: camera xx, off: camera xx; Keep Days (xx) Alarm of Video Log is lower than xx days; Schedule Start/Stop; An unexpected error occurred in Mulicam Surveillance System (Error Code: 1 or 2); There is an intruder; Missing Object; Unattended Object; Alert Message of POS; Scene Change; Crowd Detection; Advanced Missing Object; Advanced Unattended Object; Advanced Scene Change.
Login/Logout	Login; Logout.
System	Start/End Service; Fail to Start Service; Stop all camera monitoring; Start all camera monitoring; Start monitoring all type events; Stop monitoring all type events; Service hour engaged; still waiting for subscriber to log in; Unexpected subscriber logout during service times; Can't find USB Protection Key; Disk Error.

Note: Error Code 1 indicates a codec error; Error Code 2 indicates that users can't write or record any data due to HD failure or user privilege

3.4 Creating a Subscriber Account

The VSM can serve up to **1,000** subscribers at a time. Create at least one subscriber before starting VSM services. To create a subscriber, follow these steps:

1. On the VSM widow, click the **Account** button (No. 2, Figure 3-1) to display the Address Book window.

Figure 3-2

2. Click the **Add A Group** button to create a group folder.
3. Click the **Add A Subscriber** button to display the Subscriber Address Book dialog box.
4. Enter a login ID and password (required). Those will be the ID and Password for the subscriber to log in to the VSM. See Figure 3-3.
5. Enter the subscriber's contact information in the rest of fields (optional).
    - ➢ If you wish to send e-mail alerts to this subscriber, type its e-mail address. For e-mail settings, see *E-Mail Alerts* later in this chapter.
    - ➢ If you wish to send SMS alerts to this subscriber, type its country code and mobile number. For SMS server settings, see *SMS Alerts* later in this chapter.
6. Click **OK**. This adds the subscriber to the group folder created before. Returning to the VSM window, you will see a message: *Add a subscriber – xxx*. (Subscriber xxx has been added.)

3.5 Starting VSM

After subscriber accounts are created, the VSM is ready to provide services. Clicking the **Start/Stop Service** button (No. 1, Figure 3-1) on the VSM window to receive signals from subscribers.

3.6 Connecting to VSM

To configure GV-System in order to access the VSM remotely through a network connection, follow these steps:

1. Click the **Network** button, and select **Connect to VSM**. This dialog box appears.

Connect to Vital Sign Monitor

IP: 127.0.0.1

User ID: 1

Password: *

☑ Save Password

☐ Login after 30 seconds

☐ Monitoring all type events

[Connect] [Exit] [Advance...]

Figure 3-3

2. Type the IP address of the VSM, the User ID and Password created in the VSM. See *Creating a Subscriber Account* earlier in this chapter.
3. Click the **Connect** button. Make sure that the VSM is also started for the connection.

Advanced Settings for Subscription

To further define the communication conditions between the subscriber and
VSM, click the **Advance** button on the Connect to Vital Sign Monitor dialog
box (Figure 3-3) to display the Advanced Settings dialog box. There are
tabs: (1) General, (2) Camera, (3) System Information and (4) I/O Device.

[General]

The settings define the retry mode and communication port between
GV-System and VSM.
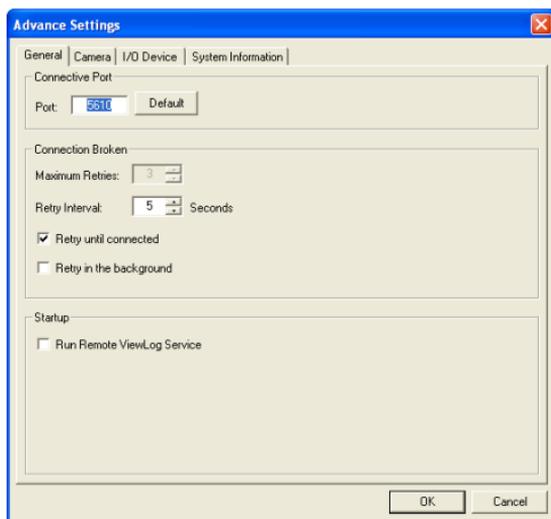
Figure 3-4

[Connective Port]   Sets the communication port to match that of VSM.
[Connection Broken]   Specify the number of retries and the retry interval
when the connection is not immediately available.

- **Retry until connected:**   Repeats attempts to connect to the VSM
  until the connection is established.
- **Retry in the background:**   Hides the retries in the background.
- **Run Remote ViewLog Service:**   Allows the VSM to retrieve the
  recordings for playback. For details, see *3.10 Remote Playback*.

[Camera]

The settings define which camera condition to notify the VSM. To configure
these settings, first disable the **Monitoring all type events** option in Figure
3-3.
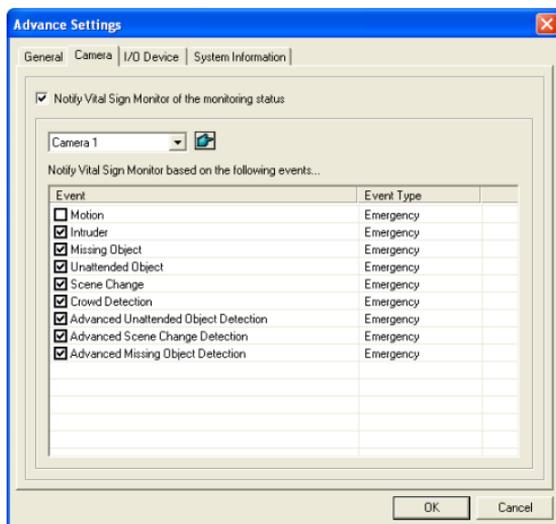
Figure 3-5

■ **Notify Vital Sign Monitor of the monitoring status:** Select this
   option to enable the live monitoring through VSM. Select one camera
   and select the alert events that you like to notify the VSM when they
   occur. Clicking the Finger button can apply the same settings to all
   cameras.

   Event Type: If the subscriber wants the VSM always to get notified of
   these alert events, select **Emergency**. If the subscriber wants the VSM
   to get notified of these alert events only when an assigned input is
   triggered, select **Normal**.

Note: To set an input trigger for the notification of **Normal** events, see
Security Service in *[I/O Device]* below.

[System Information]
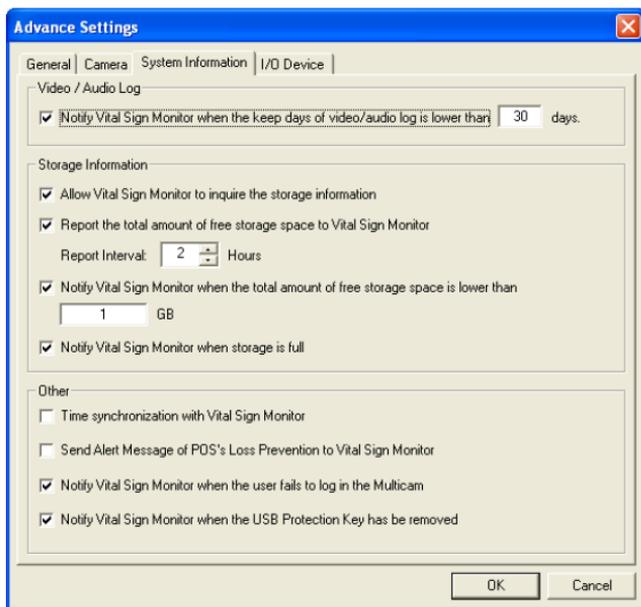
Figure 3-6

[Video/Audio Log]   Notifies the VSM when the duration of the video/audio logs is less than the specified days.

[Storage Information]
- **Allow Vital Sign Monitor to inquire the storage information:** Allows the VSM to inquire the subscriber's storage information.
- **Report the total amount of free storage space to Vital Sign Monitor:**   Reports the subscriber's size of free storage space.
- **Notify Vital Sign Monitor when the total amount of free space is lower than xx GB:**   Notifies the VSM when the subscriber's storage space is insufficient. The space limit is 1 GB at least.
- **Notify Vital Sign Monitor when the storage space was full:** Notifies the VSM when the subscriber's storage space was full.

[Other]

■ **Time synchronization with Vital Sign Monitor:** Enables the time increment/decrement of minutes and seconds at the subscriber site to match the time at the VSM.

■ **Send Alert Message of POS' Loss Prevention to Vital Sign Monitor:** Notifies the VSM when abnormal POS transactions occur.

■ **Notify Vital Sign Monitor when the user fails to log in Multicam:** Notifies the VSM when the GV-System users fail to log in by typing wrong IDs or passwords.

■ **Notify Vital Sign Monitor when the USB Protection Key was removed:** Notifies the VSM when the USB Protection Key is already removed from the GV-System.

Note: When the **Time synchronization with Vital Sign Monitor** option is checked, the function of time synchronization will be activated as soon as the VSM is started up, and it will be re-activated every 12 hours.

[I/O Device]

The settings define which I/O condition to notify the VSM. To configure these settings, first disable the **Monitoring all type events** option in Figure 3-3.
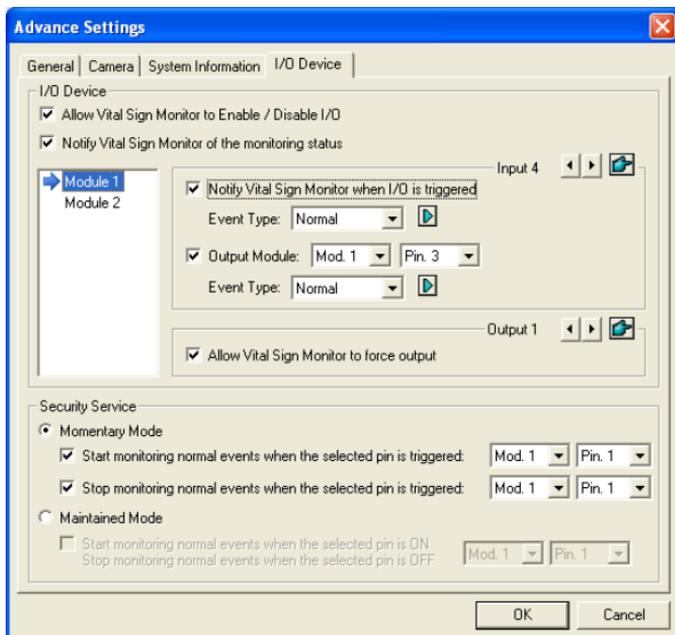
Figure 3-7

[I/O Device]   Notifies the VSM when I/O devices are triggered. Use the **Arrow** buttons to configure each I/O device, or click the **Finger** button to apply to all I/O devices.

■ **Allow Vital Sign Monitor to Enable / Disable I/O:**   Allows the VSM manually arm/disarm any I/O devices at the subscriber's site without interrupting the monitoring.
For example, when an alarm is triggered at the subscriber site, the VSM operator can turn it off remotely before arriving at the site. Meanwhile, GV-System still remains on monitoring.

■ **Notify Vital Sign Monitor when I/O is Triggered:** Notifies the VSM when any selected input is triggered.

Event Type: If the subscriber wants the VSM always to get notified of the input trigger, select **Emergency**. If the subscriber wants the VSM to get notified of the input trigger only when an assigned input is triggered, select **Normal**.

Right Arrow button: Sets the delay time to notify the VSM of the input trigger. This feature is only available when the **Normal** type is chosen.

⊙ **Exit Delay:** While the system is activated, this feature provides an interval of time for the subscriber to exit the premises. During this time, the specified input (e.g. an exit/entry door) is inactive. Once the exit delay expires, the input will be fully armed.

⊙ **Entry Delay:** While the system is activated, this feature provides an interval of time for the subscriber to entry the premises. During this time, the specified input (e.g. a exit/entry door) is inactive so that the subscriber can disarm the system. If the subscriber fails to do, once the entry delay expires, the VSM will get notified of the input trigger.

■ **Output Module:** Enables the assigned output module when the selected input module is triggered.
For this example, when the I/O Device (Module 1, Input 4) is triggered, the Output (Module 1, Pin 3) will be activated simultaneously.

Event Type: If the subscriber wants the VSM always to get notified of the output trigger, select **Emergency**. If the subscriber wants the VSM to get notified of the output trigger only when an assigned input is triggered, select **Normal**.
Right Arrow button: Sets the delay time to trigger the assigned output module. This feature is only available when the **Normal** type is chosen. The **Exit Delay** and **Entry Delay** options are similar to those described in the input trigger.

Note: To set an input trigger for the notification of Normal events, see *[Security Service]* below.

■   **Allow Vital Sign Monitor to Force Output:**   Allows the VSM operator to manually force output devices installed at the subscriber's site.

[Security Service]   Supports two types of access control systems: Momentary and Maintained mode. For details, see *[I/O Device], Advanced Settings* in *1.5 Connecting to Center V2.*

Detecting Input Status

The feature is designed to monitor all inputs for a change of state whenever the subscriber starts the live monitoring through VSM. A change from the previously defined state (N/O to N/C or N/C to N/O) will activate an alarm condition.

Click on the Connect to Vital Sign Monitor dialog box (Figure 3-3). For details, see *Detecting Input Status*, Chapter 6, *User's Manual* on the Surveillance System Software CD.

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3.7 Monitoring Subscribers

Viewing Subscriber Status

To view the subscriber status, highlight one online subscriber on the VSM
window, and then click the **View Subscriber Status** icon (No. 9, Figure 3-1)
on the toolbar. The following window appears.
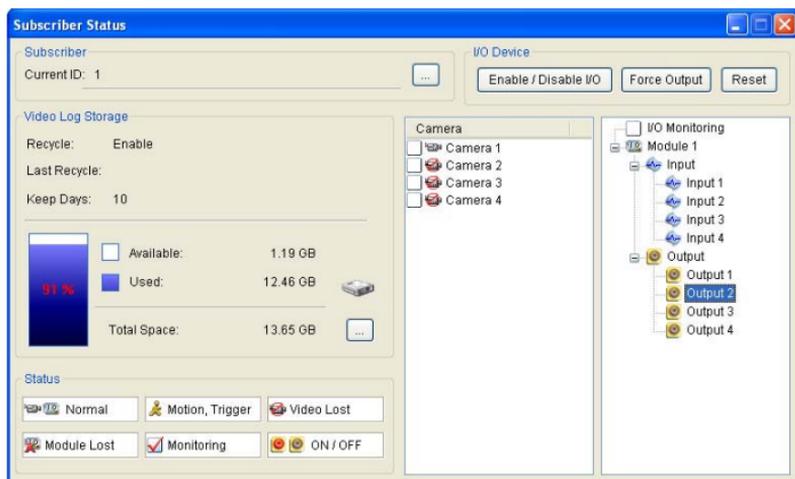
Figure 3-8

[Subscriber]   Indicates the subscriber's ID. You can change the
subscriber by clicking the **[…]** button.

[Video Log Storage]   Indicates the information of video log and hard disk
space. To view the detailed information of multiple storage groups on the
subscriber, click the **[…]** button.

To use this function, subscribers must grant the privilege first. See the
Allow Vital Sign Monitor to inquire the storage information option in
Figure 3-6.

[Status]   Indicates the icon meanings.

[I/O Device]

■ **Force Output:**   To enable this tab, highlight one output from the tree list, and click this tab to force the output at the subscriber site. For this, the subscriber must grant the privilege first. See the **Allow Vital Sign Monitor to Force Output** option in Figure 3-7.

■ **Enable/Disable I/O:**   Allows the VSM to arm or disarm any I/O devices at the subscriber site without interrupting the monitoring. For this, the subscriber must grant the privilege first. See the **Allow Vital Sign Monitor to Enable / Disable I/O** option in Figure 3-7.

Note: This function also supports the client GV IP devices of these firmware versions:
GV-Compact DVR: Firmware V1.43 or above
GV-IP Camera: Firmware V1.05 or above
GV-Video Server: Firmware V1.45 or above

Viewing Storage Information

With the above Subscriber Status window, you can see one subscriber's storage information. When the VSM is monitoring many subscribers, the following windows give you an overview of subscribers' storage information and monitoring status.

On the VSM window, click the **View Subscriber Information** button (No 6, Figure 3-1) to display the following window.

[Monitoring]

Indicates whether camera and I/O monitoring are enabled at the subscriber's sites.

Figure 3-9

[Storage]

Indicates the total storage size and free space at the subscriber's sites. For this subscribers must grant this privilege first. See *[System Information]* in Figure 3-6.
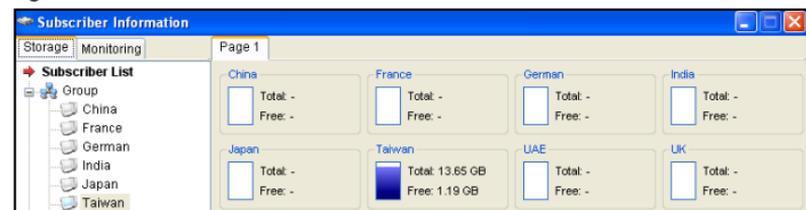

Figure 3-10

Subscription Control

The VSM operator can disable its services to an individual subscriber when subscription expires.

On the Address Book (Figure 3-2), right-click one subscriber and select **Disable**. To restore the subscription, right-click again to select **Enable**.

3.8   Subscriber Schedule

The VSM operator can create schedules to monitor subscription status. When subscribers don't log in the VSM on the programmed time, the operator and subscribers can get notified.

- To set up a schedule, see *1.8 Subscriber Schedule*.

- When a subscriber doesn't log in the VSM on time, this message will appear on the Event List: *Service hour engaged; still waiting for subscriber to log in.*
  When a subscriber logs out suddenly during a service time, this message will appear: *Unexpected subscriber logout during service times.*

- To activate the computer and output alarm to notify the operator while a SMS and an E-mail message being sent out to a subscriber, use the **Notification** feature. For details, see *Notification Settings* later in this chapter.

3.9   Alarm Report

For every event, the VSM operator can generate a report to evaluate certain conditions.

This function is the same as that of the Center V2. For details, see *1.9 Alarm Report*.

3.10   Remote Playback

You can retrieve the recordings from GV-System, GV-Video Server or GV-Compact DVR for playback.

The following function must be enabled ahead to allow remote access:
- **GV-System:**   Enable the **Run Remote ViewLog Service** option in Figure 3-4, and start recording.
- **GV-Video Server/GV-Compact DVR:**   Enable the **Remote ViewLog** function, and start recording.

1. On the Event List, double-click one motion event. This window appears.
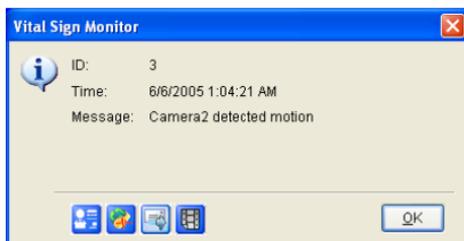
Figure 3-11

2. Click the **Remote Playback** icon. A setting dialog box appears.

3. Select the desired camera to be viewed, enter the ID and password to log in the DVR, and then click **OK**. The Remote Playback window appears.

4. For the controls on the Remote Playback window, see *4.14 Instant Playback.*

3.11 Event Log Browser

To launch Event Log Browser, click **Tools** on the window menu and select **Event Log Browser**. This feature is the same as that in Center V2. See *1.11 Event Log Browser.*

Also see *Event Log Settings* earlier in this chapter.

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3.12 System Configuration

On the window menu, click **Configure** to see these options: (1) System Configure, (2) Password Setup, (3) Event Log Settings, (4) Notification and (5) Local I/O Device. These options are discussed in this section.

System Settings

Click **Configure** on the window menu, and then select **System Configure** to open this dialog box:
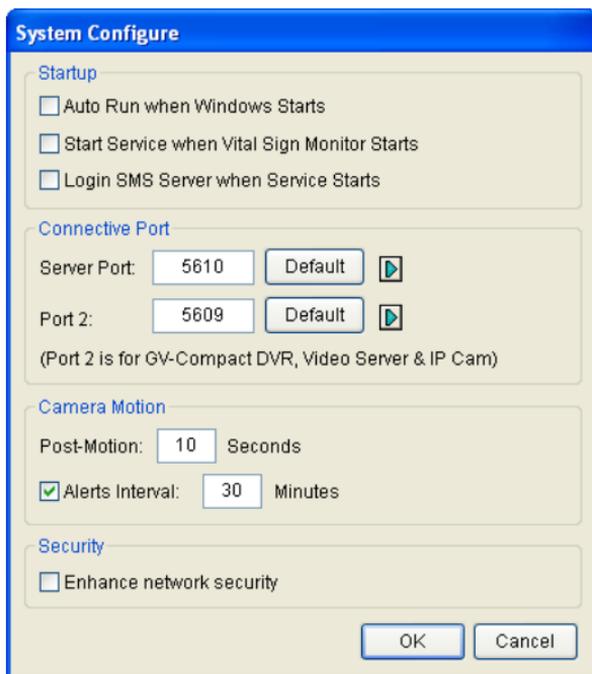
Figure 3-12

[Startup]
- **Auto Run when Windows starts:** Automatically runs VSM at Windows startup.
- **Start Service when Vital Sign Monitor starts:** Automatically starts the service when VSM starts.
- **Login SMS Server when Service starts:** Automatically logs in the SMS Server when the VSM service starts. You will be prompted to enter the related information of the SMS server.

[Connective Port]
- **Server Port:** Sets the communication port to match that of the subscriber, or keep it as default.
- **Port 2:** To set the appropriate port for the connection to the GV-Video Server, GV-IP Camera and GV-Compact DVR, keep the default port 5609, or modify it to match the VSM port on the GV IP devices. For details, see *GV-Video Server User's Manual*, *GV-IP Camera User's Manual*, or *GV-Compact DVR User's Manual.*

[Camera Motion]
- **Post-Motion:** Specify the duration of the highlighted text for the incoming message upon motion detection.
- **Alerts Interval:** Enable and specify the interval between the incoming messages upon motion detection.

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

[Arrow Button] The arrow buttons, in the Connective Port section, provide the UPnP function to configure the ports on your router automatically. For details, see *UPnP Settings*, Chapter 8, *User's Manual* on the Surveillance System Software CD.

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Password Settings

You can set an administrator password to prevent others from changing your settings by accident. Click **Configure** and then select **Password Setup**.

To start the password feature, click **Service** and then select **Logout Administrator**. Users can still start monitoring but will not be allowed to change settings or stop monitoring. To change settings, click **Service** on the window menu and then select **Login as Administrator**.

Event Log Settings

Click **Configure** on the window menu, and select **Event Log Settings** to display the Event Log Settings dialog box. The settings are the same as those in Center V2. See *Setting the Event Log*, *1.11 Event Log Browser.*

Also see *3.11 Event Log Browser*.

Notification Settings

When alert conditions occur, the VSM can automatically activate the assigned computer and output alarm to notify the operator while a SMS and an e-mail message are being sent out to subscribers.

To configure this function, click **Configure** on the window menu and select **Notification** to display the Alarm Settings window. The settings are the same as those in Center V2. See *1.13 Notification Settings.*

Also see *3.13 Output Alerts*, *3.14 SMS Alerts*, *and 3.15 E-Mail Alert*.

3.13 Output Alerts

When alert conditions occur, you can activate the output devices installed at the VSM site and/or at the subscriber site.

Forcing Outputs of VSM

To configure output devices at the VSM site, click **Configure** on the window menu and then select **Local I/O Device**. Currently the application only supports GV-IO modules. For setup details, see *Setting Up I/O Devices,* Chapter 6, *User's Manual* on the Surveillance System Software CD.

To automatically force outputs when alert conditions occur, see *Notification Settings* earlier in this chapter.

To manually force outputs, click the **I/O Device** button (No. 5, Figure 3-1) on the VSM window, and then select **Force Output** to display the Force Output of Local I/O Device window. Select a desired module and then click **Finger** buttons to activate outputs.

Forcing Outputs of a Subscriber

See *Viewing Subscriber Status* earlier in this chapter.

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3.14 SMS Alerts

This feature lets you send out SMS messages to subscribers when alert conditions occur.

Setting SMS Server

Before sending SMS messages to an individual subscriber, you need to define SMS Server correctly.

Click **Configure** on the window menu and select **SMS Setup**. For setup details, see *1.13 SMS Alerts*.

Sending SMS

Once the connection between the SMS Server and VSM is established, there are several ways to send out SMS messages to subscribers. See the VSM window for the following selections.

1. Click the **Send Short Message** button (No. 11, Figure 3-1). This sends out SMS to an individual subscriber manually.
2. On the Event List, double-click any event type to call up a message window, and then click the **Send Short Message** icon. This sends SMS to an individual subscriber manually.
3. On the Subscriber List (No. 18, Figure 3-1), right-click one subscriber and select **Send Short Message**. This sends SMS to an individual subscriber manually.
4. Click **Configure** on the window menu, and select **Notification** to display the Alarm Settings window. Select **Send SMS Alerts**. This sends SMS to subscribers automatically when alert conditions occur. See *Notification Settings* earlier in this chapter.

Inserting ID and Camera Name to Alert Messages

The subscriber's ID and camera name can be automatically inserted to your
SMS message when it is sent out.

1. Click **Configure** on the window menu and select **Notification**. The
   Alarm Settings dialog box appears.
2. Select an alert condition in the left column, select **Send SMS Alerts**,
   and then click **Edit**. This dialog box appears.

Figure 3-13

3. Type the message text and click **Macros**. This dialog box appears.
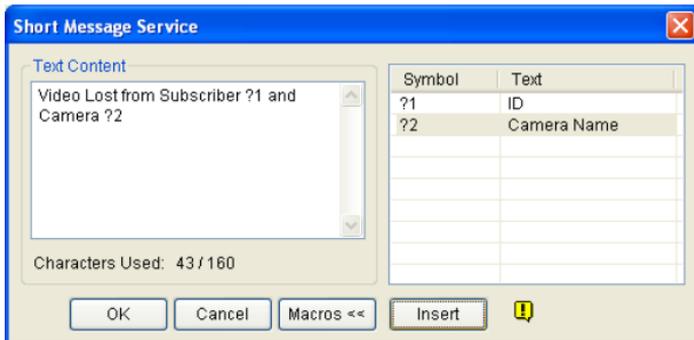

Figure 3-14

4. Place the pointer in the text where you want to insert the ID and Camera Name, select the corresponding symbol from the right column, and click **Insert**.

The symbol will be replaced with the real information when the message is displayed to a reader.

3.15 E-Mail Alerts

You can send e-mails to subscribers when alert conditions occur.

Setting Mailbox

Before you can send e-mails to an e-mail account, you need to define your mailbox correctly.

Click **Configure** on the window menu and select **E-Mail Setup**. For setup details, see *1.14 E-Mail Alerts*.

Sending E-Mail

There are several ways to send e-mail alerts. See the VSM window for the following selections.

1. Click the **E-Mail** button (No. 10, Figure 3-1). This sends the e-mail to an individual subscriber manually.
2. On the Subscriber List (No. 18, Figure 3-1), right-click one subscriber, and then select **Send E-Mail**. This sends the e-mail to an individual subscriber manually.
3. On the Event List, double-click one event to call up a message window, and then click the **e-mail** icon. This sends the e-mail to an individual subscriber manually.
4. Click **Configure** on the window menu and select **Notification** to display the Alarm Settings window. Select **Send E-Mail Alerts**. This sends e-mails to subscribers automatically when alert conditions occur. See *Notification Settings* earlier in the chapter.

Inserting ID and Camera Name to Alert Messages

The subscriber's ID and camera name can be automatically inserted to your e-mail message when it is sent out. See the same feature in *3.12 SMS Alerts*.

3.16   Backup Servers

You can configure up to two backup servers in case of the primary VSM server failure. Whenever the primary fails, the backup server takes over the connection from subscribers, providing uninterrupted monitoring services.

To access this feature, on the VSM window menu (see Figure 3-1), click **Service**, and select **Automatic Failover Support**. This feature is the same as Center V2's. For details on setup, see *1.18 Backup Servers*.

Chapter 4
Control Center

Control Center is a central monitoring station solution (CMS) that provides the CMS operator with these major features:

- Access to client DVRs (See *Remote DVR*)
- Access to remote desktops (See *Remote Desktop*)
- Display of up to 96 cameras from different DVRs on the same screen (See *Matrix View*)
- Remote playback (See *Remote ViewLog*)
- Central management for I/O devices from different DVRs (See *I/O Central Panel*)
- Monitor up to 42 Matrix views, including 6 Matrix views from the Control Center itself, with 4032 cameras over the network (See *IP Matrix*)
- Video motion detection (See *VMD Monitoring*)
- Instant Playback (See *Instant Playback*)
- Picture-in-Picture and Picture-and-Picture views (See *PIP and PAP View*)
- Panorama View (See *Panorama View*)

4.1 System Requirements

Before installation, make sure your computer meets the following minimum requirements:

Standard Version

OS	Windows 2000 / XP / Server 2003 / Vista
CPU	Pentium 4, 3.0 GHz, 800 MHz FSB
RAM	2 x 512 MB Dual Channels
Hard Disk	80 GB
VGA	NVIDIA GeForce FX5200 or ATI Radeon 9550
Network	TCP/IP

Advanced Version

Control Center runs with 4 Matrix views OR connects more than 150 channels.

OS	Windows 2000 / XP / Server 2003 / Vista
CPU	Core2 Duo E6600, 2.4 GHz
RAM	2 x 1 GB Dual Channels
Hard Disk	80 GB
VGA	NVIDIA 8600GT x 2 or ATI X1650 x 2
Network	TCP/IP

Professional Version

Control Center runs with 4 Matrix views AND connects more than 250 channels.

OS	Windows 2000 / XP / Server 2003 / Vista
CPU	Core2 Quad Q6600, 2.4 GHz
RAM	2 x 2 GB Dual Channels
Hard Disk	80 GB
VGA	NVIDIA 8600GT x 2 or ATI X1650 x 2
Network	TCP/IP

Note: Currently the 64-bit Windows operating system is not supported.

4.2　Installing Control Center

1.　Insert the CMS Software CD to your computer. It will automatically run and a window appears.
2.　Select **Install V8.3.0.0 Central Monitoring System**.
3.　Click **Control Center System**, and follow the on-screen instructions.

Note:

1.　The Control Center application is provided with a USB dongle. Make sure the dongle is tightly attached to your computer.

2.　To run the Control Center of version **8.3.0.0**, you must upgrade the NVIDIA driver to version **6.14.11.6371** or above if the NVIDIA Graphic Card is in use.

4.3 The Control Center Toolbar

Figure 4-1

The buttons on the Control Center Toolbar:

No.	Name	Description
1	Host List	Opens the Host List to create and edit hosts.
2	Group List	Opens the Group List to group cameras from different hosts.
3	IP Matrix List	See *4.11 IP Matrix*.
4	Edit	Opens the Edit toolbar to display other buttons: Search Host, Configure, Save and Delete. The Add Host button only appears after the Host List is opened.
5	Service	See the section of Service Toolbar.

The Edit Toolbar

The Edit toolbar varies when you open the **Host List** and **Group List**.

- When the Host List is open:

Figure 4-2

• When the Group List is open:

Figure 4-3

The buttons on the Edit toolbar:

No.	Name	Description
1	Search Host	Opens the Search Host window, by which you can detect any devices on the same LAN and add them to the Host List.
2	Configure	Displays these options: System Configure, E-Map Editor, DirectDraw Configuration, IP Matrix Service, Import Data, Export Data, Change Password and Version Information.
3	Save	Saves the changes made on the Host List and Group List.
4	Delete	Deletes the highlighted Host or Group.
5	Add Host	Adds a Host.
6	Rename	Renames the highlighted Group.
7	Add Group	Adds a Group.

Note: The small toolbars appearing on both the Host List and Group List correspond to the Edit Toolbar options.

The Service Toolbar

The Service Toolbar varies when you open the **Host List** and **Group List**.
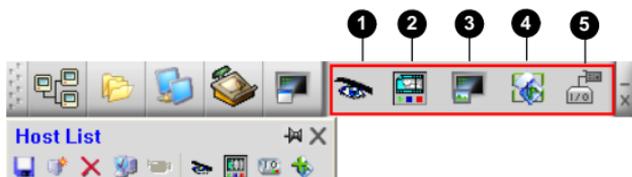
- When the Host List is open:

Figure 4-4

- When the Group List is open:

Figure 4-5

The buttons on the Host List toolbar:

No.	Name	Description
1	Remote Control	*See 4.7 Remote DVR and 4.8 Remote Desktop.*
2	Remote ViewLog	*See 4.9 Remote ViewLog.*
3	VMD System	*See 4.12 VMD Monitoring.*
4	Remote E-Map	*See 4.17 Remote E-Map.*
5	I/O Central Panel	*See 4.16 I/O Central Panel.*
6	Matrix	*See 4.10 Matrix View.*

Note: The small toolbars appearing on both the Host List and Group List correspond to the Service Toolbar options.

4.4 Creating Hosts and Groups

You need to create hosts and groups before starting the services. To create hosts, you can use the **Search Host** function (No. 1, Figure 4-2) to detect any GV devices on the same LAN and add them to the Host List. Or you can follow the steps below.

Note:

1. To use the Search Host function to locate GV devices, it is required to open TCP port 5201 on the client DVR, TCP port 5202 on the Video Server and Compact DVR, and UDP port 5200 on the Control Center.

2. To use the Search Host function to locate third-party IP cameras, go to Windows Firewall, click the **Exceptions** tab, and then select **UPnP Framework**.
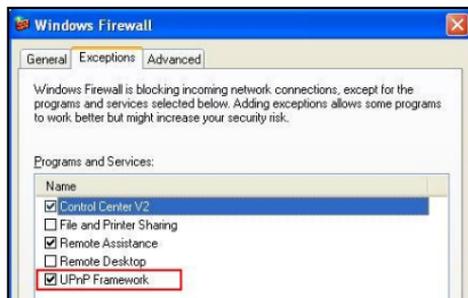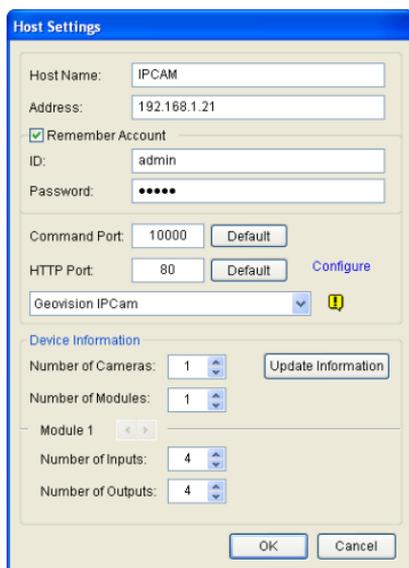

Figure 4-6

Creating a Host

You can create a host of the DVR, Compact DVR, Video Server and IP Camera. The Host Settings dialog box may look a bit different among these devices.

1. Click the **Host List** button (No. 1, Figure 4-1), right-click the Host List window and select **Add IP Camera** as example. This dialog box appears.

Figure 4-7

2. Type the host name, IP address, login ID and password of the host. Keep the communication port as default, unless otherwise necessary.

3. Click the **Update Information** button to request the number of cameras and I/O modules installed from the host. When the update is complete, this message will appear: *Update system information successfully*.

If you add a DVR host, it is required to enabled **Control Center Server** at the DVR; otherwise the message *Unable to Connect* will appear. See *4.5 Connecting to the Control Center*.

4.   Click **OK** to add the host.

Tip: To access the configuration interface of the IP device, click **Configure**.

Creating a Group

You can group cameras from different hosts by function or geography.

1.   Click the **Group List** button (No. 2, Figure 4-1), and right-click the Group List window to select **Add Group**.
2.   Name the created group.
3.   Drag the desired cameras from the Host List to the created group.
4.   Click **Save** to store your settings.

Tip:
1.   To access the live view from a desired camera, right-click the camera on the Host List or Group List, and select **Live View**.
2.   To see the information of a single camera on the Group List, right-click the camera, and select **Device Information**.

4.5   Connecting to the Control Center

To configure the client DVR in order to access the Control Center services remotely through a network connection, click the **Network** button on the main screen, point to **Control Center Server**, and then select **Start Default Service** or **Start All Service** for connection.

The Control Center Server Window

When the client DVR starts the Control Center Service (CCS) as described above, the server will be minimized to the system tray. Click the server's icon to restore its window.
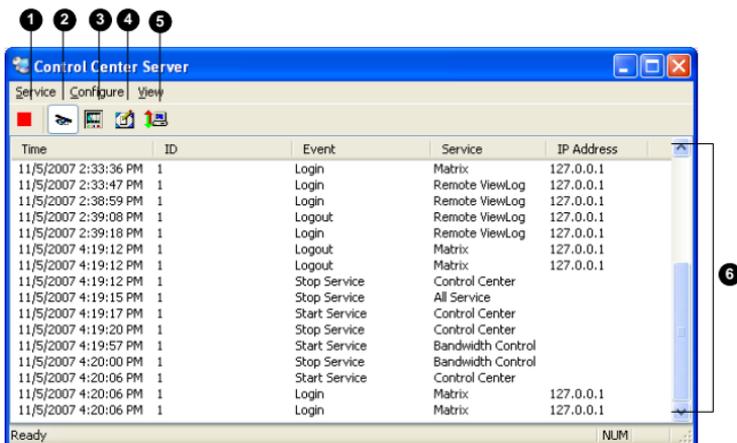

Figure 4-8

The controls on the CMS Server:

No.	Name	Description
1	Stop All Service	Stops all Control Center Server services.
2	Start / Stop Control Center Service	Starts or stops these services: Matrix, I/O Central Panel and Remote DVR. It indicates that the user allows or not allows the Control Center to access the I/O modules and GV-System.
3	Start/Stop Remote ViewLog Service	Indicates that the user allows or not allows the Control Center to access the ViewLog files.
4	Start/Stop Desktop Service	Indicates that the user allows or not allows the Control Center to control the desktop.
5	Start / Stop Bandwidth Control Service	Indicates that the user allows or not allows the Bandwidth Control Server to control the bandwidth. For details see *Bandwidth Control Applications,* Chapter 8, *User's Manual* on the Surveillance System Software CD.
6	Event List	Indicates login ID and IP address, service activation and connection time.

Configuring the CCS Server

To configure the CCS Server, click **Configure** on the window menu.

[Network Settings] Keep the three communication ports as default, unless otherwise necessary.
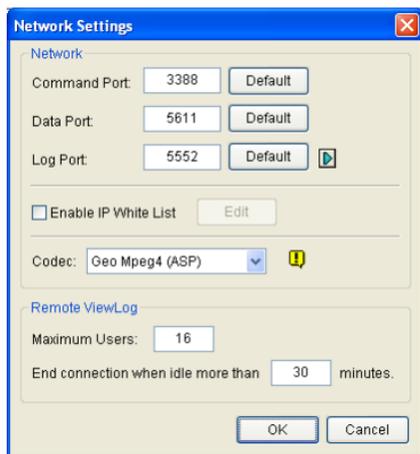

Figure 4-9

- ■ **Enable IP White List:** Limits access to the Control Center Server by assigning IP ranges. For details, see *IP White List Settings,* Chapter 8, *User's Manual* on the Surveillance System Software CD.

- ■ **Codec:** Sets video compression to Geo Mpeg4, Geo Mpeg4 ASP or Geo H264. Note Remote Desktop does not support Geo H264 codec.

- ■ **UPnP:** To automatically configure three communication ports on your router, click the **Arrow** button beside Log Port for UPnP settings. For details on UPnP, see *UPnP Setting*, Chapter 8, *User's Manual* on the Surveillance System Software CD.

- ■ **Remote ViewLog:** Sets the maximum number of users to access the video files for playback from 1 to 16. It also sets the idle time after which to end the Remote ViewLog application.

[Event Log Settings]   The settings are the same as those in Center V2. See *1.11 Event Log Browser.*

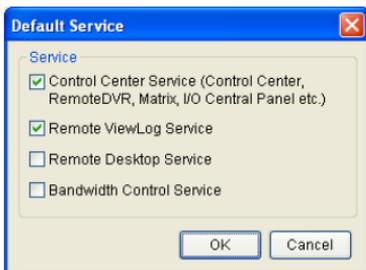**[Set Default Service]**   Select the desired services to set as default.

Figure 4-10

[Prompt to accept]   The client can be prompted to accept or reject the connection when the Control Center attempts to access his GV-System (through Remote DVR service) or Desktop (through Remote Desktop service).
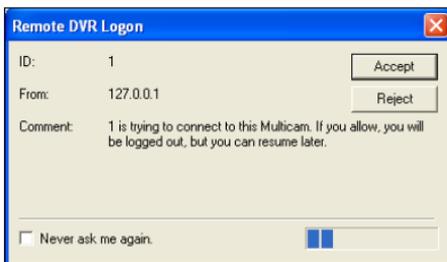
Figure 4-11

[Auto start default service when Windows starts]   Automatically runs the default services at startup.

[Hide when minimized]   Hides the minimized Control Center Server window to the notification area.

Note: If the user account of the DVR is changed by the time the **Auto start default service when Windows starts** option is enabled, you have to unselect and then select the option again before the new account setting will take effect.

![GeoVision logo](C GeoVision)

4.6 Live View

The Live View window is designed to manage the live video.

Right-click any camera on the Host List or Group List, and select **Live View**. Or click the **Camera Information** button 🖼 on the List toolbar and then select **Live View**. The Live View window appears.

Figure 4-12

The controls on the Live View window:

No.	Name	Description
1	Change Camera	Switches to another camera of the same host.
2	Change Size	Changes the size of the live video. The size corresponds to the video resolution set at the DVR site. The size choices are only available when the video resolution is higher than 320 x 240.
3	Audio	Accesses audio from the host.
4	Microphone	Enables speaking to the host.
5	Setting	Changes the audio and video settings.
6	PTZ	Activates the PTZ control by selecting PTZ Panel or PTZ Automation.

7	Visual Automation	Allows you to change the current state of an electronic device, e.g. light ON, by clicking on its image directly. The function is only available when the same function is set at the host.
8	Snapshot	Takes the snapshot of the displayed live video.
9	Zoom	Enlarges the video by selecting 1.0x, 2.0x and 3.0x.

Note: When the video resolution of the IP camera is larger than the screen resolution of the Control Center, the maximum live video you can view is approximately half size of that IP Camera resolution.

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4.7   Remote DVR

The Remote DVR service allows the Control Center to access client GV-Systems and configure their settings remotely. This feature reduces the trips to each client DVR individually.

Running the Remote DVR

1. The client DVR must activate **Control Center Service** (No. 2, Figure 4-8) first.
2. At the Control Center, highlight a DVR in the Host List.
   Then click the **Remote Control** button and select **Remote DVR**.

If the connection is established, the main screen of the client DVR will display on the Control Center desktop. At the same time, the client DVR will display the following message, advising the GV-System is in use and has been locked.

Figure 4-13

If the client wants to interrupt the connection, he or she can click the button at the bottom right corner. A valid ID and Password are required to stop the connection.

Tip: If you do not wish to overload the bandwidth by viewing all cameras of the client DVR, you can choose to view certain cameras. There are two ways to activate and deactivate cameras:

(1) Before connecting to the client DVR, in the Control Center, click the
     Configure button [icon] , select **System Configure**, and then click
     the **Remote DVR** tab. In the Active Camera field, check or uncheck
     desired cameras. Click **OK** to save to your settings.

(2) When connecting to the client DVR, on the main screen of the client
     DVR, click the **Exit** button, and then select **Activate Camera**. Check
     or uncheck cameras.

Note: Remote DVR currently doesn't support audio output, PTZ and I/O
control.

Also see *Remote DVR Settings* in *4.20 System Configuration.*

4.8 Remote Desktop

Not only does Remote Desktop provide the Remote DVR feature of working on client GV-Systems, but allow you to exit to Windows. Viewing the client desktop as a website view, the center operator has a full control to client GV-System and its operation system.

Running Remote Desktop

1. The client DVR must activate **Remote Desktop Service** (No. 4, Figure 4-8) first.
2. At the Control Center, highlight a DVR in the Host List. Then click the **Remote Control** button , and select **Remote Desktop**.

When the connection is established, the client desktop will appear on the Control Center desktop.

File Transfer

The File Transfer function is designed to transfer files easily between the Control Center and client DVR.

1. Run the **Remote Desktop**.
2. Click the **File Transfer** button on the upper left corner of the Remote Desktop. The File Transfer Service dialog box appears.
3. Select the desired file to transfer to **Local** (the Control Center) or **Remote** (the client DVR).
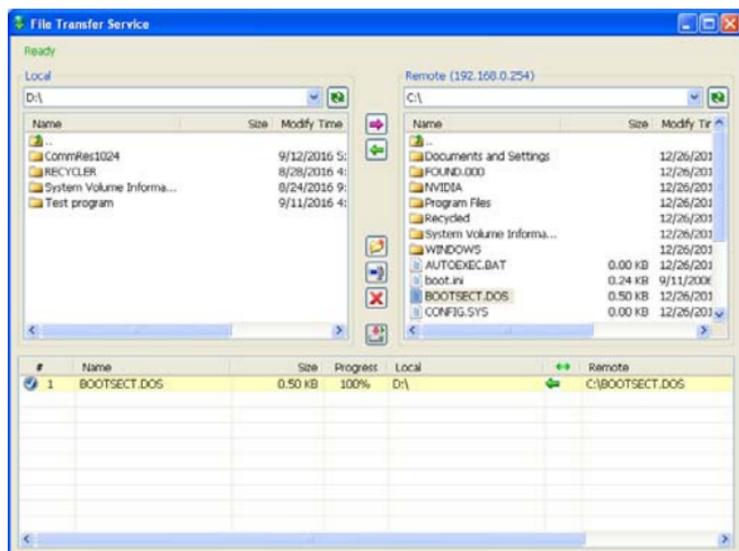
Figure 4-14

Note: The size of one single file for transfer cannot exceed 4 GB, but multiple selections of files do not have size limit.

Also see *Remote Desktop Settings* in *4.20 System Configuration.*

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4.9 Remote ViewLog

The Remote ViewLog service allows the Control Center to access the event files of client DVRs and play them back with ViewLog player.

Running Remote ViewLog

1. The client DVR must activate **Remote ViewLog Service** (No. 3, Figure 4-8) first.
2. At the Control Center, highlight a DVR in the Host List or a group in the Group List. Then click the **Remote ViewLog** button 📳 .

When the connection is established, the ViewLog player will appear on the Control Center desktop. For details on ViewLog, see Chapter 4, *User's Manual* on the Surveillance System Software CD.

If highlighting a group for the Remote ViewLog service, you can access the event files of up to 96 cameras. However, the Multi View of ViewLog can only display up to 16 cameras. So you need to select the desired cameras for Multi View mode. On the ViewLog function panel, click the **Setting** button to display the System Configuration dialog box, and select the **Multi View** tab.

Also see *Remote ViewLog Settings* in *4.20 System Configuration*.

Note: When Control Center of version 8.3 connects to GV-System of version 8.2 or earlier, the remote playback can work. However, if Control Center of version 8.2 or earlier connects to GV-System of version 8.3, the playback will fail.

4.10   Matrix View

Matrix View allows the center operator to monitor up to 96 cameras from different client DVRs on the same screen. Further, the operator can remotely change camera's monitoring status and properties. The Matrix view provides these features:

- Support for screen resolution of 1024 x 768, 1280 x 1024, 1600 x 1200, 1680 x 1050, 1920 x 1200, 1280 x 800, 1920 x 1080 and 1440 x 900
- Number of displayed cameras at a time can be up to 96
- Display of up to 6 Matrix windows in one monitor or separate six monitors at a time
- Support for remote configuration of camera status and properties
- Support for Camera Scan, PTZ Control and POS Live View functions
- Access to client ViewLog for playback

Running Matrix View

1. The client DVR must activate **Control Center Service** (No.2, Figure 4-8) first.
2. At the Control Center, highlight a Group and click the **Matrix** button . The Matrix window appears.

Tip: To add or replace one camera view in a Matrix view, simply drag the desired camera from the Group List to the desired channel position.
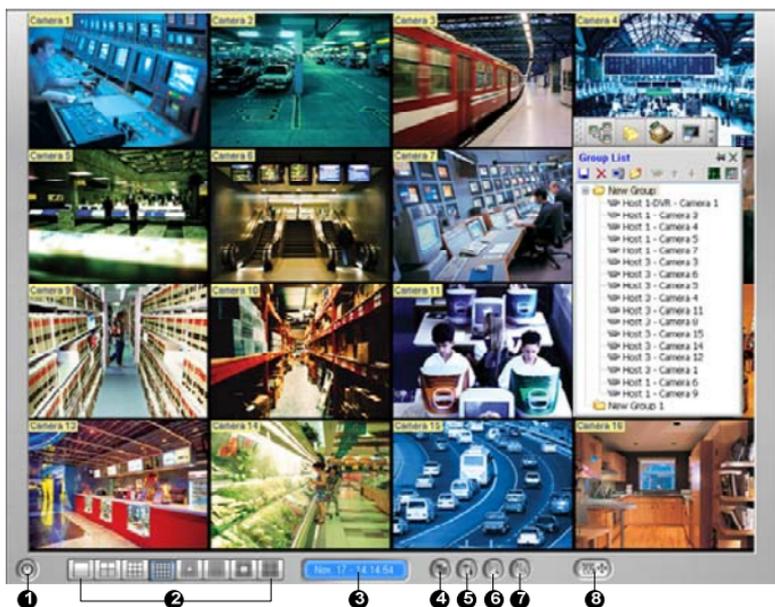
Figure 4-15

The controls on the Matrix window:

No.	Name	Description
1	Exit	Closes or minimizes the Matrix window.
2	Screen Division	Select screen divisions with the choices of 1, 4, 6, 8, 9, 12, 16, 20, 24, 32, 36, 48, 64, 80 or 96 channels.
3	Date/Time	Indicates the current date and time.
4	Monitor	Starts or stops monitoring.
5	Configure	Access the Matrix settings and camera properties.
6	ViewLog	Opens ViewLog.
7	Camera Scan	Rotates through screen divisions.
8	PTZ	Displays the PTZ control panel. To display the PTZ control panel, you can also right-click the connected channel and select **PTZ Control**.

Note:

1. To display Matrix views in separate 6 monitors, make sure your computer is equipped with 3 VGA cards. To set up multiple monitor positions and resolutions, see *Matrix Settings* in *4.20 System Configuration*.

2. The Matrix supports the megapixel resolution only on a single screen. Click the button at left-top corner of the single screen to display megapixel images. For client GV-System, it is required to activate the **Enable hardware-compressed data FIFO** function so that Matrix can receive megapixel streams. To activate the function, see *Advanced Settings*, Chapter 2 in *User's Manual* on the Surveillance System Software CD.

3. According to your screen divisions, the Matrix will reduce the received resolution as close as to the division size. For GV IP devices, the JPEG stream of 720 x 480 or smaller will be changed to the MPEG stream of the similar size; the JPEG stream higher than 720 x 480 will remain as JPEG stream. The mechanism is designed to reduce CPU usage and save bandwidth.

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Configuring Matrix View

On the Matrix window, click the **Configure** button (No. 5, Figure 4-15).
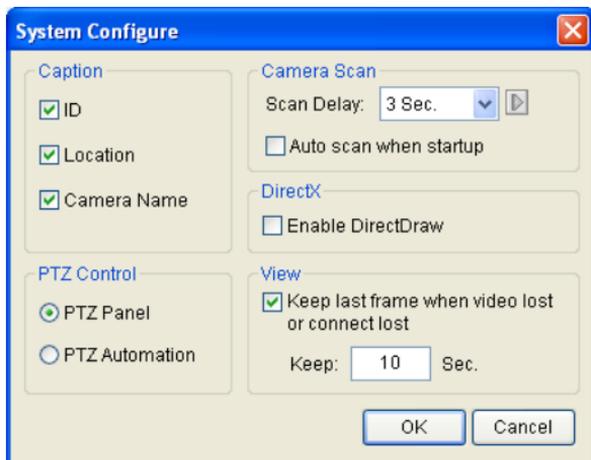
[System Configure]

Figure 4-16

- **Caption:** Displays the ID, Location or Camera Name stamp on screen.
- **Camera Scan:** Sets the rotation interval between cameras. Click the **Arrow** button to set rotation mode of 1, 4, 6, 9, 16 or 24 channels. You can also enable the automatic scan function at the Matrix startup.
- **DirectX:** Sets the DirectDraw function.
- **PTZ Control:** Select one type of PTZ control panel. For details on PTZ Automation, see *PTZ Automation*, Chapter 6, *User's Manual* on the Surveillance System Software CD.
- **View:** If video sources or connections tend to be interrupted, or you want to prevent the operator from knowing the broken connection, select this option and set the duration that the last frame remains on the screen to avoid the instant and frequent display of "Video Lost" or "Disconnect" messages.

[Camera Configure] Adjusts the properties and recording settings of cameras.

[Video Attributes] Adjusts video attributes of cameras.

[Image Quality] Adjusts the video quality with the choices of **Best**, **Normal** and **Low**. The better quality will result in bigger image size and need bigger bandwidth.

[QView] Allows you to display channels on another monitor. For details, see *QView for Channel Display on Another Monitor* later in this chapter.

[Auto Retry when Connection Broken] Automatically reconnects when the connection between the Matrix View and cameras is lost.

![GeoVision logo]

POS Live View

The POS Live View allows you to view POS transaction data or cardholder information of access control in a separate window.

➢ To open the POS Live View window, click the **ViewLog** button (No.6, Figure 4-15) and select **POS Live View**.

➢ To have the instant playback, double-click the desired transaction item or cardholder data on the POS Live View window.
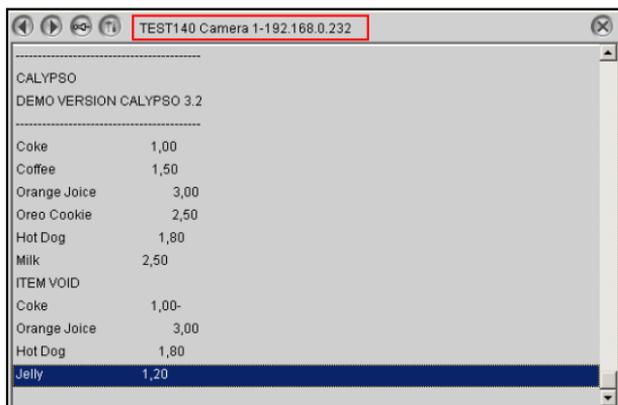

Figure 4-17

For details on POS Live View, see *POS Live View*, Chapter 7, *User's Manual* on the Surveillance System Software CD.

Instant Playback

When monitoring through Matrix View, you can instantly play back any suspicious videos of a certain time length. Time length choices include 10 seconds, 30 seconds, 1 minute and 5 minutes. For details see *4.13 Instant Playback*.

➢ To instantly play back the event(s) of one single channel, click on the **Camera Name**, select **Instant Play** and select the time length.

➢ To instantly play back the events of all channels, click the **ViewLog** button (No.6, Figure 4-15), select **Instant Play**, and select the time length.

Also see *Matrix Settings* in *4.20 System Configuration*.

QView for Channel Display on Another Monitor

If the Control Center is equipped with multiple monitors, you can use the QView feature to display a selected channel on another monitor screen.

1. Open the Matrix window, click the **Configure** button (No. 5, Figure 4-15), and select **QView**. This dialog box appears.
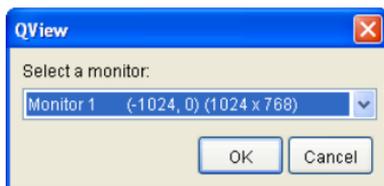

Figure 4-18

2. Use the drop-down list to select a desired monitor.

3. Click one channel to be displayed on that monitor.

Select a channel to be displayed on another monitor screen.

The selected channel is displayed on another monitor screen.

Figure 4-19

4. To switch to another channel, simply click another channel in the Matrix.

4.11 IP Matrix

The IP Matrix is designed to reduce trips to set up remote monitors. The operator can remotely assign cameras to be displayed, set screen divisions, start camera scan and etc. This feature is useful for TV wall control.

The IP Matrix allows the operator to monitor up to 42 Matrix views, including 6 Matrix views from the Control Center itself, with 4032 cameras ((96 x 6)+ (96 x 36)) in total over the network. The IP Matrix application is illustrated as below.

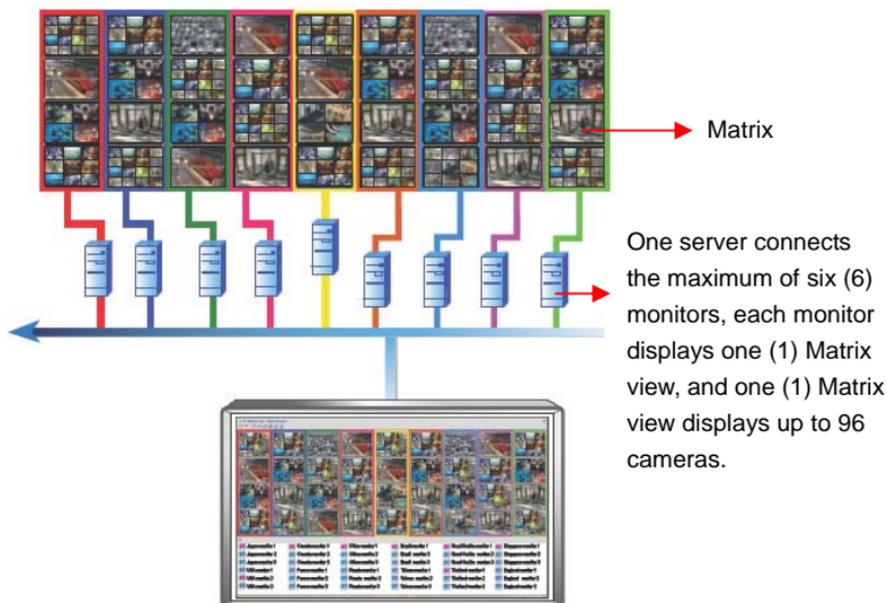For details on the Matrix view, see *4.10 Matrix View*.

Matrix

One server connects the maximum of six (6) monitors, each monitor displays one (1) Matrix view, and one (1) Matrix view displays up to 96 cameras.

Figure 4-20 IP Matrix controls up to 36 Matrix views

Running IP Matrix

To run the IP Matrix, you have to set up both client servers and Control Center.

Note: An appropriate USB dongle is required for each client server.

On client servers:

1. Insert the CMS Software CD to the computer. It will run automatically. A window appears.
2. Select **Install V8.3.0.0 Central Monitoring System**.
3. Click **IP Matrix**, and follow the on-screen instructions.
4. After the computer is restarted, go to the Windows **Start** menu, point to **Programs**, select **IP Matrix** and click **IP Matrix**. This dialog box appears.

Figure 4-21

5. Type the IP address of the Control Center, and modify the communication port if necessary.

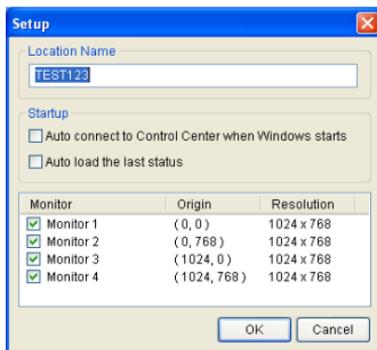6. Click **Advance**. This dialog box appears.

Setup

Location Name

TEST123

Startup

☐ Auto connect to Control Center when Windows starts

☐ Auto load the last status

Monitor	Origin	Resolution
☑ Monitor 1	(0, 0)	1024 x 768
☑ Monitor 2	(0, 768)	1024 x 768
☑ Monitor 3	(1024, 0)	1024 x 768
☑ Monitor 4	(1024, 768)	1024 x 768

OK   Cancel

Figure 4-22

[Location Name]   Names the client server.

[Startup]   Automatically connects to the Control Center when the program is started.

[Monitor]   This field displays the number, position coordinates and resolution of monitors that are connected to the client server. Enable the desired monitors for remote control.

7. Click **OK** and then **Connect** to build connection with the Control Center.

On Control Center:

1. Click the **IP Matrix List** button (No. 3, Figure 4-1) on the Control Center toolbar. The IP Matrix window appears.

2. Click the right arrow button on top left corner to start the service. The icons of connected monitors will be displayed at the bottom of the window.

3. To display monitor views, drag and drop the monitor icons from the bottom to the desired squares on the IP Matrix.
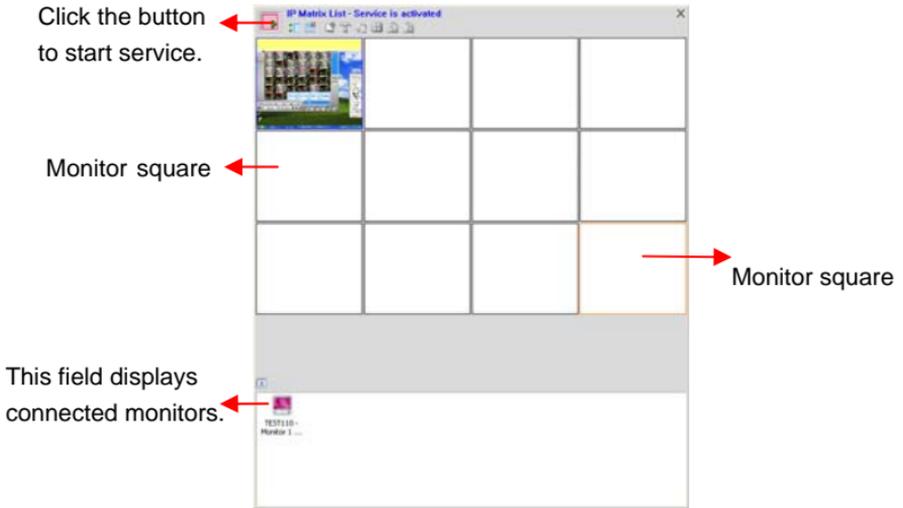
Click the button to start service.

Monitor square

Monitor square

This field displays connected monitors.

Figure 4-23

4. To assign cameras to be displayed on a specific monitor, drag a group from the Group List and drop on the monitor square. Or, right-click the monitor square and select **Set Channel** to choose a group.
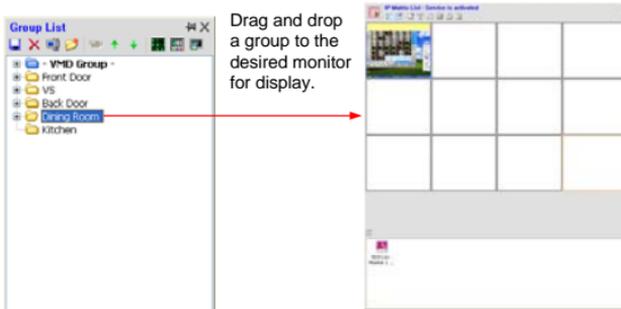

Drag and drop a group to the desired monitor for display.

Figure 4-24

5. To enlarge and manage one monitor view, double-click the monitor square and use the toolbar for control. For details on the toolbar, see *The Controls on the Window* below.
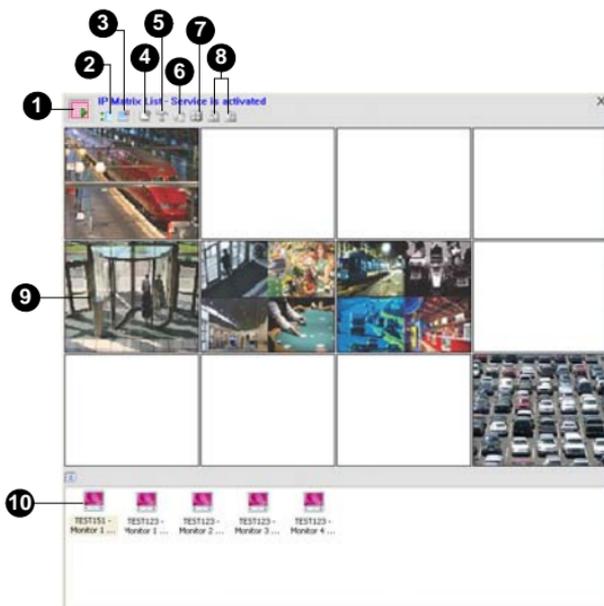
The Controls on the Window

Figure 4-25

No.	Name	Description
1	Start / Stop Service	Starts or stops the connection to client servers.
2	Show / Hide List	Opens or closes the monitor list at the bottom of the window.
3	Layout Setup	Includes these settings: • **Screen Division:** Specify the screen division of IP Matrix. The maximum number of divisions is 36, e.g. 9 x 4 or 4 x 9. • **Screen update rate:** Specify the update

		frequency for all camera views on the monitor square.
		• **Clear all set monitors' position:** Clears the IP Matrix view every time when you modify the screen division.
4	Set Channel	Focus on one monitor view, click this icon, and select one group for display.
5	Matrix Configure	Focus on one monitor view, click this icon, and set caption display, camera scan interval, DirectX and PTZ control method.
6	Start / Stop Scan	Focus on one monitor view, click this icon, and select to start or stop the camera scan function.
7	Set Quad	Focus on one monitor view, click this icon, and set the screen division.
8	Page Up & Page Down	Focus on one monitor view, and click one of these icons to scroll the page up and down.
9	Monitor Square	Displays the monitor views. Right-click one monitor view to have these settings: • **Set Channel:** Select a group for display. • **Advanced Control:** Enlarges the monitor view for further management. • **Remove Monitor:** Removes the monitor view from the monitor square.
10	Monitor Icon	The icons of connected monitors. Right-click one icon to have the setting: • **Identify Monitor:** Displays a large number on the monitor square, showing which monitor square corresponds with which monitor icon.

Also see *IP Matrix Settings* in *4.20 System Configuration*.

4.12 VMD Monitoring

The Control Center provides the VMD (Video Motion Detection) function. The operator can be alerted with a pop-up display of the live video when any of these events occur: Motion, Crowd Detection, Advanced Unattended Object Objection, Advanced Scene Change Detection and Advanced Missing Object Detection.

Note: The VMD feature does not support the third-party IP cameras.

Running VMD

1. Drag the desired cameras from the Host List and drop to **VMD Group** in the Group List.
2. To select the event for a popup alert, right-click the camera, select **Video Analysis**, and select the types of events that have been configured for this camera at the client GV-System. Note Motion Detection is selected by default.
3. To open the VMD window, click the **VMD** System icon. When motion or event is detected within the camera view, the live video will pop up on the VMD window.
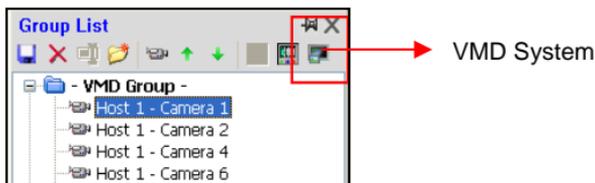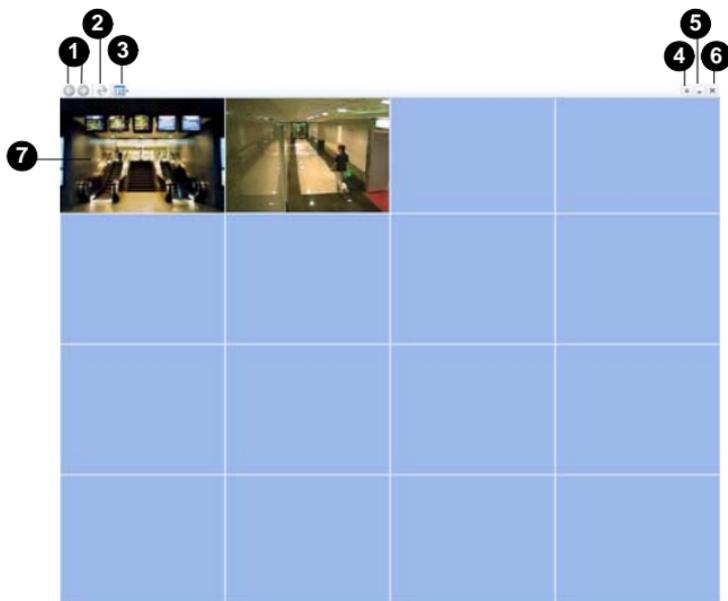

Figure 4-26

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The Controls on the Window

Figure 4-27

No.	Name	Description
1	Page Up & Down	Scrolls the page up and down.
2	Refresh	Refreshes the camera view. The feature is unavailable when the **Popup camera in user-defined position** option is enabled (see Figure 4-58).
3	Select Quad	Sets the screen division.
4	Show System Menu	Includes these settings: • **Image Quality:** Select one of these qualities: Best, Normal and Low. • **Host List:** Displays the host tree list.

		• **System Configure:** Enable DirectX and specify the Post-Motion duration for the camera view remaining on the window after motion stops. • **Event Popup:** Changes the duration that a popup remains on the screen. By default each popup remains for 60 seconds.
5	Minimize	Minimizes the window in Windows taskbar.
6	Exit	Closes the window.
7	Pop-up camera	Right-click the pop-up camera to have these settings: • **Advanced Live View:** Opens the live view window for further control. • **Instant Playback:** See *Instant Playback* below.

Also see *VMD System Settings* in *4.20 System Configuration.*

4.13 Instant Playback

You can retrieve the recordings from the DVR or GV IP device and play video back.

The following function must be enabled ahead to allow remote access from the Control Center:

- **DVR:** Enable recording and **Remote ViewLog Service** on Control Center Server.
- **Video Server/Compact DVR:** Enable recording and **ViewLog Server**.

The places to play video back:

- In the Group List, right-click one camera and select **Instant Play**.
- In the VMD window, right-click the pop-up camera and select **Instant Play**.
- In the Matrix view, click on the **Camera Name** and select **Instant Play**.
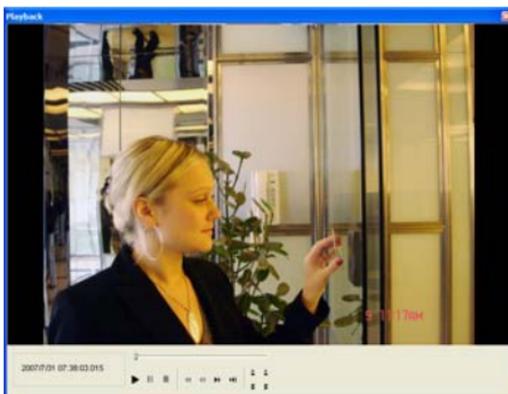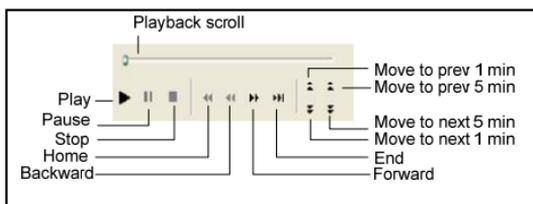

Figure 4-28

Right-click the Playback window to have the following features:

Name	Functions
Play Mode	Includes these options: • **Frame by Frame:** Plays back video frame by frame. • **Real Time:** Plays back video on real time. This mode saves waiting time for rendering, but drop frames to give the appearance of real-time playback. • **Audio:** Turns on or off the video sound. • **Auto play next 5 minutes:** Plays back video up to 5 minutes.
Render	Includes these options: • **Deinterlace:** Converts the interlaced video into non-interlaced video. • **Scaling:** Smoothens mosaic squares when enlarging a playback video, and applies the colorful mode to enhance the coloring. • **Deblocking:** Removes the block-like artifacts from low-quality and highly compressed video. • **Defog:** Enhances image visibility. • **Stabilizer:** Reduces camera shake. • **Text overlay's camera name and time:** Overlays camera name and time onto the video. • **Text overlay's POS/GV-Wiegand:** Overlays POS or GV-Wiegand Capture data onto the video. • **Full Screen:** Switches to the full screen view.

| Tools | • **Snapshot:** Saves a video image.
• **Save as AVI:** Saves a video as avi format.
• **Download:** Downloads the video clip from the DVR or IP video device to the local computer. |

4.14 PIP and PAP View

With PIP (Picture in Picture), you can crop your video to get a close-up view or zoom in on your video. With PAP (Picture and Picture), you can create a split video effect with multiple close-up views on the video.

You can enable PIP or PAP functions in Live View, Remote ViewLog and Matrix View.

■ **Live View:** In the Group List, right-click one camera and select **Live View**. In the Live View window, click the **Change Size** icon and select **PIP View** or **PAP View**.

Figure 4-29

- **Playback:** Right-click one camera in the Host List or the Group List, and select **Remote ViewLog**. In the Remote ViewLog window, click the **View Mode** button, select **Single View**, and select **Mega Pixel (PIP)** or **Mega Pixel (PAP).**

- **Matrix:** Right-click one camera view, and select **PIP View** or **PAP View**.

For details on using PIP and PAP, see *Picture-in-Picture View* and *Picture-and-Picture View,* Chapter 1, *User's Manual* on the Surveillance System Software CD.

4.15   Panorama View

Spliced from multiple camera images, a panorama view provides a continuous scene for live monitoring.

Each camera selected for the panorama view will keep the recording in original format. Up to 4 sets of panorama views can be created.

Note: This function is only available when an appropriate USB dongle is used.

To access this feature, on the Group List, right-click the desired group, and select **Panorama Setting**. The CMS Panorama program is enabled and minimized to the system tray. The Panorama Setup dialog box also appears. For the controls on the dialog box, see *Panorama View,* Chapter 3, *User's Manual* on the Surveillance System Software CD.

Creating a Panorama View

To create a panorama view, see the same topic in *Panorama View,* Chapter 3, *User's Manual* on the Surveillance System Software CD.

Accessing a Panorama View

There are two ways to access a panorama view:

- Right-click the Group that has set a Panorama view, select **Panorama View** and select the desire panorama set from the list.

- Right-click the CMS Panorama icon on the system tray, select **Panorama View**, and select the desired panorama set from the list.

Panorama View Controls

To control a panorama view, see the same topic in *Panorama View,* Chapter 3, *User's Manual* on the Surveillance System Software CD.

4.16   I/O Central Panel

The I/O Central Panel provides a centrally managing solution for I/O devices from different DVRs. Its major features are:

- Group I/O devices from different DVRs
- Trigger I/O devices in cascade mode
- Monitor different I/O cascade configurations at different times of the day
- Quick access triggered I/O devices by a Quick Link window

Running the I/O Central Panel

1. The client DVR must activate **Control Center Service** (No. 2, Figure 4-8) first.
2. Click the **I/O Central Panel** on the Control Center toolbar.

When the connection is established, the I/O Central Panel will display on the Control Center desktop.

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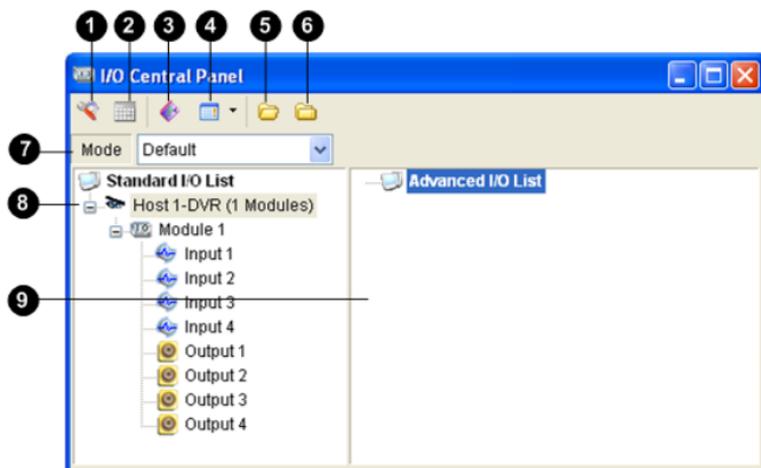## The I/O Central Panel

Figure 4-30

The controls on the I/O Central Panel:

No.	Name	Description
1	Configure	Accesses Panel and Schedule settings.
2	Mode Schedule	Starts/stops Mode Schedule.
3	Toggle Quick Link	Displays the Quick Link window for quick access to triggered I/O devices.
4	Advanced I/O List Style	Displays the Advanced I/O List in various styles: View/Edit, Icon and Detail.
5	Expand Tree Row	Expands tree branches.
6	Collapse Tree Row	Collapses tree branches.
7	Mode	Configures various cascade modes.
8	Standard I/O List	Displays connected I/O modules.
9	Advanced I/O List	Groups I/O devices in cascade mode.

Creating a Group for Cascade Triggers

You can group I/O devices by function or geography. Further, the group allows cascade triggers, meaning that the trigger actions of one trigger can activate another trigger.

For this example, you might have a group called "Entrance" that contains all I/O devices installed at entrances. The "Entrance" group might contain other sub groups, each of which contains just the related I/O devices in various geographic locations:
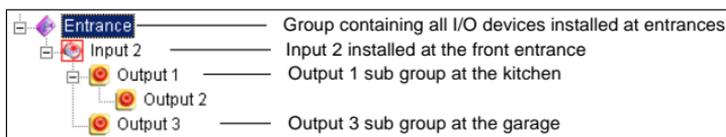

Figure 4-31

When Input 2 is triggered, it will trigger Output 1 and Output 3 sub groups, and Output 1 will trigger Output 2 in a cascade series.

Creating a Group:

1. Right-click on **Advanced I/O List** (No.9, Figure 4-30), and then select **Add A Group**. This dialog box appears.

Figure 4-32

[Group Name] Names the group.

[Group Notify Setting]

■ **Invoke Alarm:** Invokes the computer alarm on I/O trigger. Select a sound from the drop-down list.

2. Click **Save** to apply the settings, and return to the panel.
3. To create a cascading hierarchy, drag the desired inputs/outputs from the left **Standard I/O List** to the group.

Note: In the cascading hierarchy, each input can only be used once while the same output can be used repeatedly.

Editing a Group:

To modify group settings, right-click a group, and select **View/Edit**. This dialog box appears.
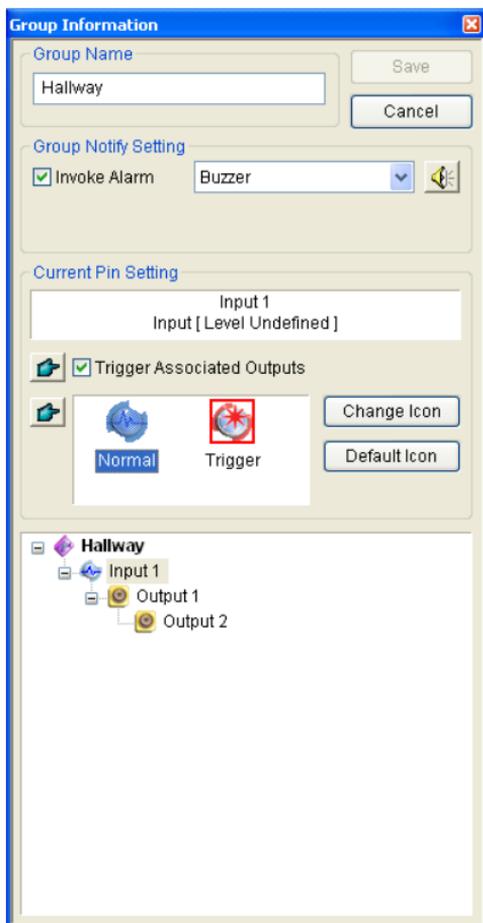

Figure 4-33

[Group Name] As described in Figure 4-32.
[Group Notify Setting] As described in Figure 4-32.

[Current Pin Setting]   To enable this option, highlight an I/O device from the group list at the bottom.

■   **Trigger Associated Outputs:**   Triggers outputs in cascade mode. Click the **Finger** tab to apply the change to all I/O devices at the same group.

■   **Change Icon:**   To enable this option, select one of two displayed icons: Normal or Trigger. Click the **Change Icon** tab to change an icon. Click the **Finger** tab to apply the change to all I/O devices at the same group.

Editing an I/O Device:

In addition to editing groups, you can also edit the settings of individual I/O device. Right-click an I/O device, and select **Setting**. This dialog box appears.
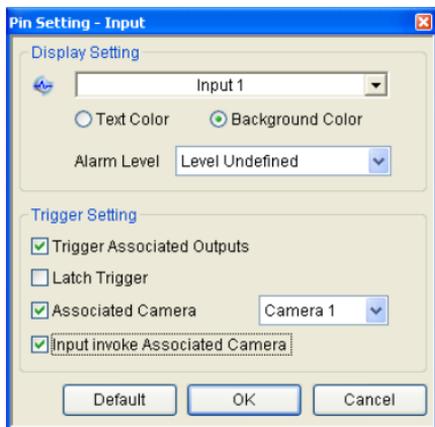

Figure 4-34

[Display Setting] You can define the nature of I/O devices by colors. Note that the setting only affects the **Detail** style of the Advanced I/O List (No. 4, Figure 4-30).

■ **Alarm Level drop-down list:** Click the drop-down list, and select one of the six default colors: Fire, Smog, Vibration, Intruder, Motion and Emergency. For the Level Undefined option, select **Text Color** or **Background Color**, and then click the Input/Output drop-down list to change its color.

[Trigger Setting]

■ **Trigger Associated Outputs:** Triggers outputs in cascade mode.

■ **Latch Trigger:** Instead of a lasting output alarm, the Latch Trigger option provides a momentary alarm when an input is triggered in cascade mode. For details, see *Latch Trigger*, Chapter 6, *User's Manual* on the Surveillance System Software CD.

■ **Associated Camera:** Assign a camera to the input for live view function. After this option is enabled, you can click the input icon and select **View Associate Camera** to view live video anytime.

■ **Input Invoke Associated Camera:** The live video pops up when its associated input is triggered. See *Popping Up Live Video After Input Trigger* later in this chapter.

Configuring the I/O Central Panel

On the panel toolbar, click the **Configure** button, and select **Panel Setting**. This dialog box appears.
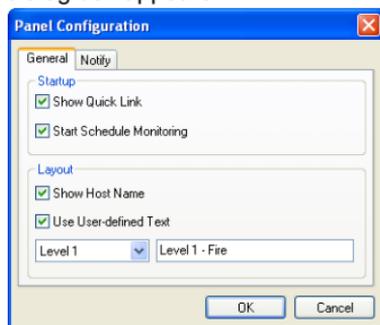

Figure 4-35

[Startup]

■ **Show Quick Link:** Opens the Quick Link window at panel startup.

■ **Start Schedule Monitoring:** Starts Mode Schedule at panel startup. For details, see *Setting up Mode Schedule* below.

[Layout]

■ **Show Host Name:** Displays the host name of each I/O device on the Advanced I/O List.

■ **Use User-defined Text:** Allows you to modify the text of Alarm Level (see Figure 4-34).

Setting Up Mode Schedule

The Mode Schedule allows you to monitor different I/O cascade configurations at different time. For example, you may want I/O cascade triggers one way during business hours and another way for non-business hours. Modes can be switched automatically at a scheduled time.

Creating a Mode:

1. Click the **Mode** drop-down list (No. 7, Figure 4-30), and select **More Edit**. This dialog box appears.
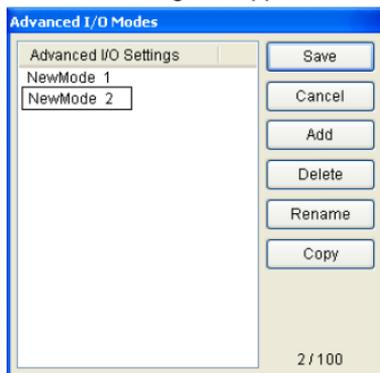

Figure 4-36

2. Click **Add**, and name the created mode. You can create up to 100 modes.
3. Click **Save** to return to the panel.
4. Select the created mode from the **Mode** drop-down list, and create the groups in the Advanced I/O List. For details, see *Creating a Group for Cascade Triggers* earlier in this chapter.

Creating a Mode Schedule:

Define the times and days you like the panel to switch modes.

1. On the panel toolbar, click the **Configure** button (No.1, Figure 4-30), and select **Schedule Setting**. This dialog box appears.
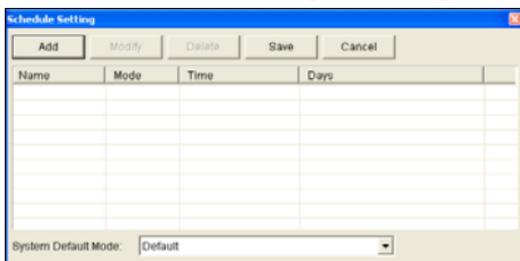

Figure 4-37

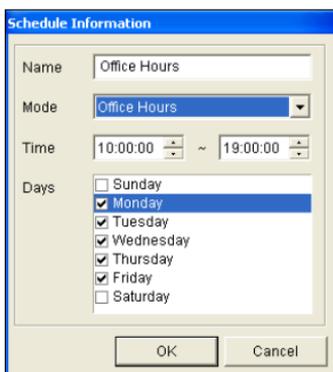2. Click **Add** to create a schedule. This dialog box appears.

Figure 4-38

- ■ **Name:** Type a name for the schedule.
- ■ **Mode:** Select a mode from the drop-down list.
- ■ **Time:** Define a time period you want the mode to run.
- ■ **Days:** Check the day box(es) you want the mode to run.

3. Click **OK** to apply the settings, and click **Save** to return to the panel.
4. To start the mode schedule, click the **Mode Schedule** button (No. 2, Figure 4-30), and then select **Mode Schedule Start**.

Quick Link

The Quick Link provides a quick access to triggered I/O devices. It is a separate window to display all group icons. The group icon flashes when any included I/O device is triggered. Clicking the flashing icon will bring you to the I/O location in the Advanced I/O List.

➢ To open the Quick Link window, click the **Toggle Quick Link** button. (No. 3, Figure 4-30).

➢ To open the Quick Link window at panel startup, check the **Show Quick Link** option in Figure 4-35.
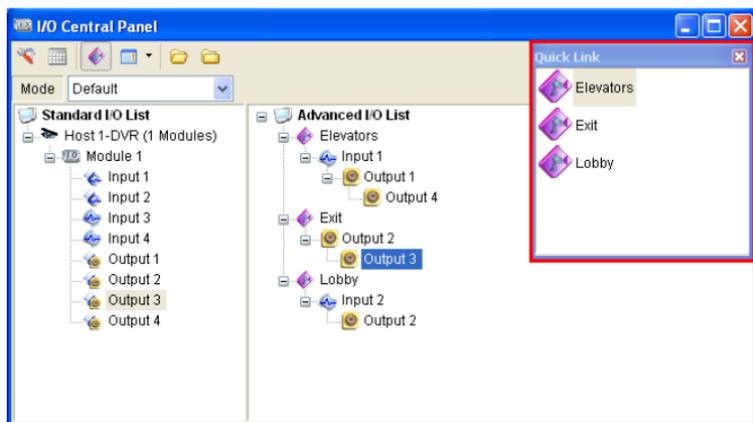

Figure 4-39

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Forcing Output

To manually force an output, click one output, and select **Force Output**.

➤ In the Standard I/O List, you can force the output individually.
➤ In the Advanced I/O List, considering cascade triggers, you can only manually force the output at the top level, e.g. Figure 4-40. Other outputs at sub levels cannot be forced manually, e.g. Figure 4-41. However, if the output is not in a cascading hierarchy, you can definitely force it manually, e.g. Figure 4-42.
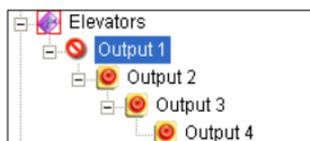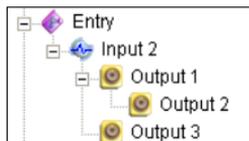

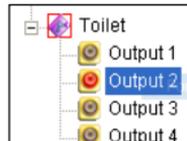***Figure 4-40***   ***Figure 4-41***   ***Figure 4-42***

Editing Background Image

With the Background Image feature, you can import a floor plan to lay out the locations of triggered I/O devices. This feature works in the **Icon** style of the Advanced I/O List.

1. To switch to the Icon style, click the **Advanced I/O List Style** button (No. 4, Figure 4-30) and then select **Icon**.
2. Select a group in the Advanced I/O List. The I/O icons of this group will be displayed.
3. Right-click on the right screen, and select **Background Image** to import a graphic file.
4. Right-click on the right screen, and uncheck **Auto Arrange**. Now you can freely drag the I/O icons to the desired locations on the imported map.
5. To add images to another group, repeat the steps 2 to 4.

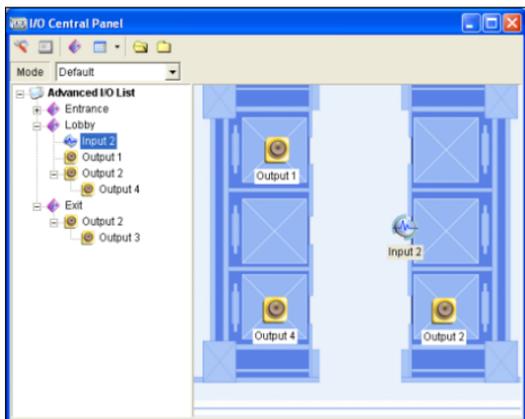**Note:** Highlighting **Advanced I/O List** in the Advanced I/O List, you can import another image.

Figure 4-43

Managing a Group of I/O Devices

With groups of I/O devices set up on the Advanced I/O List, you can enable or disable these I/O devices by groups.

Enabling a Group

On the Advanced I/O List, right-click a desired group and select **Start Monitoring**. All input devices of this group are now enabled. When inputs are triggered, outputs will be activated in cascade mode.

Disabling a Group

On the Advanced I/O List, right-click a desired group and select **Stop Monitoring**. All input devices of this group are now disabled. No cascade triggers will occur.

Pausing the Triggered Inputs

This feature is designed for a group of outputs set to be Toggle mode. When inputs activate outputs in cascade triggers, right-click this group and select **Pause Monitoring**. The inputs of the group will be reset, but the outputs keep on alarming.

Controlling I/O Devices

The Control Center operator can manually arm or disarm any I/O devices of client DVRs without interrupting the monitoring.

Note: This function also supports the client GV IP devices of these firmware versions:

GV-Compact DVR: Firmware V1.43 or above

GV-IP Camera: Firmware V1.05 or above

GV-Video Server: Firmware V1.45 or above

Arming or disarming I/O devices

1. On the Standard I/O List, right-click one host and select **I/O Enable Setting**. This dialog box appears.
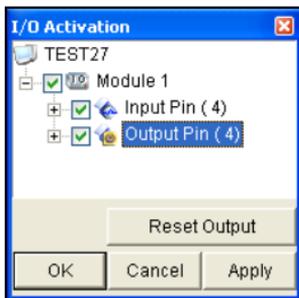

Figure 4-44

2. Check the Input/Output to arm or uncheck the Input/Output to disarm the device (s). Then click **Apply** to verify the changes.

Popping Up Live Video after Input Trigger

You can be alerted by a pop-up live video after an input device is triggered.
Up to 16 live videos can be accessed simultaneously.

1. On the toolbar, click the **Configure** button (No.1, Figure 4-30), select
    Panel Setting and click the **Notify** tab. This dialog box appears.

Panel Configuration

General | Notify

Notification Setting

Maximum number of invoked camera views: 1

☑ Enable digital input to invoke the associated camera.
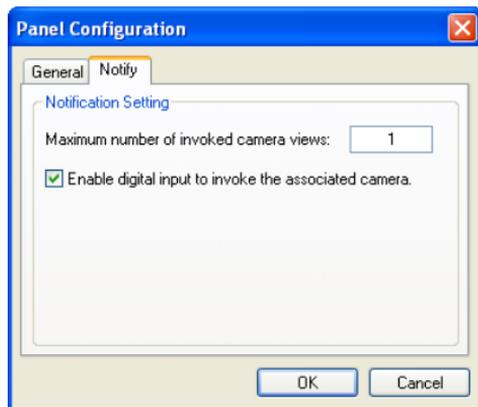
OK   Cancel

Figure 4-45

2. Specify the **Maximum Number of Invoked Camera Views** that can
    pup up at the same time when inputs are triggered. Note that the
    maximum number of popup videos is 16.

3. Select **Enable input invoke camera** to activate the function.

4. To map a camera to an input device, right-click an input device in the Advanced I/O List, and select **Setting**. This dialog box appears.

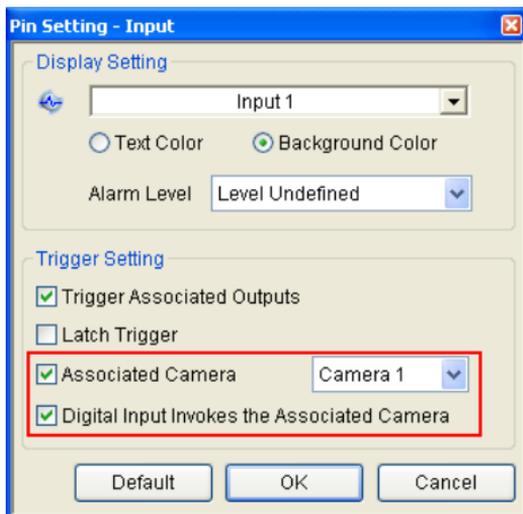*Figure 4-46*

5. Select **Associated Camera**, assign a camera from the drop-down list, and select **Digital Input Invokes the Associated Camera**.

6. Click **OK**. When the input is triggered, the live video of its associated camera will pop up.

4.17 Remote E-Map

The Control Center can create E-Maps for client DVRs to monitor the surveillance sites on an electronic map.

1. First create E-Maps for client DVRs.

    ➢ Click the **Configure** button (No. 2, Figure 4-2) on the Edit toolbar and then select **E-Map Editor**. Or,

    ➢ Select **E-Map Editor** within the Control Center folder from the Windows Start menu.

    For details on creating an E-Map, see *Creating an E-Map File*, Chapter 9, *User's Manual* on the Surveillance System Software CD.

2. On the Host List, click the **Remote E-Map** button to connect to the DVRs. Once the connection is established, the Remote E-Map will appear on the Control Center desktop.
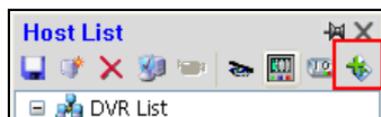

Figure 4-47

4.18 Colorful Mode of Live Video

You can enhance the coloring to have more vivid and saturated images. Click the **Configure** button (No. 2, Figure 4-2), select **DirectDraw Configuration**, select **Use Colorful Model**, click **OK** and restart the Control Center program for the mode to take effect.

This mode will only apply on **Live View** and **Matrix View**.

4.19 Changing Interface Style

The startup of Control Center is in a toolbar format and the operator may open a variety of windows to manage client hosts, such as Host List, Group List, Live View, Playback and IP Matrix. Now the operator may choose to open all these managing windows on one screen.

1. Click the **Configure** button and select **System Configure**. The System Configure dialog box (Figure 4-49) appears.

2. To change user interface, click the **Control Center Style** drop-down list and select one of these options:
    - **Advanced Style:** the toolbar format
    - **Standard Style:** the window format

3. Click **OK** and restart the Control Center for the new style to take effect.

The Standard Window

You can move freely any managing windows and resize them.

Drag and drop any camera from Host List to this Live View window.
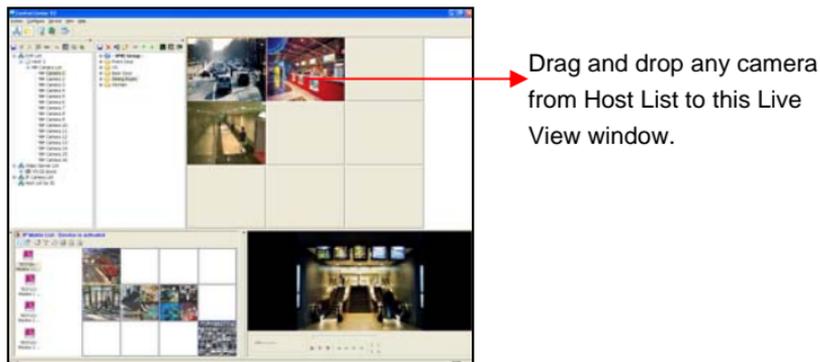
Figure 4-48

4.20 System Configuration

You can configure the startup mode and screen position for the Control Center services. Click the **Configure** button (No. 2, Figure 4-2), and select **System Configure** to display the following dialog box.

General Settings

Figure 4-49

[Startup]

- **Autorun When Windows Starts:** Automatically runs the Control Center at Windows startup.
- **Minimize when startup:** Automatically minimizes the Control Center toolbar to the taskbar when the Control Center is started.
- **I/O Central Panel:** Automatically runs the I/O Central Panel at Windows startup.

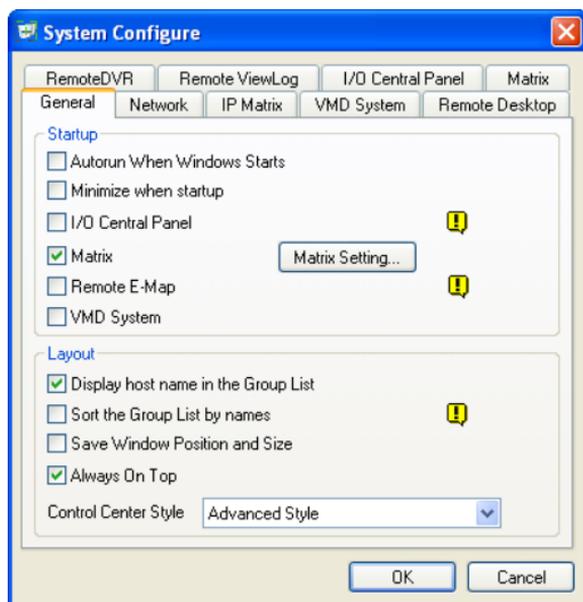- ■ **Matrix:** Automatically runs the Matrix View and displays up to 6 selected groups of cameras at startup. Click the **Setting** button to select the groups to be displayed.
- ■ **Remote E-Map:** Automatically runs the Remote E-Map at Windows startup.
- ■ **VMD System:** Automatically runs the VMD function at Windows startup.

[Layout]
- ■ **Display host name in the Group List:** Displays the individual camera's host name on the Group List.
- ■ **Auto sort group name in the Group List:** Automatically sorts the Group List alphabetically by group names. Note that the arrow buttons used to move the groups will not be available for use when this function is enabled.
- ■ **Save Window Position and Size:** Saves the position of the Control Center toolbar and the size of Host List and Group List. The position and size will be restored when the Control Center starts.
- ■ **Always On Top:** The Control Center toolbar always stays on the top of other windows.
- ■ **Control Center Style:** See *4.19 Changing Interface Style*.

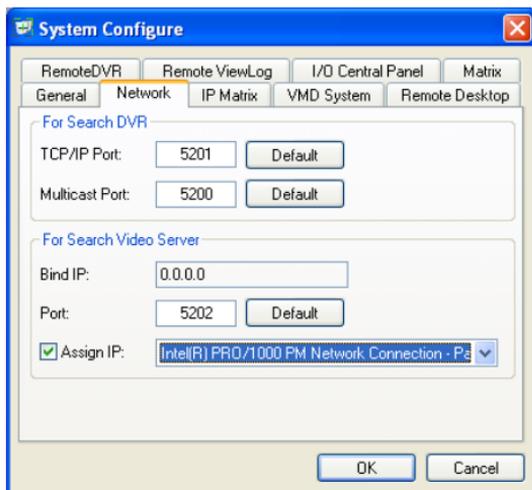## Network Settings

Figure 4-50

This dialog box displays the related ports for DVR and Video Server (The Video Server port is also used for IP Camera and Compact DVR communications). To allow the **Search Host** function (No. 1, Figure 4-2) to work, it is required to open TCP port 5201 on the client DVR, TCP port 5202 on the Video Server and Compact DVR, and UDP port 5200 on the Control Center.

Remote DVR Settings

Figure 4-51

[Panel Resolution] Sets the resolution of the Remote DVR panel.

[Position] When the screen resolution is set to higher resolution of wide screen, align the position of the Remote DVR window on screen. The position settings support negative coordinates, and corresponds to the XY coordinates in Windows Display Properties. Refer to Figure 4-55.

[Active Camera] Enable the desired cameras when the Remote DVR starts.

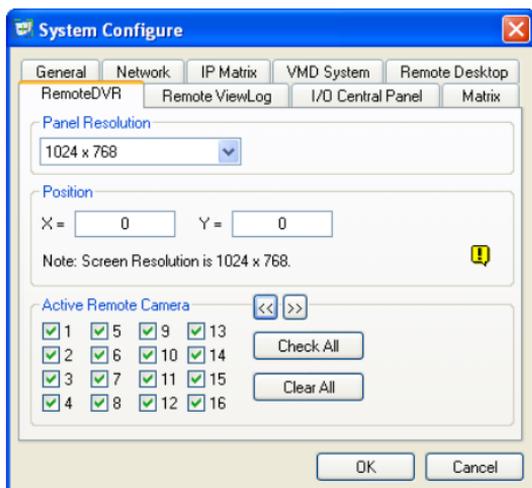## Remote ViewLog Settings
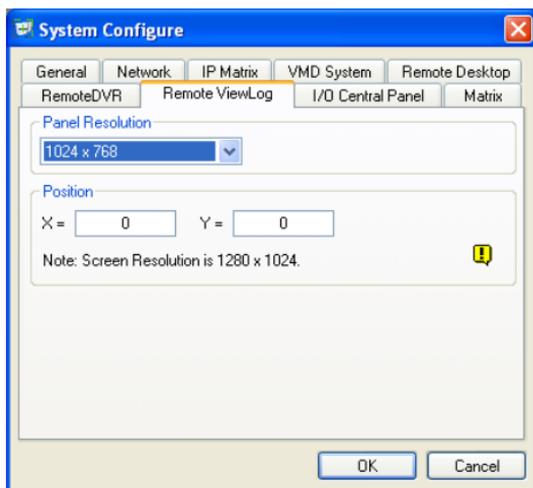
Figure 4-52

[Panel Resolution]   Sets the resolution of the Remote ViewLog panel.

[Position]   When the screen resolution is set to higher resolution of wide screen, align the position of the Remote ViewLog window on screen. The position settings support negative coordinates, and corresponds to the XY coordinates in Windows Display Properties. Refer to Figure 4-55.

I/O Central Panel Settings
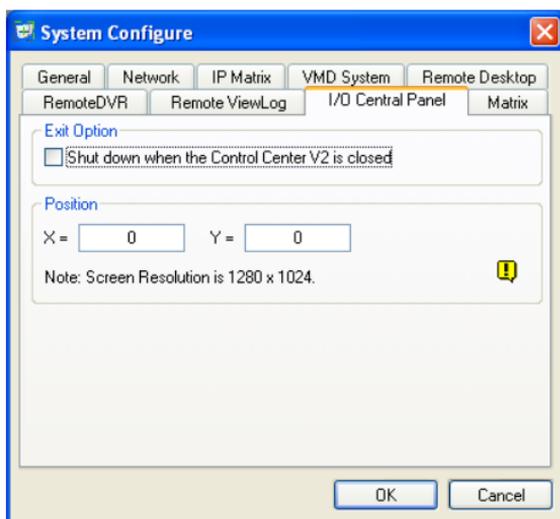
Figure 4-53

[Exit Option]   Automatically closes the I/O Central Panel when the Control Center is shut down.

[Position]   When the screen resolution is set to higher resolution of wide screen, align the position of the I/O Central Panel on screen. The position settings support negative coordinates, and corresponds to the XY coordinates in Windows Display Properties. Refer to Figure 4-55.

Matrix Settings
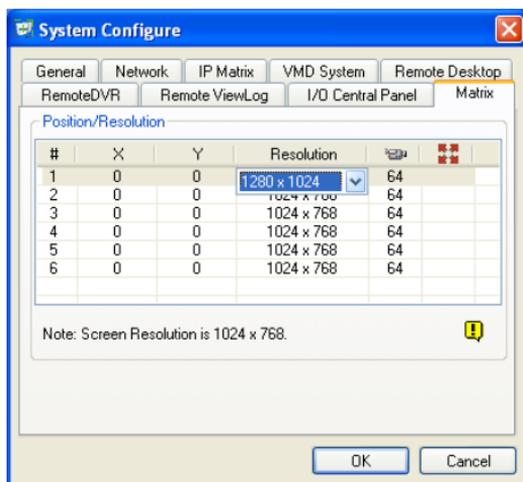
Figure 4-54

[Position / Resolution]   You can open up to four Matrix windows in one monitor or separate four monitors at a time.

■   **X / Y:**   Aligns the positions of up to six Matrix windows on screen. Type the position values in the X and Y columns. The position settings support negative coordinates, and corresponds to the XY coordinates in Windows Display Properties

■   **Resolution:**   Changes the Matrix resolution.

■   **:**   Indicates the maximum number of channels the Matrix window can display.

■   **:**   Check this column to set the full screen mode.

Tips: To set the X and Y values, you may refer to Windows Display Properties and check the position values of the set monitor icons. See Figure 4-55.

Figure 4-55

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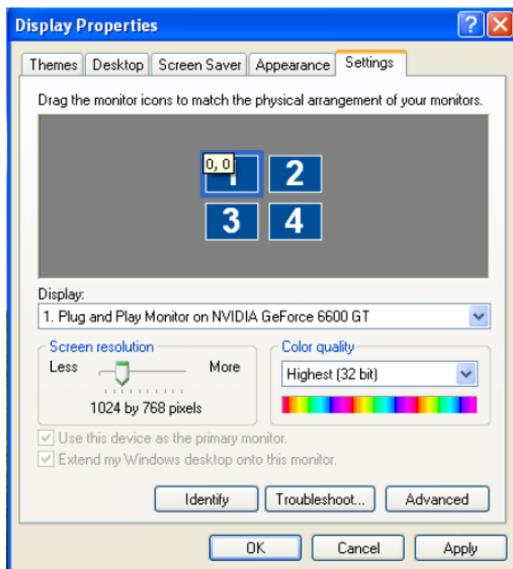
Remote Desktop Settings
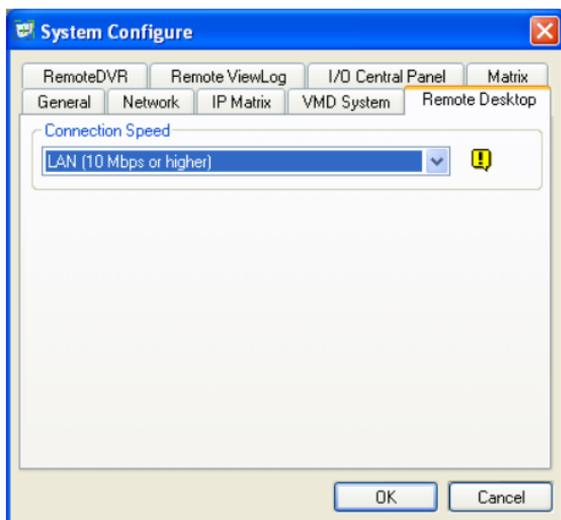
Figure 4-56

[Connection Speed]
Select the Internet connection speed to suit you needs: **Modem (56 Kbps)**,
Broadband (128 Kbps – 1.5 Mbps) or **LAN (10 Mbps or higher)**.

IP Matrix Settings
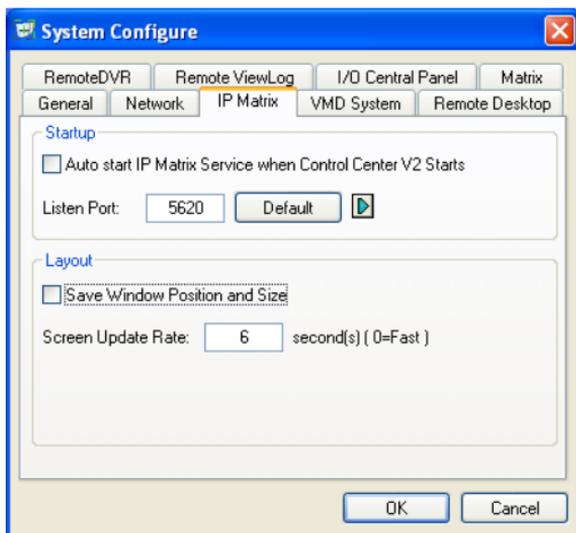
Figure 4-57

[Startup]   Runs the IP Matrix service when Control Center is started. The **Listen Port** setting corresponds to the **Port** setting in the IP Matrix Client dialog box. See Figure 4-21.

[Layout]   Saves the position and size of the IP Matrix window and restores it when the window is open. You can also specify **Screen Update Rate** for update frequency on all camera views.

VMD System Settings
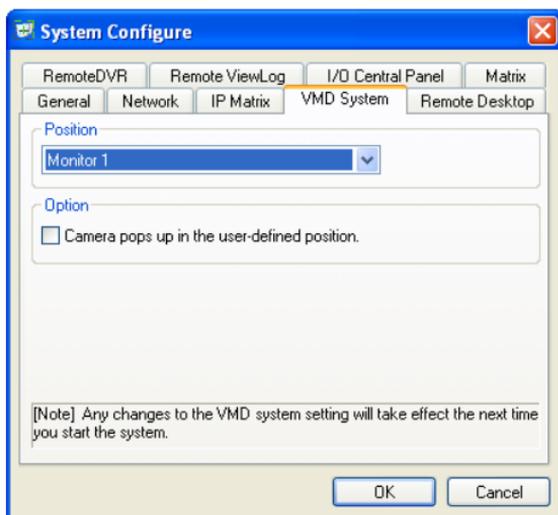
Figure 4-58

[Position] Sets one monitor to display the VMD window.

[Option] When the **Camera pops up in the user-defined position** option is enabled, the position of pop-up camera on the VMD window is based on the camera sequence in the VMD Group, e.g. if camera1 is listed as the third camera in the VMD Group, camera1 will pop up on the third square on the VMD window (the order of pop-up cameras is from left to right). When this option is disabled, the poison of pop-up camera is based on the sequence order of motion detection.

Chapter 5   GV-GIS

The GV-GIS is a GIS (Geographic Information System) based central management system for GeoVision devices.

The vehicle tracking and location verification remotely from the GV-GIS is made possible by the GPS receiver installed in GV-Video Server and GV-Compact DVR to constantly obtain the GPS data (vehicle coordinates and speed) from the satellite, and through mobile internet connection (e.g. UMTS, EDGE, GPRS, GSM, etc) to transmit the GPS data to the GV-GIS.

Besides real-time vehicle tracking, you can also monitor the location of cameras and the status of I/O devices from the DVR devices, without GPS functions.
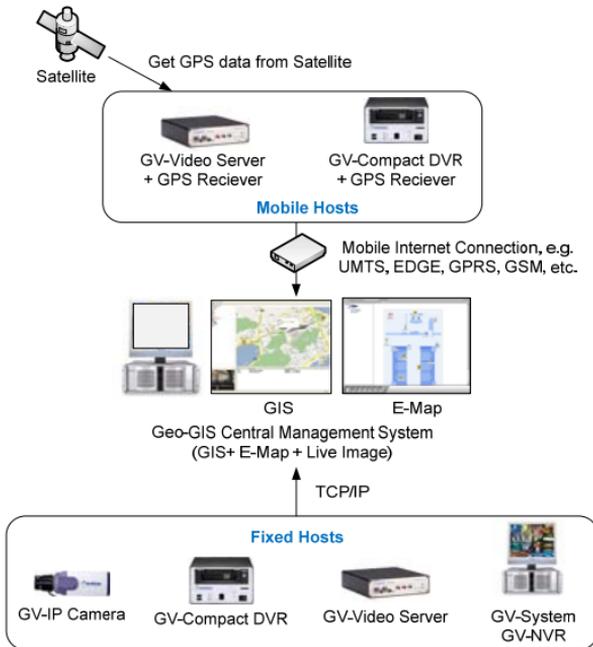
Figure 5-1

5.1 Features

- GIS central management system
- 500 vehicles tracking at one time
- Real-time vehicle GPS coordinates
- Real-time vehicle video image
- Google Maps, Microsoft Virtual Earth and user-defined maps support
- GPS Tracks playback
- Detour Detection
- Idle Speed Detection
- E-Map Support
- Motion and Input-triggered alert for fixed hosts
- Customized landmark (interested points) setting
- Integration with GV-Video Server, GV-Compact DVR, GV-IP Camera, GV-System and GV-NVR

5.2   System Requirements

1.   The minimum system requirements to run the GV-GIS:

Standard Version

	10 Mobile-Host Map Views	**10 Mobile-Host Map Views with up to 10 Megapixel Live Views**
OS	Windows 2000 / XP / Server 2003 / Vista	Windows 2000 / XP / Server 2003 / Vista
CPU	Pentium 4 3.0 GHz with HT	Core 2 Quad 2.4 GHz
Memory	2 x 512 MB Dual Channels	2 x 1 GB Dual Channels
VGA	ATI X700 256 MB	ATI X700 256 MB

Advanced Version (Up to 500 Mobile Hosts)

	16 Mobile-Host Map Views	**16 Mobile-Host Map Views with up to 16 Megapixel Live Views**
OS	Windows 2000 / XP / Server 2003 / Vista	Windows 2000 / XP / Server 2003/Vista
CPU	Pentium 4 3.0 GHz with HT	Intel Core 2 Quad 2.4 GHz
Memory	2 x 1 GB Dual Channels	2 x 1 GB Dual Channels
VGA	ATI X700 256 MB	ATI X700 256 MB

2.   DirectX 9.0C installed. Available from the software CD.
3.   Microsoft Internet Explorer 7.x.

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4. A GV-GIS dongle is required for the GV-GIS software to work.

    - **The primary USB dongle provides 10 vehicle connections. The number limit is 500 connections with the increment of 5 connections at a time.**

      Inform your sales representative the required number of vehicle connections so the dongle can be delivered upon your requirements. Otherwise, you can upgrade your primary dongle later by following the instructions in *Appendix B. Upgrading the Black Dongle.*

      For example, if you need 33 vehicle connections and already have a primary dongle, you can upgrade the primary dongle from 10 to 35 connections.

    - It is required to install drivers from the software CD for the USB dongle to work.

    Note: GV-GIS can run together with VSM (Vital Sign Monitor) in the same PC. For this integration, a Combo Dongle is required.

5.3   Overview of GV-GIS

Get yourself familiar with the Main Screen, Toolbar and Event List, as it will help you when you read further in the following sections.

Main Screen

Microsoft Virtual Earth is used as Map API (Application Program Interface) in this example.
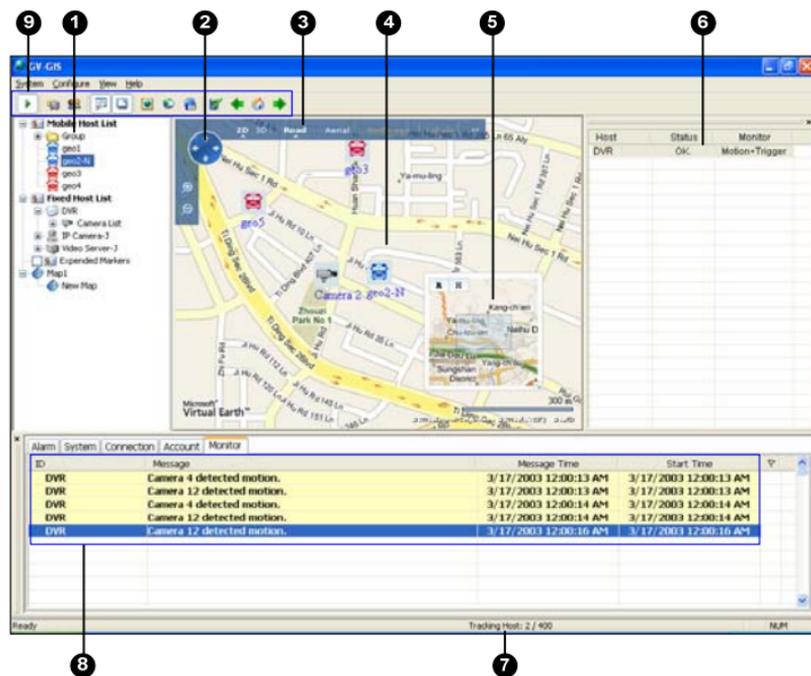
Figure 5-2

No.	Name	Description
1	Host List	Include these types of folders: Mobile Host List, Fixed Host List, Expended Markers, and New Map.
2	Navigation Controls	Use these to zoom, look and move around.
3	Views	Click these to display different views, including aerial images and street level imagery.
4	Map	This area displays the tracking map, E-Map and query results.
5	Overview Map	This view shows the location of current map view.
6	Monitor List	Activate monitoring of events of video motion and input trigger occurred at the fixed host. See *Detecting Motion and Input-triggered Events* in *5.8 System Configurations*.
7	Tracking Host Indicator	Indicate the connected mobile hosts. Take the picture Tracking Host: 3 / 50 as example. Three (3) mobile hosts are connecting to the GV-GIS while GV-GIS supports the maximum of 50 mobile hosts.
8	Event List	See *Event List* later.
9	Toolbar	See *Toolbar* later.
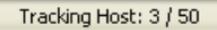
Toolbar

Figure 5-3

No.	Name	Description
1	Start/Stop Service	Start or stop the GV-GIS services.
2	System Configuration	Configure the system. See *5.8 System Configurations.*
3	Account	Configure host accounts. See *Creating Host Accounts* in *5.4 Getting Started.*
4	Event List	Open or close the Event List on the main screen.
5	Monitor List	Open or close the Monitor List on the main screen. See *Detecting Motion and Input-triggered Events* in *5.6 Monitoring Operations for Fixed Hosts.*
6	Event Log Browser	Search for log events. See *5.9 Event Log Browser.*
7	Range Query	Search for places and devices. See *Searching for Places and Devices* in *5.5 Tracking Operations for Mobile Hosts.*
8	Track List	Track addresses of multiple mobile hosts in real time. See *Tracking Multiple Hosts* in *5.5 Tracking Operations for Mobile Hosts.*
9	Map Setting	Configure the Idle Speed function and settings for E-Map icons. See *Detecting Idle Speed* in *5.5 Tracking Operations for Mobile Hosts* and *Creating an E-Map* in *5.7 Advanced Operations.*
10	Up One Level Map	Display the previous map.
11	Map Home	Display the tracking map.
12	Down One Level Map	Display the next map.

Event List

Figure 5-4

No.	Name	Description
1	Event Type	Include these types of events: **Alarm**, **System**, **Connection**, **Account**, and **Monitor**.
2	Message	Indicate associated information for each event type.
3	Selection Menu	Right-clicking a message in the Alarm, Connection and Monitor tabs allows you to instantly access some useful functions.
4	Message Time	Indicate when the GV-GIS receives an event.
5	Start Time	Indicate when an event happens at the host.
6	Flag	Flag an event for later reference.

5.4 Getting Started

Installing the GV-GIS

To install the GV-GIS program to your computer:

1. Insert the Software CD to your computer. It will run automatically and a window pops up.

2. Select **V8.3.0.0 Central Monitoring System**, select **GV-GIS** and follow the on-screen instructions.

3. The first-time user will be prompted for a License Agreement.

    Note "*The license of API is excluded from GeoVision products and you should apply for the license of the API by yourself in advance*."

    Read through the license terms before you click **I understand and agree** to continue.
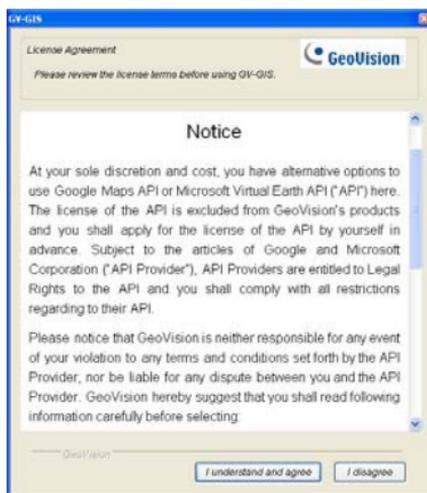
Figure 5-5

4. From the "Please Select a Map API" drop-down list, select a Map API (Application Program Interface). For Google Maps, you need to sign

up for an API key from Google website
(http://code.google.com/apis/maps/signup.html), and enter the API key
in the **Please enter the map authorization key or license key field**.
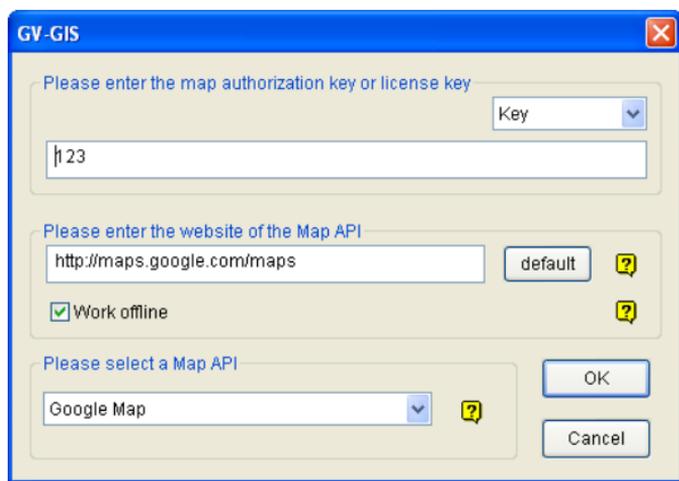
Figure 5-6

5. Click **Submit** to open the main screen.

Note:

1. Some GV-GIS features may not be available to your location depended on Maps API.

2. If you want to use the maps created by yourself, overwrite the files at :\GV-GIS folder\GIShtm-User, and select **User Defined** from the "Please Select a Map API" drop-down list.

3. If you are the paid-client of Google Maps, select **Client** from the "Please enter the map authorization key or license key" drop-down list; otherwise select **Key**.

Creating Host Accounts

Create host accounts for the DVR devices you wish to track and manage with the GV-GIS. The GV-GIS supports two types of hosts: **Mobile Host** and **Fixed Host**. Mobile hosts refer to those devices equipped with GPS receivers and installed in vehicles, while fixed hosts refer to those without GPS functions and installed at fixed locations.

A total of 500 mobile host accounts and 1,000 fixed host accounts can be created. The number of created accounts is displayed at the bottom of the Account window. Take the picture Total count: [Mobile Host: 5 / 500] [Fixed Host: 2 / 1000] as example. 5 out of 500 mobile host accounts have been created and 2 out of 1,000 fixed host accounts have been created.

Creating a Mobile Host

1. On the toolbar, click the **Account** button (No.3, Figure 5-3). The Account window appears.
2. Click the **Add A Group** button to create a group folder if necessary.
3. Click the **Add A Subscriber** button to create a host account.
4. Assign **ID** and **Password** for the host to log onto the GV-GIS.
5. Other information of the host such as Name, TEL, Mobile, Address and E-Mail are optional entries.
6. The **Visible Level in Map** option allows you to set the minimal zoom level of the host icon on the map. For example, if you set it to 14, you can only see the host icon on the map when zooming in to the level 14 or above. Setting the level to 0 makes the host icon always visible regardless of zoom level.

After creating host accounts, click the **Start/Stop Service** button (No.1, Figure 5-3) on the toolbar to start the GV-GIS service. Meanwhile, hosts must be configured and connected to the GV-GIS. See *Connecting Hosts to the GV-GIS* later for how hosts can log onto the GV-GIS.

Creating a Fixed Host

1. On the toolbar, click the **Account** button (No.3, Figure 5-3). The Account dialog box appears.

2. Click the **Add A Group** button to create a group folder if necessary.

3. Click the **Add A Fixed** Host button to create a host account.

4. In the dialog box,

   A. Name the host in the **Host ID** field and select a device type from the **Host Type** drop-down list.

   B. In the Connection Information section, type **IP Address**, **Login ID** and **Password** to log onto the host. Use the default communication ports, or modify port values if necessary.

   C. In the Device Information section, click the **Update Information** button to request the number of cameras and I/O modules installed from the host.

   D. If you want to disable the monitoring functions to certain cameras, click the **Camera Monitor Setting** button . For details, see *Detecting Monitor and Input-Triggered Events* in *5.6 Monitoring Operations for Fixed Hosts*.

   E. Subscriber Information and Note are optional entries

Figure 5-7

Note:

1. The **Visible Level in Map** option in the "Subscriber Information**"**
    section is to set the minimal zoom level of the host icon on the map.
    The same option in the "Device Information" section is to set the
    minimal zoom level of camera and I/O icons on the map. For details
    on the option, see step 6 in C*reating a Mobile Host* earlier in this
    chapter.

2. The communication ports of DVR (Command Port 3388, Data Port
    5611 and Log Port 5552) should match Control Center ports on that
    DVR.

After creating host accounts, some hosts must be configured and
connected to the GV-GIS. See *Connecting Hosts to the GV-GIS* later for
how hosts can log onto the GV-GIS.

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Connecting Hosts to the GV-GIS

You need to configure hosts in order to access the GV-GIS service remotely through a network connection.

Connecting a Mobile Host

To perform the GPS tracking remotely from the GV-GIS, first make sure a GPS receiver is connected to the mobile host and its GPS function is activated. Then, the mobile internet connection (e.g. UMTS) on the host must be activated so that the GV-GIS can access the GPS data through the connectivity. For details on GPS and mobile internet connection, see GV-Video Server or GV-Compact DVR User's Manual.

1. Open the configuration interface of the GV-Video Server or GV-Compact DVR, and select **GV-GIS**.

Figure 5-8

2. Select **Activate Link**.
3. Type IP address or domain name of the GV-GIS.
4. Keep **Port number** as default, or change it if necessary.

5. Type **User Name** and **Password** used to log onto the GV-GIS. These entries must match ID and Password created on the GV-GIS. See *Creating Host Accounts* earlier in this chapter.

6. Click **Apply** to start connection.

When the connection is established between the mobile host and GV-GIS, a message "Status: Connected. Connected Time: xxx" will be displayed at the bottom of the configuration page.

Connecting a Fixed Host

- **GV-System, GV-NVR:** To establish the connection, activate the **Control Center Service**.
- **GV-Video Server, GV-Compact DVR, GV-IP Camera:** It is not required to set up these fixed IP devices for connection.

5.5 Tracking Operations for Mobile Hosts

You can track locations of mobile hosts in real time.

Starting the Tracking Services

After the GV-GIS service is started, drag the mobile host icon to the map. Since the host is GPS-enabled, the host icon will automatically move to its correct location on the map.

Tracking Features

On the map or the Mobile Host List, right-click the mobile host icon to have these tracking features:
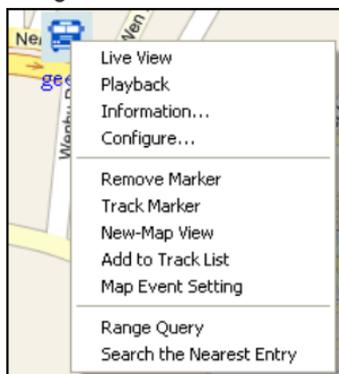
Figure 5-9

Feature	Description
Live View	Display live view. See *Viewing Live Video* in *5.5 Tracking Operations for Mobile Hosts.*
Playback	Play back the GPS tracks recorded at the mobile host. *See Playing Back GPS Tracks* in *5.5 Tracking*

	Operations for Mobile Hosts.
Information	Display the host information.
Configure	Link to the configuration interface of the mobile host, such as GV-Video Server and GV-Compact DVR.
Remove Marker	Remove the host icon from the map.
Track Marker	Always keep the host icon staying at the center of the map when the vehicle moves. A yellow block similar to the following figure will be displayed on the map. Clicking the yellow block will stop the host tracking. **Pause**(Track Marker: geo3)
New-Map View	Track the host in a separate window. See *Tracking Multiple Hosts* in *5.5 Tracking Operations for Mobile Hosts.*
Add to Track List	Create a Track List to track multiple hosts. See *Tracking Multiple Hosts* in *5.5 Tracking Operations for Mobile Hosts.*
Map Event Setting	Define a range or route to detect detours. See *Detecting Detours* in *5.5 Tracking Operations for Mobile Hosts.*
Range Query	Search for places and devices. See *Searching for Places and Devices* in *5.5 Tracking Operations for Mobile Hosts.*
Search the Nearest Marker	Allow you to search for a desired host or marker. The GV-GIS will display a route and provide step-by-step directions from the host to that target. Note that depending on Maps API, this feature may not be available for your location.
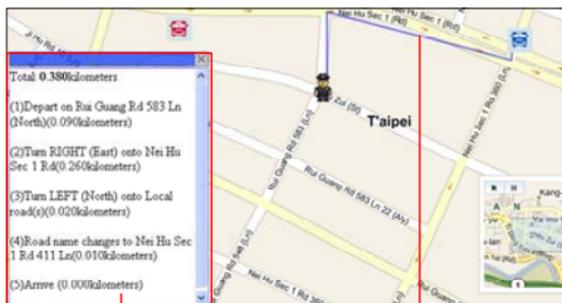
The window provides the estimated distance and step-by-step directions.

The blue line provides the possible route from the selected host to the target.

Viewing Live Video

To view live video, right-click one host or camera icon and select **Live View**.

Figure 5-10

The buttons on the Live View window:

No.	Name	Description
1	Change Camera	Switch to another camera of the same host.
2	Change Size	Include these options: ■ **Sizes:** Changes the size of the live video. The size corresponds to the video resolution set at the host. ■ **PIP View:** Refers to Picture in Picture. You can zoom in on the video. ■ **PAP View:** Refers to Picture and Picture. You can create a split video effect with multiple close-up views on the video.

3	Audio	Access the audio from the host.
4	Microphone	Activate speaking to the host. A microphone must be installed properly in the computer.
5	Setting	Change the audio and video settings.
6	PTZ	Activate the PTZ control.
7	Visual Automation	Allow you to change the current state of an electronic device, e.g. light ON, by clicking on its image directly. The function is only available when the same function is set at the host.
8	Snapshot	Take the snapshot of the image.
9	Zoom	Enlarge the video by selecting 1.0x, 2.0x and 3.0x.

Playing Back GPS Tracks

You can play back the GPS tracks recorded on the mobile host.

1. Right-click a mobile host and select **Playback**. This dialog box appears.
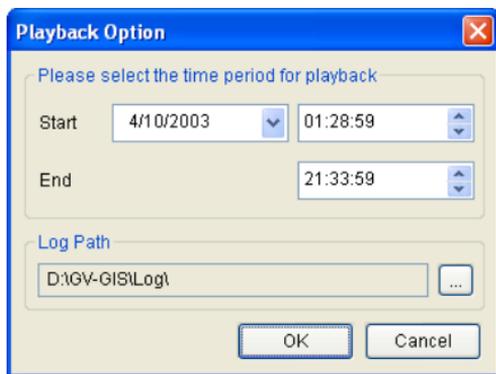
Figure 5-11

2. Specify the date and time period of the recorded tracks. Keep the default log path C:\GV-GIS\Log, or modify it if necessary. Then click **OK**. The Playback window appears.

Figure 5-12

3. Click the **Play** button to start.

4. Select **Show Route** if you want each GPS track to be drawn as a solid line. Select **Show Directions** to display a direction icon for every GPS track in the map.

5. Select **Instant Playback** if you want to retrieve recorded video from the mobile host. A valid ID, Password, IP address and Port number are required to log onto the host. For detailed playback operations, see *Retrieving Recorded Video* in *5.6 Monitoring Operations for Fixed Hosts*.

Tracking Multiple Hosts

The GV-GIS can track locations of multiple mobile hosts on the graphical map and provide a list of street addresses in real time.

Tracking Locations

You can track the locations of up to 16 mobile hosts simultaneously in separate windows or a single window.
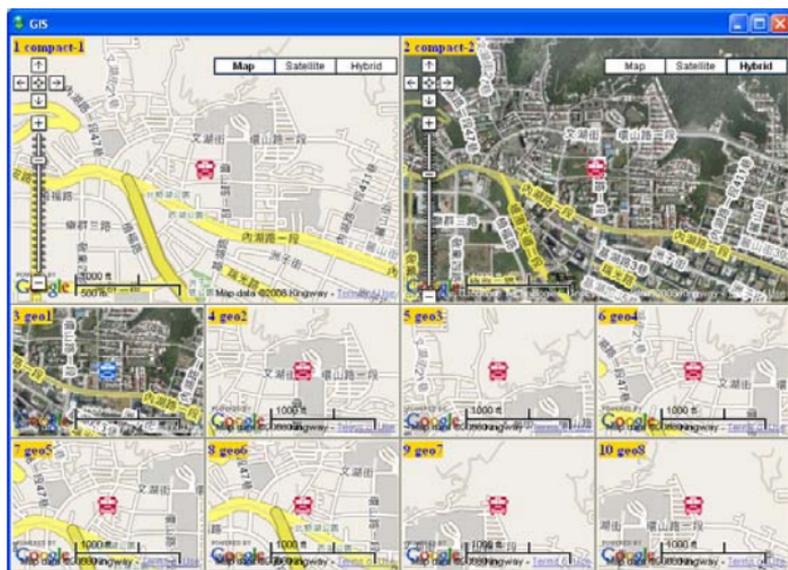
Figure 5-13   A single window

1.   On the map or the Mobile Host List, right-click the desired mobile hosts, and select **New-Map View** to start tracking.

2.   By default, the tracked hosts are displayed in separate windows. To display all of them on a single window, click the **System Configuration** button (No. 2, Figure 5-3) on the toolbar and change

Multi-Map Style from Multiple Windows Mode to Single Window
Mode.

3. Right-clicking on the displayed window can have the options of
    changing map type, zooming in, zooming out, or setting the host as the
    tracking target on the main screen (the **Exchanged with main screen**
    option).

Tracking Addresses

You can track street addresses of multiple mobile hosts in real time.

Figure 5-14

1. On the map or the Mobile Host List, right-click a group or a mobile host,
    and select **Add to Track List**. The Track List appears.

2. To add another group or mobile host, keep the Track List open. Then
    right-click that group or host, and select **Add to Track List**.

3. Use **Update Frequency** to select how often the GV-GIS will update
    the GPS data.

4. Minimize or close the Track List. Click the **Track List** button (No 8.
    Figure 5-3) on the toolbar can restore the List anytime.

Detecting Detours

A detour message will be generated in the Alarm tab of Event List when the vehicle moves out of the defined area and planned route.

To access this function, right-click a mobile host and select **Map Event Setting**.
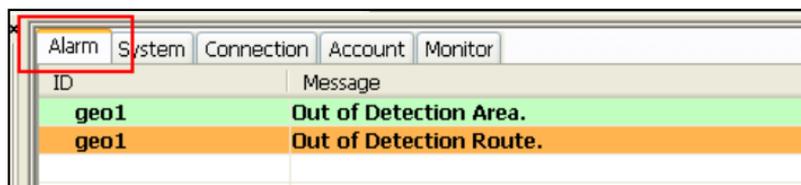
Figure 5-15 *Detour Messages*

Defining a Detection Area

1. Select **Set Detection Area** on the left panel. This window appears.
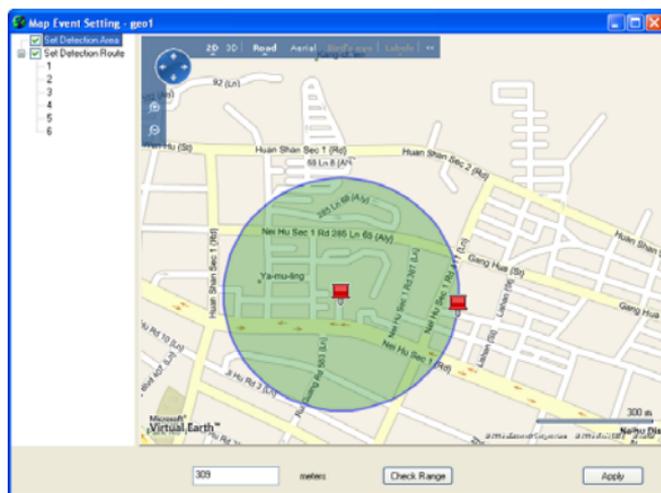
Figure 5-16

2.   To define the detection range, follow one of these ways:

   A.   Specify the radius distance from the mobile host in meters or
        feet. Clicking **Check Range** will display a circular area on the
        map based on your specification.

   B.   Use the markers to move, increase or decrease the detection
        area.

3.   Click **Apply**.

When the mobile host moves out of the defined area, the message "Out of
Detection Area" will appear in the Event List. When the mobile host moves
in the defined area, the message "Within the Detection Area" will be
displayed.

Planning a Detection Route

1.   Select **Set Detection Route** on the left panel. This window appears.
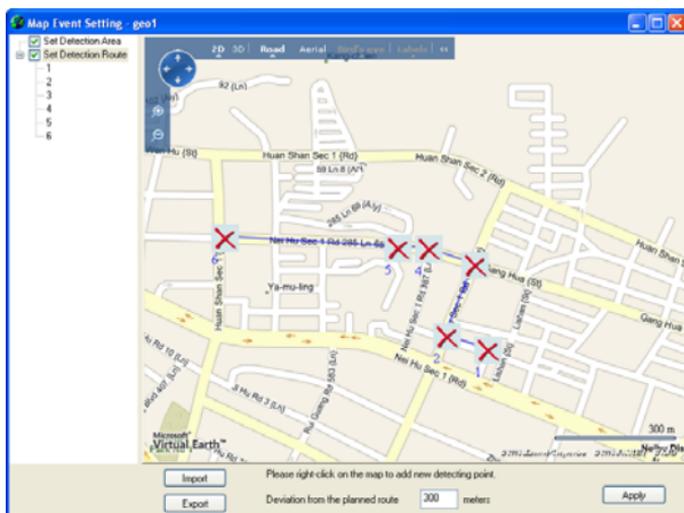
Figure 5-17

2. To plan your route, right-click on the map to set markers. Take the above figure as example. Six markers are set in the planned route.

3. In the **Deviation from the planned route** field, specify the maximum distance in meters or feet that allows the mobile host to deviate from the planned route to any distance.

4. You can click **Export** to save the settings to another location, or **Import** to apply the pre-defined route to the mobile host.

5. Click **Apply**.

When the mobile host moves out of the planned route, the message "Out of Detection Route" will appear in the Event List. When the mobile host moves in the planned route, the message "Within the Detection Route" will be displayed.

Viewing a List of Detour Settings

You can view a complete list of detour settings configured to the mobile hosts. On the menu bar, click **View** and select **Map Event List**. This dialog box will appear. The symbol "O" indicates the Detection Area or Detection Route has been configured on the host; otherwise, the symbol "X" will be used.

ID	Area	Route
geo1	O	X
geo2-N	X	O
geo3	O	X
geo4	O	O
geo5	O	O

Figure 5-18

Searching for Places and Devices

You can search for any devices and places within a defined area.

1. Right-click on the map, and select **Range Query**. The Range Query dialog box appears and a circular search area is displayed on the map too.
2. To define the search area, you have two options.

    Option 1: Directly drag the markers on the search area.

    *   Use the marker at the center of the search area to move the circle to the appropriate location. Use the marker at the rim of the search area to increase or decrease the search range.
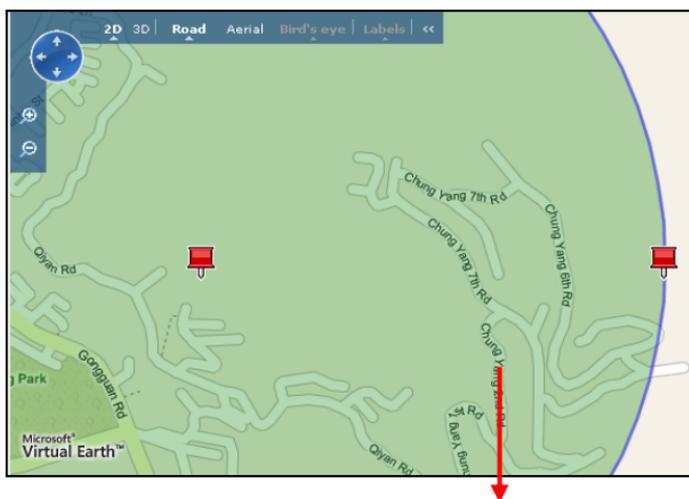
Circular search area on
the Microsoft Virtual

Figure 5-19

Option 2: Customize the settings in the Range Query dialog box.

You can use one of these methods to define the search area:

- Specify the latitude and longitude of the center of the search area, or the address of the center. Click **Move to** to move the circular area to your specified location.

Figure 5-20

Note: To search for an address, use these formats for addresses: "Address, city, state" or "Address, city, ZIP"

- Specify the speed of the vehicle in kilometers or miles per hour and the time in minutes the vehicle might travel. Click **Check Range** to display the range of the search area on the map based on your specification.

Figure 5-21

- Specify the radius of the search area in meters or feet. Click
  Check Range to display the range of the search area on the map
  based on your specification.
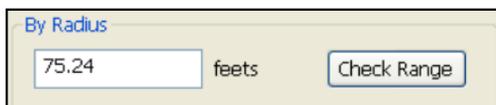
Figure 5-22

3. Select the type of device or place you are looking for.
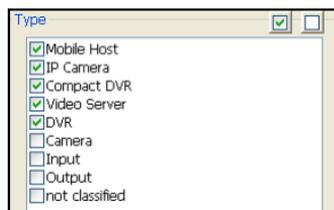
Figure 5-23

4.   Click **Query** to display search results.
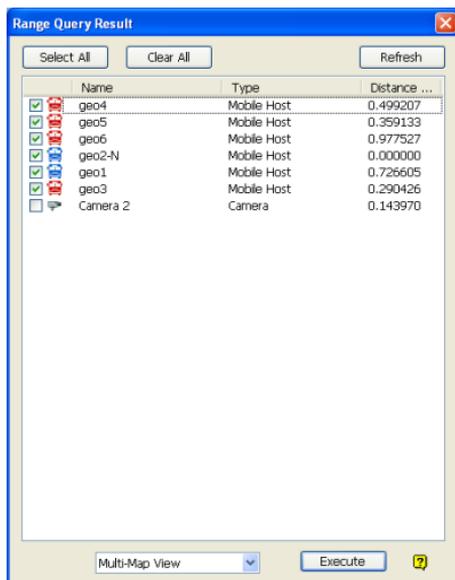
Figure 5-24

5.   Double-clicking any found device or place can bring it to the center of the map.

6.   If you want to track the found mobile hosts, select those hosts and click **Execute** to start tracking.

Note: The tracked mobile hosts are displayed in separate windows by default. If you want to display all tracked hosts in a single window, change **Multi-Map Style** in *5.8 Layout Settings.*

![GeoVision logo]

Detecting Idle Speed

An idle speed message will be generated in the Alarm tab of Event List
when any vehicle does not cover the required distance in the given time.
For example, you set a threshold that every vehicle should cover a distance
of 1 km in 5 minutes. When one vehicle only covers 0.75 km in 5 minutes,
the alert message will appear.

Figure 5-25   Idle Speed Message

1.   Click the **Map Setting** button (No.9, Figure 5-3) on the toolbar. This
      dialog box appears.
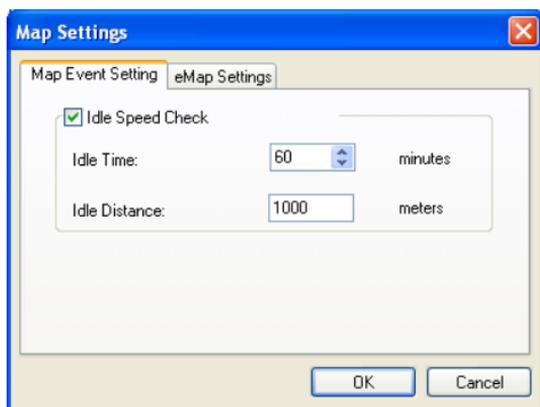
Figure 5-26

2.   Select **Idle Speed Check** to activate the settings.
3.   In **Idle Time**, specify the time threshold.

4. In **Idle Distance**, specify the distance threshold.

5. Click **OK**.

When any mobile host does not cover the specified distance in the given time, the message "*Idle Speed is detected*" will appear in the Event List. When the detected mobile host meets the threshold, the message "*Speed threshold is met*" will be displayed.

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5.6 Monitoring Operations for Fixed Hosts

You can monitor the location of a fixed host without GPS.

Starting the Monitoring Services

1. Drag the **Fixed Host**, **Camera**, **Input** and **Output** icons to their appropriate positions on either the tracking map or the created E-Map for live monitoring. For details on the E-Map, see *Creating an E-Map* in *5.7 Advanced Operations.*

2. You can monitor the fixed host for the alert events of video motion and input trigger. Whenever movement occurs in the images or the input device is triggered, the alert message will be generated in the Event List and the related icons will start blinking on the Host List and map to alert you. See *Detecting Motion and Input-Triggered Events* in *5.6 Monitoring Operations for Fixed Hosts*.

Monitoring Features

On the map or the Fixed Host List, right-click the Fixed Host, Camera and
Output icons to have these monitoring features:

Fixed Host Icon
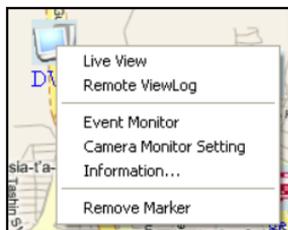
Figure 5-27

Feature	Description
Live View	Display live view. See *Viewing Live Video* in *5.5 Tracking Operations for Mobile Hosts*.
Remote ViewLog	Play back video recorded at the fixed host. See *Retrieving Recorded Video* in *5.6 Monitoring Operations for Fixed Hosts*.
Event Monitor	Activate event monitoring. See *Detecting Motion and Input-Trigger Events* in *5.6 Monitoring Operations for Fixed Hosts*.
Camera Monitor Setting	Disable the monitoring functions to certain cameras. See *Detecting Motion and Input-Trigger Events* in *5.6 Monitoring Operations for Fixed Hosts*.
Information	Display the host information.
Remove Marker	Remove the host icon from the map.

Camera Icon
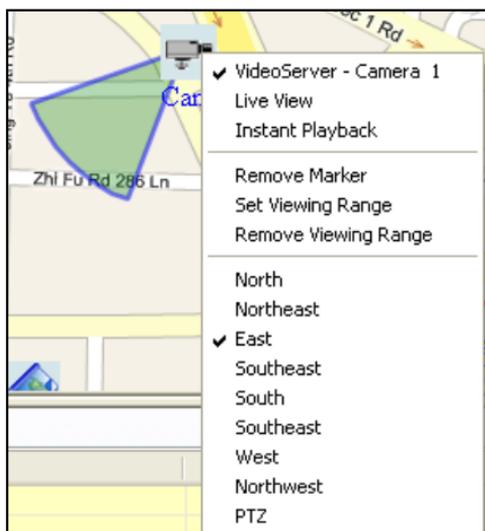
Figure 5-28

Feature	Description
Live View	Display live view. See *Viewing Live Video* in *5.5 Tracking Operations for Mobile Hosts*.
Instant Playback	Play back video recorded at the fixed host. See *Retrieving Recorded Video* in *5.6 Monitoring Operations for Fixed Hosts*.
Remove Marker	Remove the camera icon from the map.
Set Viewing Angle	Set the viewing angle of the camera.
Direction Options	Set the direction where you want the camera icon to point to, e.g. north, east and etc.
PTZ	Change the camera icon to the PTZ icon.

Output Icon
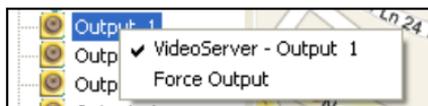
Figure 5-29

Feature	Description
Force Output	Remotely trigger the output device installed at the fixed host.

Detecting Motion and Input-Triggered Events

An alert message will be generated in the Monitor tab of Event List after video motion is detected and input device is triggered at the fixed host. Meanwhile, the related Camera and Input icons will start blinking to alert the user.

1. Right-click a fixed host to be monitored, and select **Monitor Event**. The fixed host is displayed in the Monitor List. If the List does not appear on the main screen, click the **Monitor List** button (No. 5, Figure 5-3) on the toolbar.

2. If you want to disable the monitoring functions to certain cameras, right-click the fixed host, select **Camera Monitor Setting** and clear the selections of those cameras.

3. In the Monitor List, click on the **Monitor** column. Select **Motion** to generate an alert message whenever movement occurs in the images, select **Trigger** to generate an alert message whenever the input device is triggered, or select **Motion + Trigger** to generate both types of alert messages.
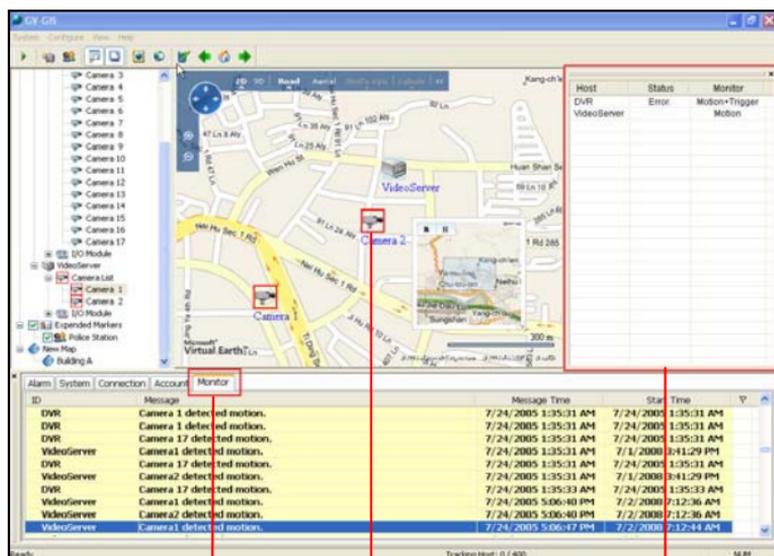
Event List   Blinking Icon   Monitor List

Figure 5-30

Retrieving Recorded Video

Recorded video can be reviewed by retrieving the video from the fixed host. There are two playback options:

1. **Instant Playback:** Plays back the recorded video of a desired camera up to 5 minutes.
2. **Remote ViewLog:** Plays back the recorded video of a desired fixed host.

Note: GV-IP Camera does not support the playback function.

Instant Playback

Before you can review video recorded on the fixed host, the following functions must be enabled to allow remote access:

- **DVR:** Enable **Remote ViewLog Service** on Control Center Server and activate recording.
- **Video Server, Compact DVR:** Enable the **Remote ViewLog** function and activate the recording.

To retrieve recorded video, right-click the Camera icon and select Instant Playback. If recorded video exits, the playback window will be activated and playback will start.
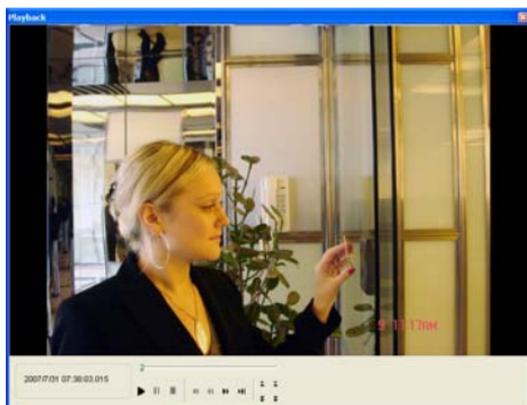
Figure 5-31

Right-click the window to have the following features:

Play Mode	Includes these options:
	• **Frame by Frame:** Play back video frame by frame.
	• **Real Time:** Play back video on real time. This mode saves waiting time for rendering, but drop frames to give the appearance of real-time playback.
	• **Auto Play Next 5 Minutes:** Play back video up to 5 minutes.
	• **Audio:** Turn on or off the video sound.
Render	Includes these options:
	• **Deinterlace:** Convert the interlaced video into non-interlaced video.
	• **Scaling:** Smoothen mosaic squares when enlarging a playback video. And apply colorful mode to enhance the coloring.
	• **Deblocking:** Remove the block-like artifacts from low-quality and highly compressed video.
	• **Defog:** Enhance image visibility.
	• **Stabilizer:** Reduce camera shake.

	• **Text overlay's camera name and time:** Overlay camera name and time onto the video. • **Text overlay's POS/GV-Wiegand:** Overlay POS or GV-Wiegand Capture data onto the video. • **Full Screen:** Switche to the full screen view.
Tools	• **Snapshot:** Save an image. • **Save as AVI:** Save a video as avi format. • **Download:** Download the video file from the fixed host to the local computer.

Remote ViewLog

Before you can review video recorded on the fixed host, the following functions must be enabled to allow remote access:

- **DVR:** Enable **Remote ViewLog Service** on Control Center Server.
- **Video Server, Compact DVR:** Enable the **Remote ViewLog** function.

To use the Remote ViewLog player, it is required to install the Remote ViewLog program from the software CD to your GV-GIS computer.

Right-click the fixed host and select **Remote ViewLog**. The Remote ViewLog player will appear. Select the desired camera and video event to start playing. For detailed functions of the player, see *Chapter 4 Playing Back Video Files*, *User's Manual* on Surveillance System Software CD.

If the player does not appear, click **Configure** on the menu bar, select **System Configuration**, click the **Remote ViewLog** tab, and verify the path of the installed Remote ViewLog program. See *Remote ViewLog Settings* in *5.8 System Configurations.*

5.7 Advanced Operations

Creating an E-Map

The E-Map allows you to import a floor plan in BMP, GIF and JPG formats, and use the icons of cameras and I/O devices to edit an electronic map according to your requirements. When the cameras and I/O devices are triggered at the host, the related icons will blink to alert you.

Figure 5-32

1. On the host list, right-click **New Map** and select **Add Map**. A new Map folder is created.

2. Name the map folder, and click it to open.

3. Right-click the created map folder and select **Load Map** to import a graphic file.

4. Drag and drop the icons of cameras and I/O devices from the fixed host onto the map.

5. You can set the direction where you want the camera to point to, and change the camera icon into the PTZ camera icon by right-clicking a camera icon.

6. You can also drag the created E-Map icon from the host list to the correct location on the tracking map.

Note: The icons of cameras and I/O devices are used on either the tracking map or the E-Map.

Configuring E-Map Icon Settings

You can set options for the E-Map icon. Click the **Map Setting** button (No. 9, Figure 5-3) on the toolbar and click the **E-Map Settings** tab. This dialog box appears.
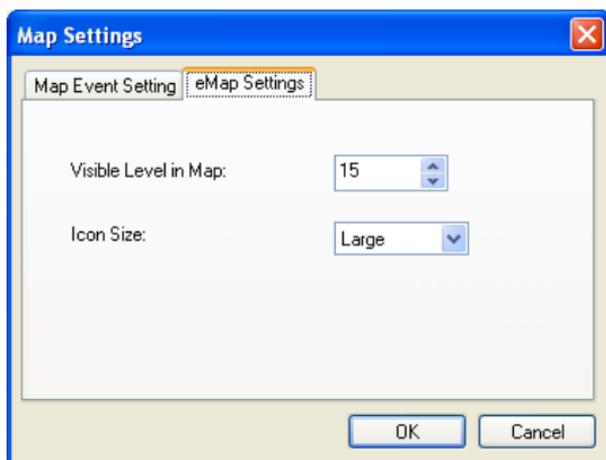
Figure 5-33

■   **Visible Level in Map:** Set the minimal zoom level of the E-Map icon on the tracking map. For example, if you set it to 14, you can only see

the E-Map icon on the tracking map when zooming in to the level 14 or above. Setting the level to 0 makes the E-Map icon always visible regardless of zoom level.

■ **Icon Size:** Set large or small icons on the E-Map.

Adding a Place

You can add a place marker of business or point of interest to the map.

1.   On the host list, right-click **Expended Markers** and select **Add Marker**. This dialog box appears.
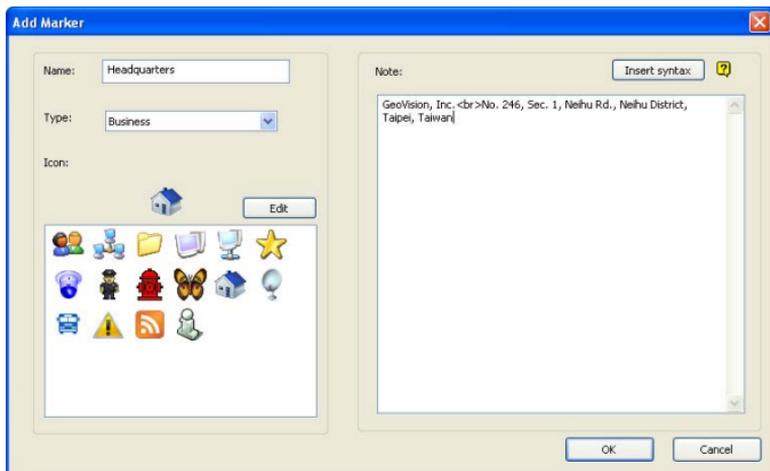
Figure 5-34

2.   Name the place marker and select the icon.
3.   Optionally, you can select **Type** if available and enter the details in the **Note** field to describe the place.
4.   If you want to add a photo to describe the place, click **Insert Syntax** and select **Insert Image**. This dialog box appears. Click **Search** to locate the image path and name the image.

Insert Image

Name

GeoVision Logo

The website or file path

C:/Documents and Settings/test-85/Desktop/geovision.bmp

[Search]   [OK]   [Cancel]
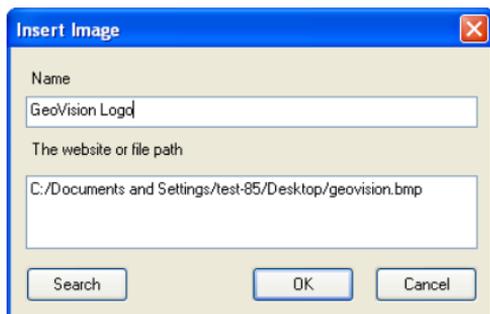
Figure 5-35

5. If you want to add a web link to describe the place, click **Insert Syntax** and select **Hyper Link**. The dialog box similar to Figure 5-35 appears. Name and enter a web address.

6. After above settings, drag the created marker to the correct location on the map.

When you click the marker, you should see the information you added to describe the location.

Saving a View

You can save a view of interest by creating a view marker. Every time when you click on the view marker, the map will return to the saved view.

1. Adjust the map to the desired view and zoom level.

2. On the host list, right-click **Expended Markers** and select **Add Map View Region**.

3. Name the view, select one icon, and click **OK**.

4. If you want to change the saved view, adjust the map to the desired view and zoom level, right-click the view marker and select **Update Region**.

Getting Driving Directions

You can get the step-by-step driving directions. This feature may not be available to your location depended on Maps API.

1. Right-click on the map, and select **From** to set the starting point.

2. Right-click on the map, and select **To** to set the stop where you want to go before reaching to the final destination. You can configure multiple stops.

3. Right-click on the map, and select **Destination** to set the destination. A possible route and step-by-step directions are displayed.
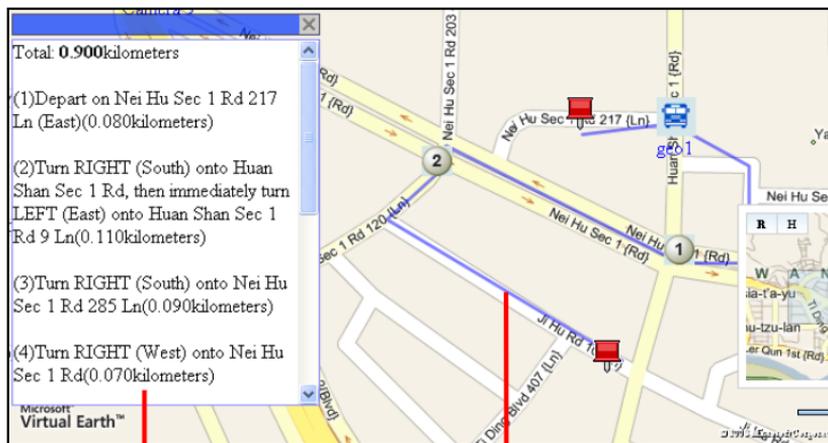
The window provides the estimated distance and step-by-step directions.

The blue line displays your possible route.

Figure 5-36

5.8   System Configurations

To configure the GV-GIS system, click the **System Configuration** button
(No. 2, Figure 5-3) on the toolbar.

Layout Settings
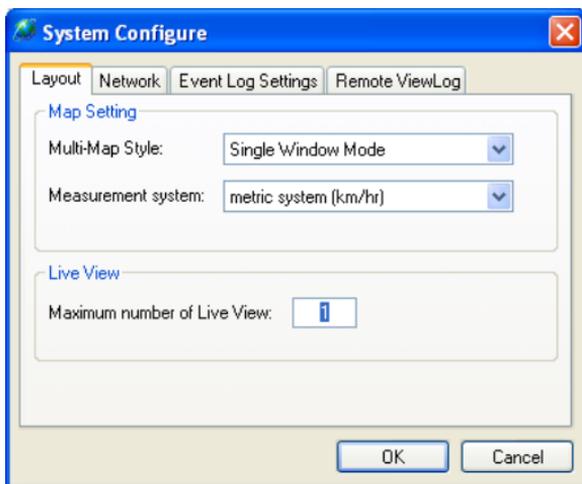
Figure 5-37

- ■ **Multi-Map Style:** Select **Multiple Window Mode** to display tracked
  hosts in different windows; select **Single Window Mode** to display all
  tracked hosts in the same window. See *Tracking Multiple Hosts* in *5.5
  Tracking Operations for Mobile Hosts*.

- ■ **Measurement system:** Select imperial or metric measurements.

- ■ **Maximum number of Live View:** Specify the maximum number of
  the Live View window displayed on the screen between 1 and 16.
  See *Viewing Live Video* in *5.5 Tracking Operations for Mobile Hosts*.

C GeoVision

Network Settings
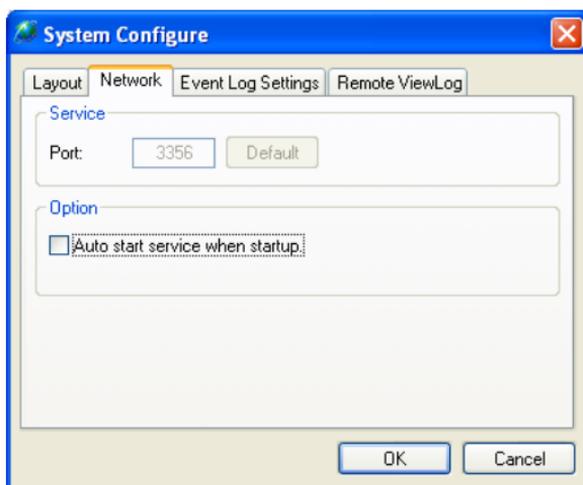
Figure 5-38

- ■ **Port:** The default communication port is 3356.

- ■ **Auto start service at Windows startup:** Automatically start the GV-GIS services at Windows startup.

Event Log Settings
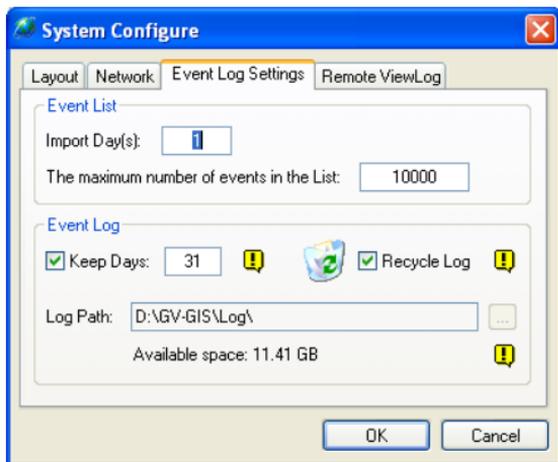
Figure 5-39

[Event List]

■ **Import Day(s):** Specify the logs of the number of days to be loaded when the Event List (No. 8, Figure 5-2) is opened. The number is between 1 and 7 days.

■ **The maximum number of events in the List:** Specify the maximum number of events displayed in the Event List. The number is between 500 and 500000.

[Event Log]

■ **Keep Days:** Select this option and specify the number of days to keep logs. Cleaning this option can keep logs for an unlimited period of time unless the disk space is full or the Recycle function is activated.

■ **Recycle Log:** Selecting this option will cause the oldest files to be deleted when the storage space is lower than 500 MB.

■ **Log Path:** Indicate the saved location of logs.

Remote ViewLog Settings
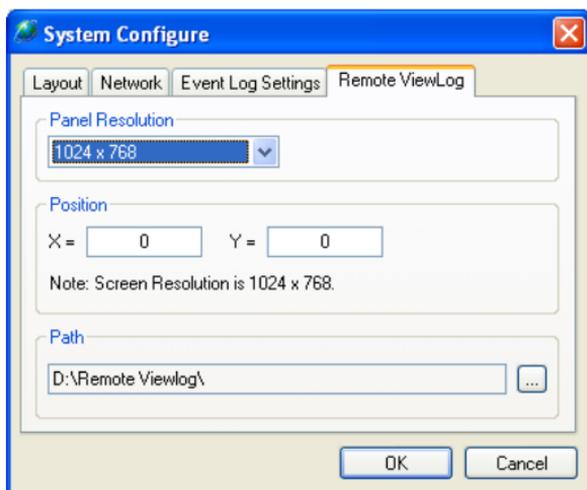
Figure 5-40

[Panel Resolution] Select the panel resolution of the Remote ViewLog player.

[Position] Set the position of the Remote ViewLog player on screen. The position settings support negative coordinates and correspond to the XY coordinates in Windows Display Properties.

[Path] Specify the saved location of the Remote ViewLog program.

Colorful Mode

You can enhance the coloring of live video to have more vivid and saturated images. Click the **Configure** button from the menu bar, select **DirectDraw Configuration,** select **Use Colorful Mode,** and restart the GV-GIS program for the mode to take effect.

5.9 Event Log Browser

The GV-GIS records the events in four types of logs: Alarm, System, Connection, Account and Monitor. With the event logs in the Event Log Browser, you can obtain information about tracking alarms, system activities, host connectivity, account changes and monitored events. On the toolbar, click the Event Log Browser button to start.

Figure 5-41

The buttons on the Event Log Browser:

No.	Name	Description
1	Open	Open an event log. See *Opening the Event Log* later.
2	Reload	Refresh the event log manually
3	Filter	Define the search criteria. See *Filtering the Event Log* later.
4	Refresh the Filter Result	Refresh the filter results.
5	Backup	Export the current event list. See *Backing Up the Event Log* later.
6	Page Setup	Create a header and footer for the printout

		of the event list. See *Printing the Event Log* later.
7	Print	Print the current event list.
8	Exit	Exit the browser.
9	Log Tab	Click the log tabs of Alarm, System, Connection and Account to get the related log events.

Opening the Event Log

To open the log data, follow these steps:

1. Click the **Open** button (No. 1, Figure 5-41). This dialog box appears.
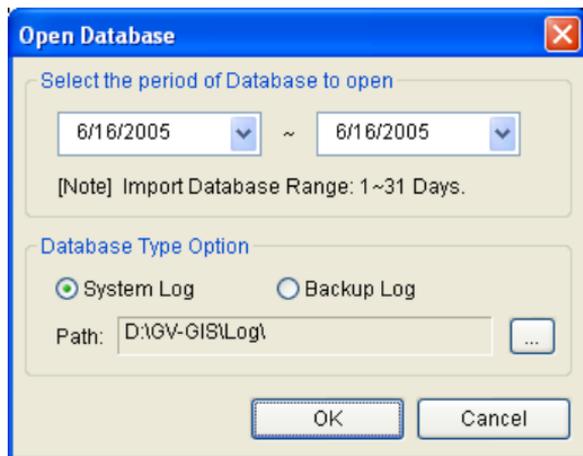
Figure 5-42

2. Specify a time period and select the type of database. If you want to open the logs created by the system, select **System Log**; if you want to open the logs you have backed up in a local drive or CD/DVD, select **Backup Log**. Then assign the log path.
3. Click **OK**. The events matching the search criteria are displayed in the Event Log Browser.

For details on backing up logs, see *Backing up the Event Log* later.

Filtering the Event Log

You can filter log events on defined criteria.

1. Click the **Filter** button (No. 3, Figure 5-41). This dialog box appears.
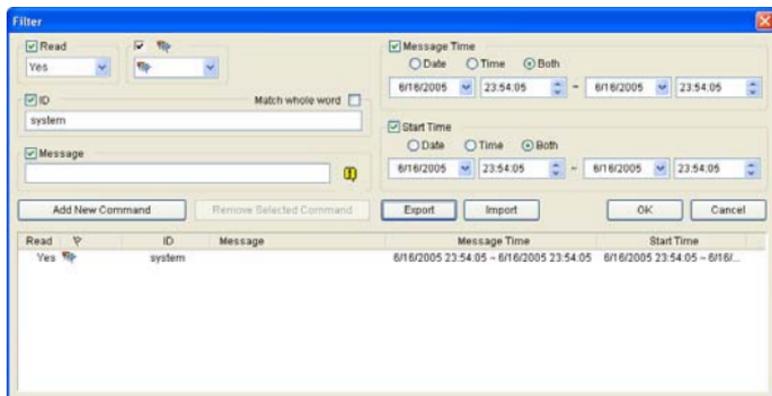
Figure 5-43

2. Specify the filter options that you want:
    - **Read:** Search for the events you have opened on the Event List.
    - **Flag:** Search for the flagged events.
    - **ID:** Search for the events from a specific host or related to system activities.
    - **Message:** Search for the events by keywords.
    - **Message Time:** Search for the events by the arriving time or date to the GV-GIS.
    - **Start Time:** Search by the starting time of the events occurred at the host.
3. If you want to save your filter settings to another location, click **Export**. If you want to apply the pre-defined filter settings, click **Import**.

4. Click **OK**. The events matching the filter settings are displayed in the
    Event Log Browser.

Backing Up the Event Log

You can back up the logs to a local drive, or export them to CD and DVD.

1. Click the **Backup** button (No. 5, Figure 5-41). This dialog box appears.
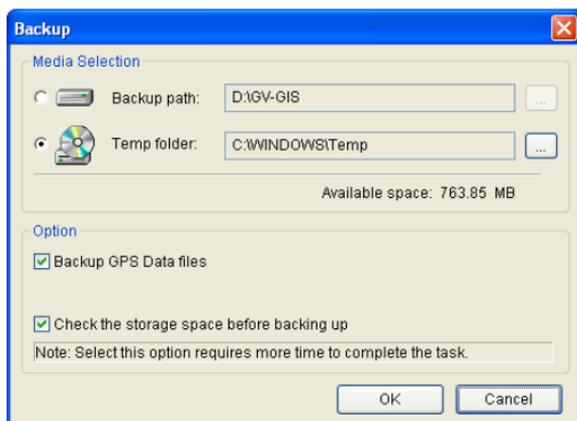
Figure 5-44

2. To back up logs to a local drive, select **Backup path** and click the **[…]**
    button to specify a location where you want to save the log files.

3. To export logs to CD and DVD, select **Temp folder**, and click the **[…]**
    button to specify a location for temporary storage of log files.

4. Select whether you want to back up GPS data along with logs.

5. Click **OK**.

6. If you select **Temp folder**, this dialog box appears for further setup.
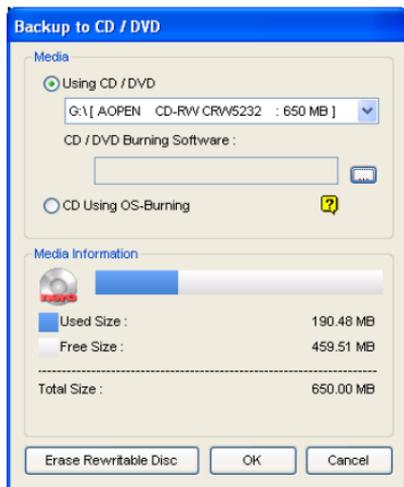
Figure 5-45

■ **Using CD/DVD:** Click to back up files to the CD or DVD using the third-party software. Click the **[…]** button to specify the desired burning software (.exe file).

■ **CD Using OS-Burning:** This option is only available when you use Windows XP, Server 2003 or Vista. It burns files to the CD or DVD using the inbuilt software of the operating system.

Printing the Event Log

You can print out the filtered log events, and define the footer and header for the printout.

1. To print out the desired log events, click the log tab to display its event list.
2. Click the **Page Setup** button (No. 6, Figure 5-39). This dialog box appears.
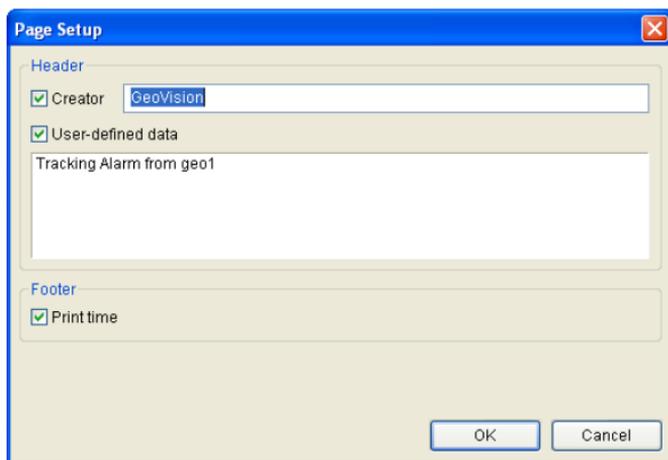
Figure 5-46

3. Select the options and type the information you want for the header and footer, and click **OK**.
4. Click the **Print** button (No. 7, Figure 5-39) to start printing.

5.10 Shortcut Keys

Shortcut Keys	Description
F2	Open the Account window for account settings.
F3	Open the Find dialog box for account search.
F4	Go to the tracking map.
F5	Open or close the Event List.
F6	Open or close the Monitor List.
F7	Open the Range Query dialog box to search for places and devices.
F8	Open the E-Map Setting dialog box to set the minimal zoom level of the E-Map icon on the tracking map.
F9	Open the System Configure dialog box.
F10	Open the Log Browser.

Appendix

C GeoVision

A. Dongle Description

The GeoVision Central Monitoring Station (CMS) includes four independently developed modules: Center V2 (Pro), Dispatch Server, Vital Sign Monitor (VSM) and Control Center.

- An appropriate USB dongle of "Black" color is required for each CMS module to work.
- Using more than one Black Dongle on the same computer is possible. But remember the rule that **Control Center** and **Center V2** cannot be run together, and **Center V2** and **Dispatch Server** cannot be run together.
- The Black Dongle can be upgraded to include more functions.
- It is required to install drivers from the software CD for the Black Dongle to work.

Dongle options for Center V2
- Center V2 Pro
- Center V2 + VSM

Connection of GeoVision IP devices to Center V2: The Center V2 accepts any video stream from GeoVision IP video devices. There is no need to use an extra dongle. Currently Center V2 does not support the video streami from third-party IP video devices.

Dongle options for Dispatch Server
- Dispatch Server
- Dispatch Server + VSM

Dongle options for VSM

- VSM
- VSM + Control Center
- VSM + Center V2
- VSM + Dispatch Server

Dongle options for Control Center

- Control Center or IP Matrix
- Control Center + Advanced Video Analysis
- Control Center + VSM
- Control Center + VSM + Advanced Video Analysis

Connection of IP devices to Control Center: The Control Center accepts the video stream from both GeoVision and third-party IP video devices. There is no limitation on the number of channels, and no need to use an extra USB dongle in this case.

B. Upgrading the Black Dongle

The Black Dongle can be upgraded to include more functions or enhance the system. You need to collect the data from your dongle and send it back to GeoVision for an upgrade. To upgrade your dongle, follow these steps:

1. Each dongle has its own serial number. Find it on the side of the dongle. Later this serial number will be used in naming the files for upgrading.
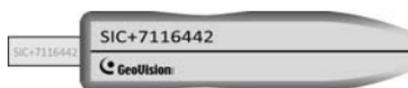
Figure 1

2. Insert the dongle to the computer.
3. In the GV folder, double-click **GVUsbKeyUpClient.exe**. This dialog box appears.
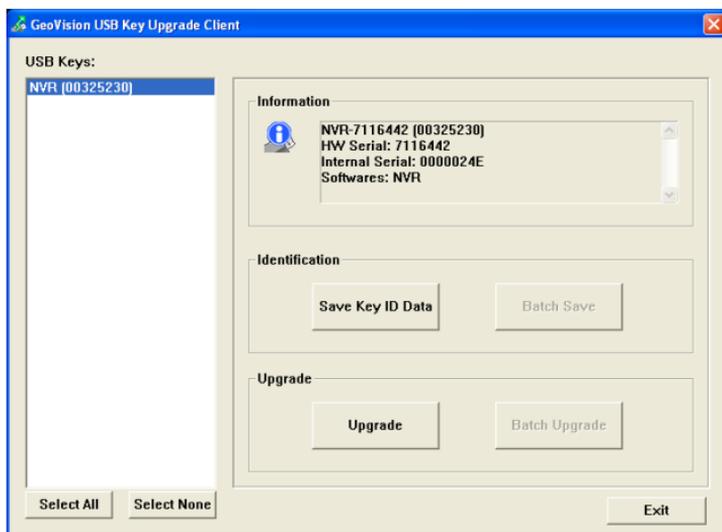
Figure 2

4. To retrieve the data from the dongle, click **Select All**. The information of the dongle is displayed in the information field. Note the displayed number of "HW Serial" should be the same as that on the dongle.

5. To save the data to your local computer, click **Save Key ID Data**. If you have more than one dongle to upgrade, click **Batch Save**. Different dongle data will be saved as separate files. The file will be named after the serial number on the dongle and saved as ***.out**. For example, if a dongle serial number is 7116442, the file is named "NVR-7116442.out".

6. Send this data file to GeoVision at sales@geovision.com.tw. The GeoVision will examine the data file and send an ***.in** file back to you. The file name also includes the serial number of that dongle. In this example, the data file you will receive is named "NVR-7116442.in".

7. After you receive the updated file, insert the correct dongle matching the .in file you receive, and then run **GVUsbKeyUpClient.exe**.

8. Click **Select All** to read the dongle, click **Upgrade** and then open the updated file to upgrade the dongle. You can also select more than one dongle in the list and click **Batch Upgrade** to upgrade them at the same time. Make sure these dongles match the updated files you receive.

C. Fast Backup and Restore

With the Fast Backup and Restore (FBR) solution, you can change interface skin for Center V2 and Control Center, as well as back up and restore your configurations in CMS applications.

Installing the FBR Program

1. Insert the CMS Software CD, click **Install V8.3.0.0 Central Monitoring System**, select **Fast Backup & Restore System**, and follow the on-screen instructions.
2. After the installation is complete, run **Fast Backup and Restore Main System** from the Windows Start menu. This window appears.
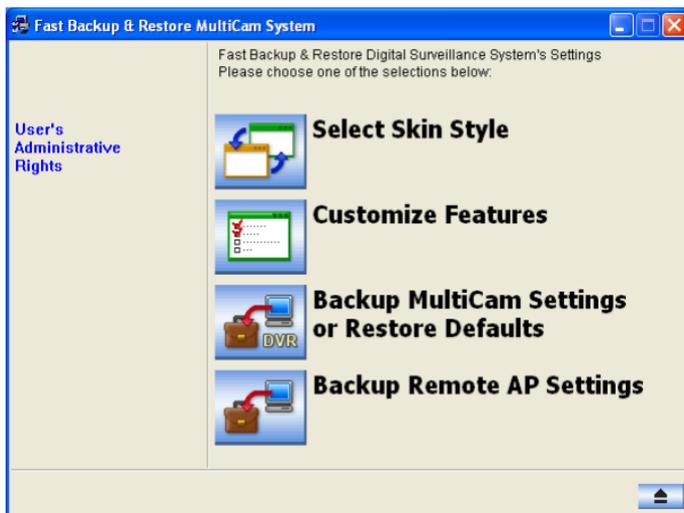
Figure 3

Selecting a Skin

There are two skin options: silver (default) and conventional. The skin change will only apply to the main screens of Center V2 and Control Center. The dialog boxes will not be affected.

Changing the Skin Style

1. In the FBR window (Figure 3), click the **Select Skin Style** icon. The option menu appears.
2. To use one skin style for all applications, simply select **All use Conventional Style** or **All use Silver Style**.
   To change the skin style of a single application, point to the desired application, and then select the skin style you want to apply.
3. Close the FBR window, and start the application to see the change.

Backing Up and Restoring Settings

You can back up the configurations you made in the CMS application, and restore the backup data to the current system or import it to another site.

Backing Up the Settings

1. In the FBR window (Figure 3), click the **Backup Remote AP Settings** icon, and select the desired application from the menu. For example, we select VSM Server. This dialog box appears.
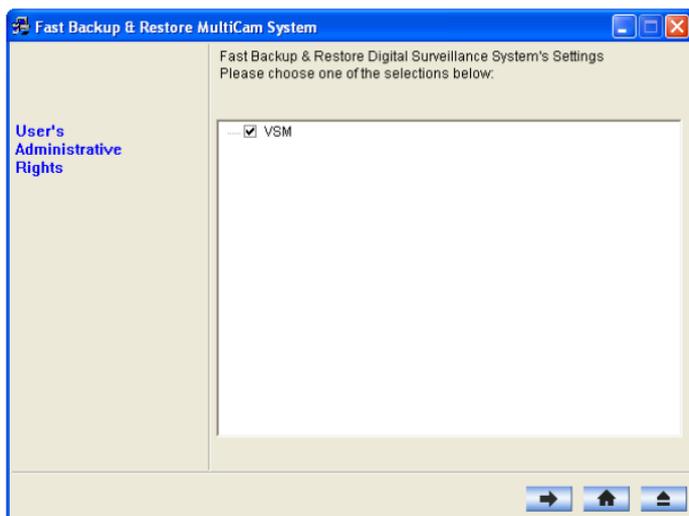
Figure 4

2. Click the **Next Step** button . The Save As dialog box appears.

3. Select the destination drive to store the backup file. When the backup is complete, this message will appear: *Successfully Backup VSM Server Settings.*

Restoring the System

You can restore the current application settings with the backup of configuration file. Also, you can copy this backup file to configure another application at different site with the same settings as the current application.

1. Open the backup file (*.exe) you previously stored. A valid ID and password are required to display this window.
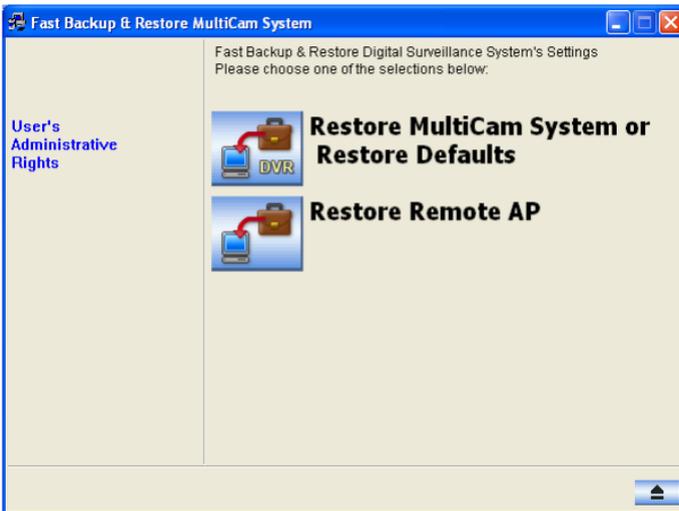
Figure 5

2. Click the **Restore Remote AP** icon, and then select the application that you want to restore its backup settings. For example, we select VSM Server for restoration.
3. Click the **Next Step** button [→] to start restoring.
4. When the restoration is complete, this message will appear: *Successfully Restore VSM Server Settings*.

D. PTZ Control Using GV-Joystick

You need to run the following program in the background when using the GV-Joystick to control PTZ. For details on the GV-Joystick operations, see *GV-Joystick User's Manual*.

- **Center V2**

You can control the PTZ cameras using GV-Joystick in **Camera/Audio Control** (see Figure 1-28). Up to 4 GV-Joysticks can be connected to control the PTZ cameras.

- **Control Center**

You can control the PTZ cameras using up to 4 GV-Joysticks in **Live View** and **Matrix**.

1. Run mcamctrl.exe from the Center V2 program folder. This dialog box appears.

Figure 6

2. In the Port field, select the COM port connected to the GV-Joystick.
3. Click the **Start Service** button ▶ (Figure 6) and then you can use the GV-Joystick to control the PTZ camera.
4. If more than one GV-Joystick is connected, repeat Step 2 to set up and use another GV-Joystick.

E. Matrix Control Using GV-Keyboard

You can use a GV-Keyboard for assistance in controlling a Matrix view. It is required to run the following program in the background while you use the GV-Keyboard with Matrix. For more details, see *GV-Keyboard User's Manual*.

1. Run **mcamctrl.exe** from the Control Center program folder. The Keyboard & Joystick dialog box (Figure 6) appears.
2. In the Port field, select the COM port that the GV-Keyboard is connected to.
3. If you want to define the eight function keys on the GV-Keyboard for a quick control of Matrix, click a function key. This dialog box appears.
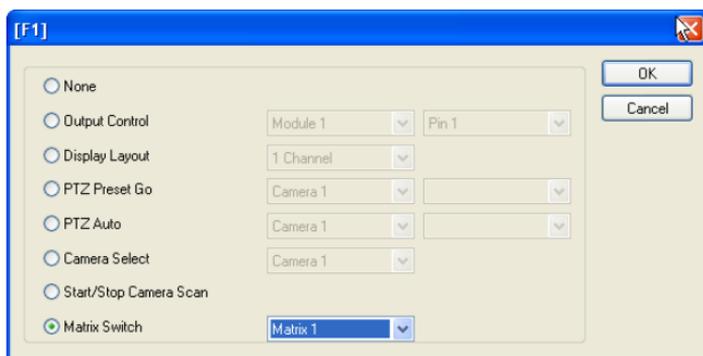
Figure 7

4. Select a function you want to assign to this function key.
5. If you set up multiple Matrix views and want to have a quick access, select **Matrix Switch**, and select a desired function including **Previous Matrix**, **Next Matrix** and **Matrix 1 to Matrix 6**.
6. Repeat Steps 3 and 4 to set up other function keys.
7. Click the **Start Service** button ▶ (Figure 6). Now you can use the GV-Keyboard to control Matrix View.

Note: These four keys on the GV-Keyboard do not function at all when Matrix is in use:

F.　Supported IP Devices

This list provides the detailed information about GeoVision IP devices and supported third-party IP devices in the four categories:

- **Audio:** A "O" mark indicates the CMS supports the two-way audio communication with the device; otherwise, a "✕" mark is given.
- **Codec:** You can find what video codecs these models support.
- **PTZ:** An IP device with PTZ function is marked with "O"; otherwise, a "✕" mark is given.
- **Megapixel:** An IP device supporting megapixel resolution is marked with "O"; otherwise, a "✕" mark is given.

Center V2

GeoVision

Model	Audio	Codec	PTZ	Megapixel
GV-Compact DVR	O	GeoMPEG4 (ASP)	O	O
GV-IP Camera	O	MPEG4 / MJPEG	✕	O
GV-Video Server	O	GeoMPEG4 (ASP)	O	O

Control Center

GeoVision

Model	Audio	Codec	PTZ	Megapixel
GV-Compact DVR	O	GeoMPEG4 (ASP)	O	O
GV-IP Camera	O	MPEG4 / MJPEG	✕	O
GV-Video Server	O	GeoMPEG4 (ASP)	O	O

Arecont

Model	Audio	Codec	PTZ	Megapixel
AV1300	✕	JPEG	✕	○
AV2100	✕	JPEG	✕	○
AV3100	✕	JPEG	✕	○
AV3130	✕	JPEG	✕	○
AV5100	✕	JPEG	✕	○
AV5105	✕	JPEG／H.264	✕	○
AV8360	✕	JPEG	✕	○

Axis

Model	Audio	Codec	PTZ	Megapixel
206	✕	JPEG／MPEG-4	✕	✕
207	✕	JPEG／MPEG-4	✕	✕
207MW	○	JPEG／MPEG-4	✕	○
207W	○	JPEG／MPEG-4	✕	✕
209FD	✕	JPEG／MPEG-4	✕	✕
209FD-R	✕	JPEG／MPEG-4	✕	✕
209MFD	✕	JPEG／MPEG-4	✕	○
209MFD-R	✕	JPEG／MPEG-4	✕	○
210	✕	JPEG／MPEG-4	✕	✕
210A	○	JPEG／MPEG-4	✕	✕
211	✕	JPEG／MPEG-4	✕	✕
211A	○	JPEG／MPEG-4	✕	✕
211M	○	JPEG／MPEG-4	✕	○
211W	○	JPEG／MPEG-4	✕	✕
212	○	JPEG／MPEG-4	○	✕
213	○	JPEG／MPEG-4	○	✕
214	○	JPEG／MPEG-4	○	✕
215	○	JPEG／MPEG-4	○	✕
216FD	○	JPEG／MPEG-4	✕	✕
216FD-V	○	JPEG／MPEG-4	✕	✕
216MFD	○	JPEG／MPEG-4	✕	○
216MFD-V	○	JPEG／MPEG-4	✕	○
221	✕	JPEG／MPEG-4	✕	✕
223M	✕	JPEG／MPEG-4	✕	○
225FD	○	JPEG／MPEG-4	✕	✕
231D+	✕	JPEG／MPEG-4	○	✕

232D+	✕	JPEG／MPEG-4	O	✕
233D	✕	JPEG／MPEG-4	O	✕
241Q	✕	JPEG／MPEG-4	O	✕
241S	✕	JPEG／MPEG-4	O	✕
P3301	O	JPEG／H.264	O	✕
Q7401	O	JPEG／H.264	O	✕

Canon

Model	Audio	Codec	PTZ	Megapixel
VB-C50i	✕	JPEG	O	✕
VB-C300	✕	JPEG	O	✕

IQEye

Model	Audio	Codec	PTZ	Megapixel
301	✕	JPEG	✕	O
302	✕	JPEG	✕	O
510	✕	JPEG	✕	O
511	✕	JPEG	✕	O
701	✕	JPEG	✕	O
702	✕	JPEG	✕	O
703	✕	JPEG	✕	O
705	✕	JPEG	✕	O
752	✕	JPEG	✕	O
753	✕	JPEG	✕	O
755	✕	JPEG	✕	O

JVC

Model	Audio	Codec	PTZ	Megapixel
VN-C20U	✕	JPEG	✕	✕
VN-C205U	✕	JPEG	✕	✕
VN-C215U	✕	JPEG	✕	✕
VN-C625U	✕	JPEG	✕	✕
VN-C655U	✕	JPEG	O	✕
VN-V25	✕	JPEG／MPEG-4	✕	✕
VN-V26	✕	JPEG／MPEG-4	✕	✕
VN-V686U	✕	JPEG／MPEG-4	O	✕

Mobotix

Model	Audio	Codec	PTZ	Megapixel
M12D Sec-DNight	O	JPEG	✕	O
M12D Web	O	JPEG	✕	O
M12D IT-DNight	O	JPEG	✕	O
M12D Sec	O	JPEG	✕	O
M12D Sec-R8	O	JPEG	✕	O
Note: Its MxPEG codec is not supported.				

Panasonic

Model	Audio	Codec	PTZ	Megapixel
BB-HCE481A	✕	JPEG／MPEG-4	O	✕
BB-HCM110	✕	JPEG／MPEG-4	✕	✕
BB-HCM311	✕	JPEG／MPEG-4	✕	✕
BB-HCM331	✕	JPEG／MPEG-4	✕	✕
BB-HCM371	✕	JPEG／MPEG-4	✕	✕
BB-HCM381	✕	JPEG／MPEG-4	O	✕
BB-HCM403	✕	JPEG／MPEG-4	✕	✕
BL-C10	✕	JPEG	✕	✕
BL-C30	✕	JPEG	✕	✕
WV-NS202A	O	JPEG／MPEG-4	O	✕
WV-NW484	✕	JPEG／MPEG-4	✕	✕
WV-NW964	O	JPEG／MPEG-4	O	✕

Pelco

Model	Audio	Codec	PTZ	Megapixel
Spectra IV IP Series	✕	JPEG／MPEG-4	O	✕
IP110 Series	✕	JPEG／MPEG-4	✕	✕
IP3701Series	✕	JPEG／MPEG-4	✕	✕

SONY

Model	Audio	Codec	PTZ	Megapixel
SNC-CM120	O	JPEG／MPEG-4	✕	O
SNC-CS10	O	JPEG／MPEG-4	✕	✕
SNC-CS11	O	JPEG／MPEG-4	✕	✕
SNC-CS20	O	JPEG／MPEG-4	✕	✕
SNC-CS50N	O	JPEG／MPEG-4／H.264	✕	✕
SNC-CS50P	O	JPEG／MPEG-4／H.264	✕	✕
SNC-DF40N	O	JPEG／MPEG-4	✕	✕
SNC-DF40P	O	JPEG／MPEG-4	✕	✕
SNC-DF50N	O	JPEG／MPEG-4／H.264	✕	✕
SNC-DF50P	O	JPEG／MPEG-4／H.264	✕	✕
SNC-DF70N	O	JPEG／MPEG-4	✕	✕
SNC-DF70P	O	JPEG／MPEG-4	✕	✕
SNC-DF80N	O	JPEG／MPEG-4	✕	✕
SNC-DF80P	O	JPEG／MPEG-4	✕	✕
SNC-DM110	O	JPEG／MPEG-4	✕	O
SNC-DM160	O	JPEG／MPEG-4	✕	O
SNC-DS10	O	JPEG／MPEG-4	✕	✕
SNC-DS60	O	JPEG／MPEG-4	✕	✕
SNC-P1	O	JPEG／MPEG-4	✕	✕
SNC-P5	O	JPEG／MPEG-4	✕	✕
SNC-RX530N	O	JPEG／MPEG-4／H.264	O	✕
SNC-RX530P	O	JPEG／MPEG-4／H.264	O	✕
SNC-RX550N	O	JPEG／MPEG-4／H.264	O	✕
SNC-RX550P	O	JPEG／MPEG-4／H.264	O	✕
SNC-RX570N	O	JPEG／MPEG-4／H.264	O	✕
SNC-RX570P	O	JPEG／MPEG-4／H.264	O	✕
SNC-RZ25N	O	JPEG／MPEG-4	O	✕
SNC-RZ25P	O	JPEG／MPEG-4	O	✕
SNC-RZ50N	O	JPEG／MPEG-4／H.264	O	✕
SNC-RZ50P	O	JPEG／MPEG-4／H.264	O	✕

G. Specifications

Product specifications are subject to change without notice.

Center V2

Feature	Note
Maximum of Subscribers (standard)	5
Maximum of Subscribers (professional)	500
Maximum of Channels (standard)	80
Maximum of Channels (professional)	800
Control of GV-Joystick	Yes
Backup to CD/DVD	Yes
Alarm Reports of Events	Yes
Notification of SMS Alerts	Yes
Notification of E-mail Alerts	Yes
Notification of E-Map Alerts	Yes
Automatic Connection Recovery	Yes
Support for Mega Pixel Resolution	Yes
Real-Time Monitoring	Yes
Remote PTZ Control	Yes
Remote I/O Control	Yes

Dispatch Server

Feature	Note
Maximum No. of Channels	40,000
Maximum No. of Subscribers	25,000
Maximum No. of Center V2	50
Maximum No. of Sensors / Alarms	3,600,000
Real-Time Audio Monitoring	Yes
Remote PTZ Control	Yes
Remote I/O Control	No
Auto Recording	No
Event List Viewer	Yes
Event List Filter	Yes
Dual Monitor Support	No
Network Load Support	Yes
Automatic Connection Recovery	Yes

Comparison of VSM and Center V2 Pro

Feature	VSM	Center V2 Pro
Subscriber	1,000	500
Group	Yes	Yes
Bandwidth	4Mbps	25Mbps
Record Mode	No	Live / Attachment / Both
Live Subscriber Status	Yes	No
Auto Login	Yes	Yes
I/O Control	Yes	Yes
SMS Message	Yes	Yes
Time Synchronization	Yes	Yes
Keep Day Notify	Yes	No
Event Message	Yes	Yes
Notification Setting	Yes	Yes
Event Log	Yes	Yes
Connection Lost Detection	Yes	Yes
I/O Device Support	Yes	Yes
Subscriber storage Info.	Yes	No

Control Center

Feature	Amount	Note
DVR Host	1000 Hosts	
Video Server Host IP Camera Host Compact DVR Host	500 Hosts	The total number of Video Server, IP Camera, Compact DVR hosts is 500.
Remote DVR	Unlimited	
Remote Desktop	Unlimited	
Remote ViewLog	1	One at a time.
I/O Host	• DVR: 1000 Hosts • GV-Video Server + GV-IP Camera + GV-Compact DVR: 500 CH	• Only for GV IP products. • One host supports up to 9 sets of 16-in and 16-out I/O modules.
Remote E-Map Host	500 Hosts	
Remote E-Map Map	Unlimited	
Live View (Advanced Type UI)	1	One at a time from one application.
Live View Channel (Standard Type UI)	20 CH	
Matrix	4 Matrix Views	
Matrix Group	Unlimited	
Matrix Channel	576 CH	For 1920 x 1200, 1920 x1 080 resolution.
IP Matrix	36 Monitors	
IP Matrix Channel	4032 CH (including 567 Matrix Channels of Control Center itself)	
VMD Group	1	

VMD Group Channel • DVR: 1000 CH • GV-Video Server + GV-Compact DVR + GV-IP Camera: 200 CH		Only for GV IP products
Panorama View	4 Views	
Panorama Channel	32 CH	
Matrix	1024 x 768: 64 CH	Total: 256 CH on 4 Matrix
	1280 x 1024: 64 CH	Total: 256 CH on 4 Matrix
	1680 x 1050: 80 CH	Total: 320 CH on 4 Matrix
	1600 x 1200: 64 CH	Total: 256 CH on 4 Matrix
	1920 x 1200: 96 CH	Total 384 CH on 4 Matrix
	1920 x 1080: 96 CH	Total 384 CH on 4 Matrix
	1280 x 800: 64 CH	Total 256 CH on 4 Matrix
	1440 x 900: 64 CH	Total 256 CH on 4 Matrix

Appendix