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Chapter 1 — Overview

1.1 In This Manual

This manual describes the procedures for operating Remote Administration System Plus software (RASplus) designed for the digital video recorder (DVR).

1.2 RASplus Features

The RASplus program is the integrated software that controls system management, video monitoring and image playback of multiple remote DVRs. The RASplus offers the following features:

- Check and report on the DVR status at a remote site
- Notification of the event detection from remote sites
- Remote monitoring of live camera images
- Time-lapse and event search of recorded images
- Remote software upgrades and system programming
- View of system and event log information of a remote DVR
- Remote monitoring for multiple remote sites through the map
- Connection up to 16 remote sites at a time.

1.3 Product Information

Product Components

- User's Manual (This Document)
- Installation CD

System Requirements

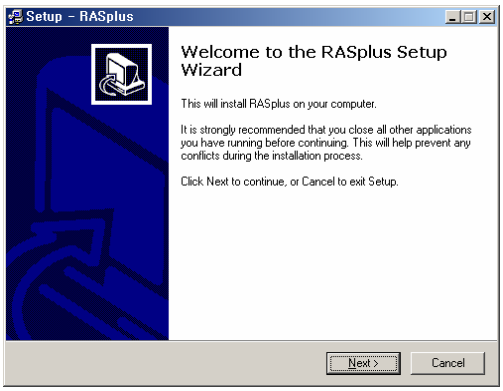
- Operating System: Microsoft Windows XP or higher
- CPU: Intel Pentium IV (Celeron) 2.4GHz or higher
- RAM: 512MB or higher
- VGA: AGP, Video RAM 8MB or higher (1024x768, 24bpp or higher)

Chapter 2 — Installation

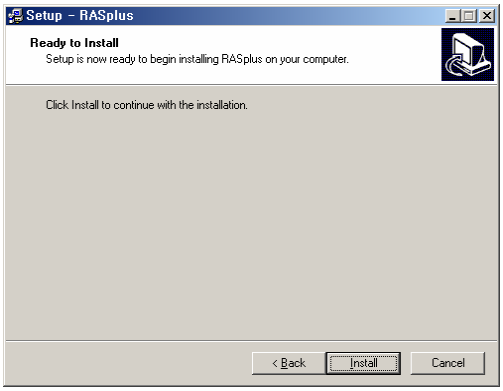
CAUTION: If an older version of RASplus software has been already installed on your computer, you should uninstall the older version first.

NOTE: Under the Start menu in Windows, go to Settings and then to Control Panel. Double click the *Power Options* to evoke the Management Properties dialog box. Select *Never* for the Turn off monitor and the Turn off hard disks options.

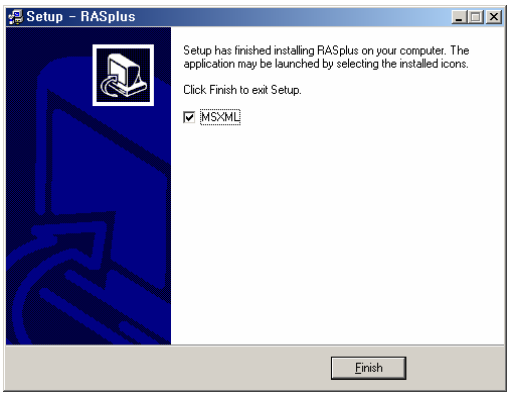
1. Insert the installation CD.
2. Run the Setup.exe file.
3. When the following dialog box appears, click Next.



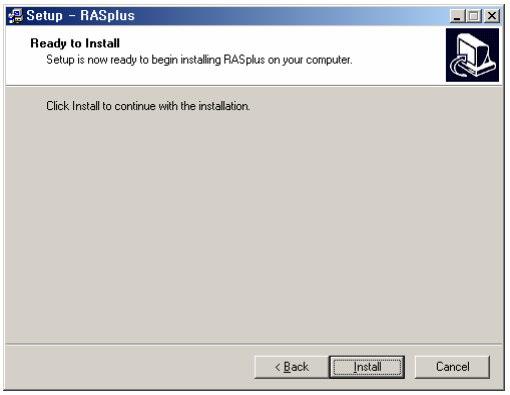
4. Click Install.



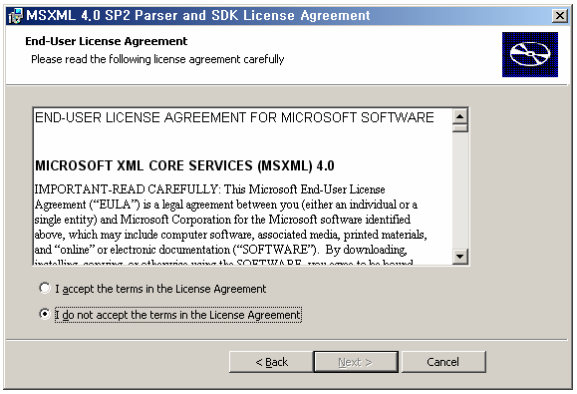
5. When the following dialog box appears after finishing the RASplus installation, select MSXML application and click Finish. Installing the MSXML is required for the RASplus initiating.



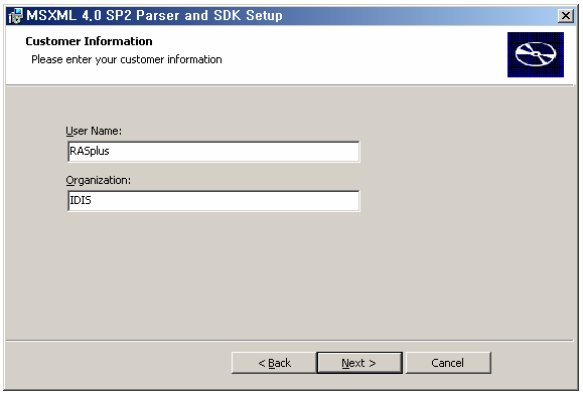
6. Click Install.



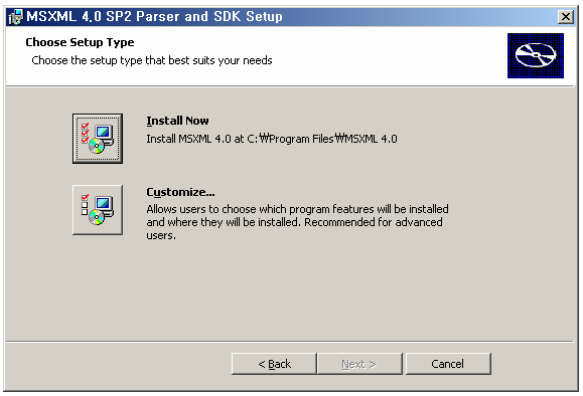
7. Select I accept the terms in the License Agreement, and click Next.



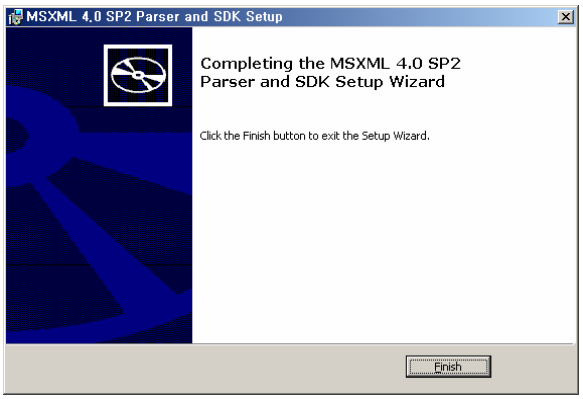
8. Enter User Name and Organization, and click Next.



9. Select Install Now.

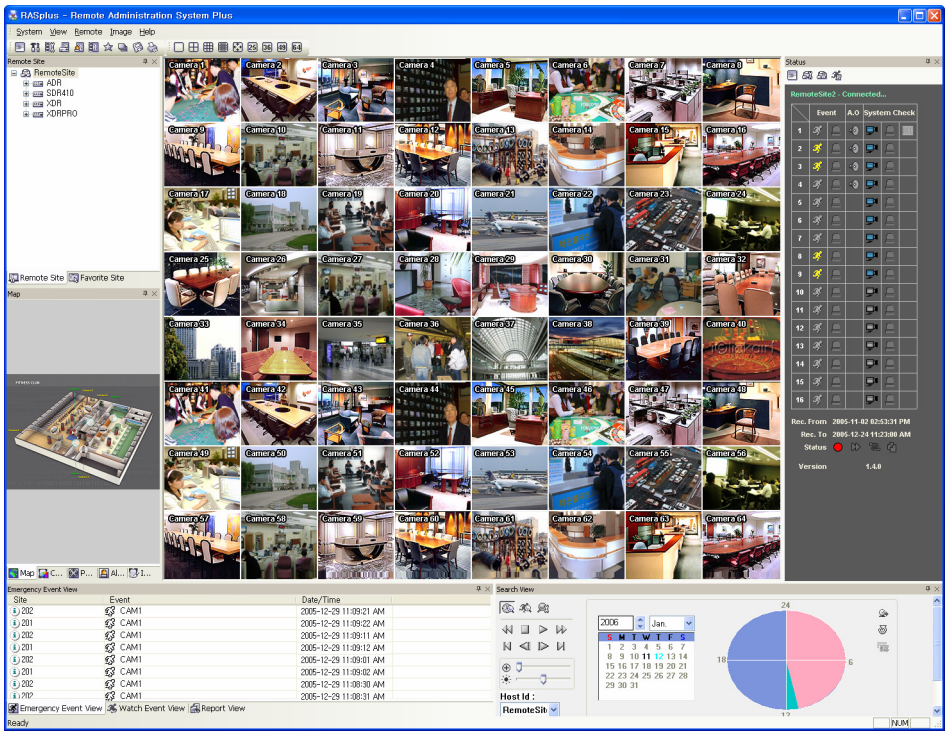


10. Click Finish to complete the MSXML installation.



Chapter 3 — Configuration

After installing the RASplus software, you will find the RASplus shortcut icon on the desktop. Run the RASplus program by double clicking the icon. The RASplus program consists of the screen, 12 docking panels, menu and toolbar.



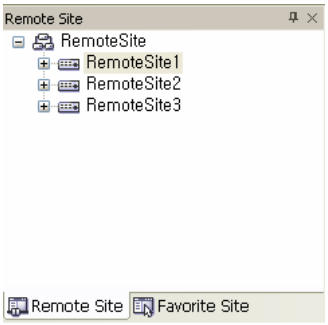
3.1 Screen

Displays images from selected cameras in the live monitoring or playback mode. The RASplus provides various multi-screen formats; single-screen, quad, 3x3, 4x4, full-screen, 5x5, 6x6, 7x7 and 8x8.

3.2 Panel

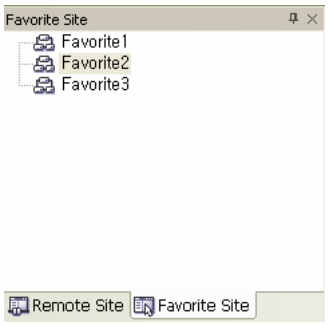
The user can configure the RASplus window variously by arranging 12 docking panels according to the user convenience. Clicking the icon floats the panel, and clicking the icon hides the panel.

Remote Site Panel



Displays the list of remote sites registered during the RASplus System setup and installed cameras on the remote site. To connect the remote site, select the site or camera you want to connect to from the list and then drag and drop it to the desired position on the screen or the Status panel. The screen displays images from selected cameras, and the Status panel displays the system status information of the connected remote site. Connecting on the Status panel can also be available by selecting Connect Status on the popup menu displayed by clicking the right mouse button after selecting the site from the list. This popup menu initiates the remote menu including Remote Setup, Remote System Log, and Remote Event Log. Refer to the 3.3 Menu – Remote Menu for details.

Favorite Site Panel



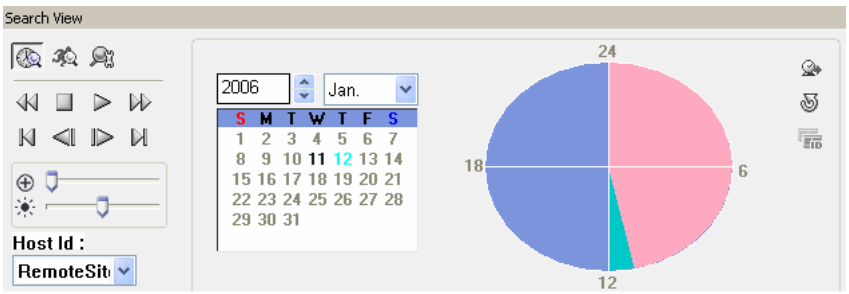
Displays the list of Favorite sites registered during the RASplus System setup. Selecting the Favorite site you want to connect to from the list and then dragging and dropping it to the desired position on the screen connects all remote sites registered on the Favorite site automatically. Selecting the camera from the Favorite site and then dragging and dropping it to the Status panel displays the system status information of the remote site where the selected camera is installed.

Status Panel

Displays the event, alarm out, system check and recording status information of the connected remote site in real-time. To connect the remote site, select the site or camera you want to connect to from the Remote Site or Emergency Event View panel and then drag and drop it to the Status panel.

NOTE: Refer to the *4.3 Status View* for details.

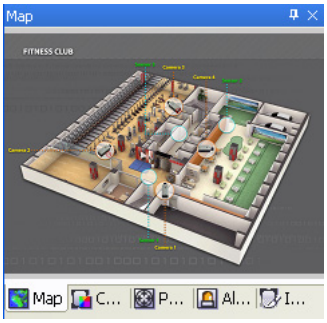
Search View Panel



Allows time-lapse or event searching for recoded data on the remote DVR.

NOTE: Refer to the *4.2 Playback and Search* for details.

Map Panel



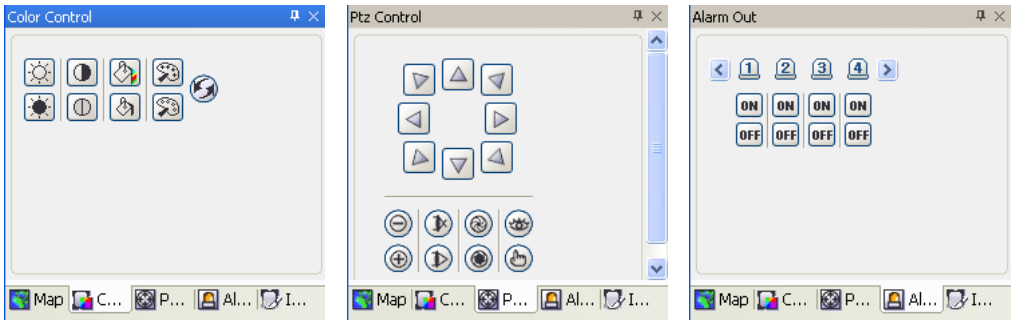
Allows efficient monitoring for the remote site through the map. To connect the remote site, select the device you want to connect to from the Map panel and then drag and drop it to the desired position on the screen or the Status panel. Also, placing the mouse cursor on the device on the map displays the device status. When the device detects any event or the device is not working properly, the following status icons (max.4) appear.

- Unplug
- Event off
- Irregular
- Video Loss
- Motion
- Alarm In
- Alarm Out

NOTE: It displays the status of its devices as *Irregular* according to the setting on *System Check* and as *Video Loss* / *Motion* / *Alarm In* / *Alarm Out* according to the event detection settings on the remote DVR.

NOTE: Refer to the *Appedix C – Map Editor* for details on editing maps.

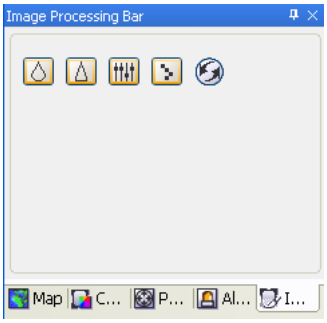
Color / PTZ / Alarm Out Control Panel



Allows color control, PTZ control and alarm out control during live monitoring from a remote site.

NOTE: Refer to the *4.1 Live Monitoring* for details.

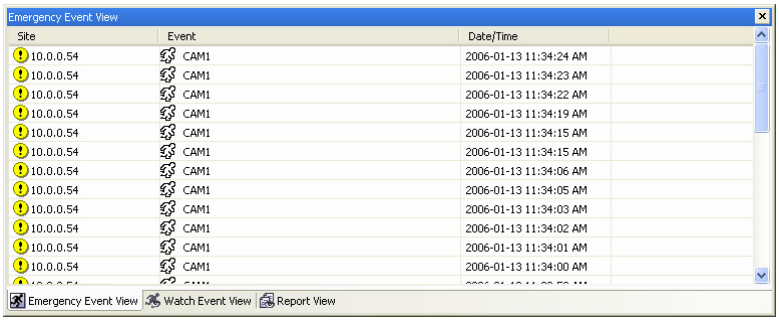
Image Processing Panel



Allows enhancements to be made to played back images.

NOTE: Refer to the *4.2 Playback and Search* for details.

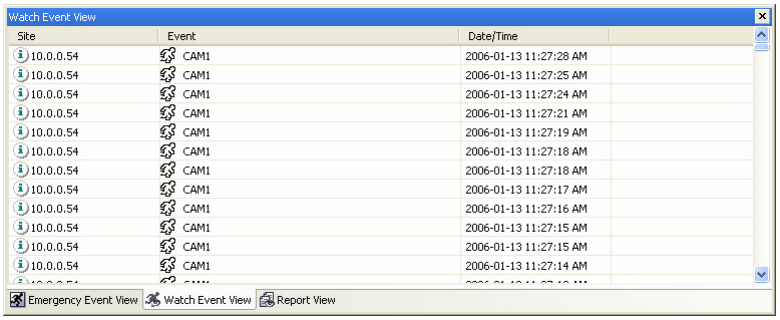
Emergency Event View Panel



Displays events that were called back from individual remote site (LAN connection only). The description of event icons and their meanings follow:

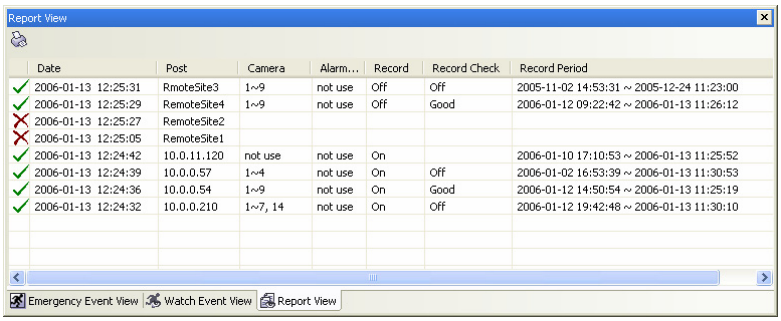
- Normal Event
- Emergency Event (preset to be notified at the remote DVR)
- Motion Detection
- Video Loss
- Alarm In
- Text In
- Alarm In Bad
- Recorder Bad
- Disk S.M.A.R.T.
- Disk Bad
- Disk Full
- Disk Temperature

Watch Event View Panel



Displays events that were detected from individual remote site while the RASplus is in the live monitoring mode.

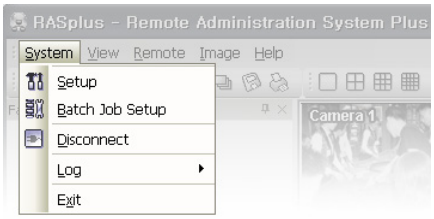
Report View Panel



Displays the system status information of the remote site. The RASplus checks on the remote site and report the system status. For this function, Report Setup should be made during the RASplus System setup. Refer to the 3.3 Menu – System Menu for details.

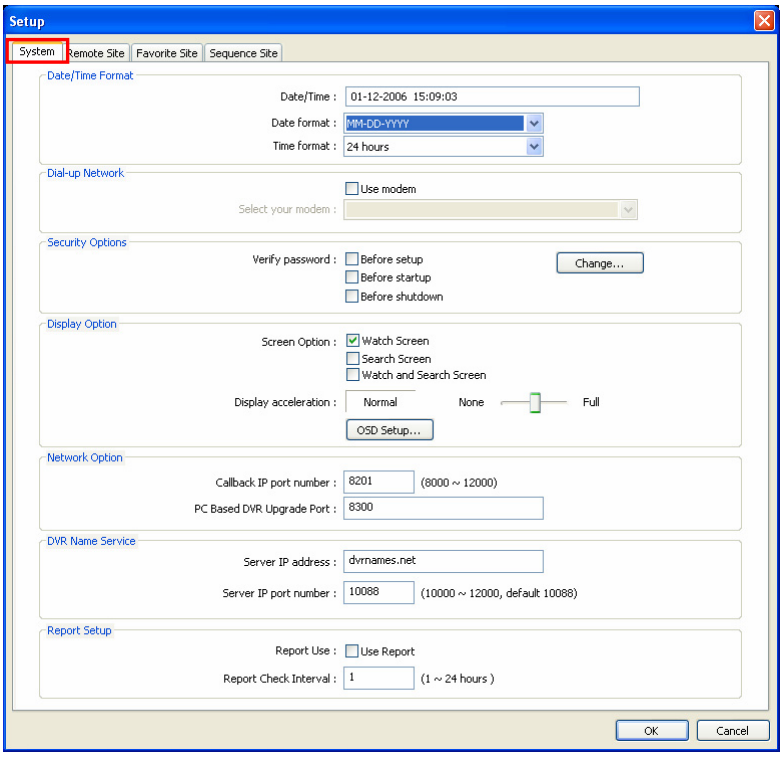
3.3 Menu

System Menu



▶ Setup

Allows programming for the system operation and remote site configuration.



System: Set up the date/time format for the RASplus, modem connection information for remote access, system password, display option, network option, DVRNS server, and Report function.

- Date/Time Format: Set the date/time format.
- Dial-up Network: Select Use modem if you want to use a modem for remote access.
- Security Options: Set up the password if password confirmation is required Before setup, Before startup, or Before shutdown the RASplus. Click the Change button to change the password.
- Display Option: Set up the screen display, display acceleration (None, Normal and Full), and OSD (Title, Time Info., Date Info, Text-In and Overlay Text-In Data) option.
  - Watch Screen: Using the screen for live monitoring only.
  - Search Screen: Using the screen for search only.
  - Watch and Search Screen: Using the screen for both live monitoring and search.

NOTE: The image cannot be displayed properly, depending on the specification of your PC. In this case, lower the level of the display option.

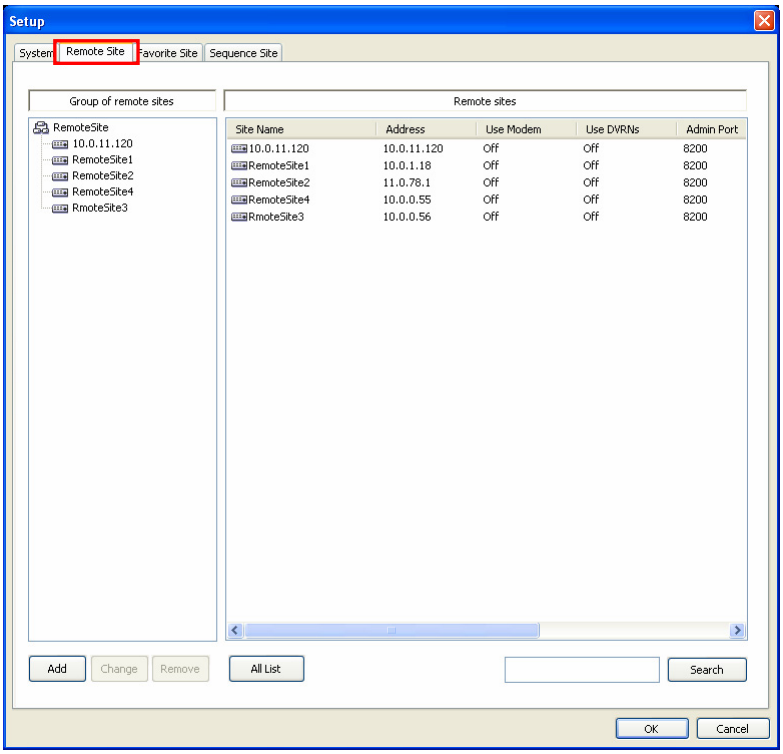
- Network Option: Set up the IP port number (from 8000 to 12000) that is used for network connection when receiving a callback message from a remote site, and the upgrade port number that is used for upgrading the PC-based DVR.

NOTE: The IP port and upgrade port number you enter should match the value set during the network setup on the remote DVR.

- DVRNS Server: Set up the IP address and port number (from 10000 to 12000) of the DVRNS (DVR Name Service) server. The IP address and port number you enter should match the value set during the DVRNS setup on the remote DVR.

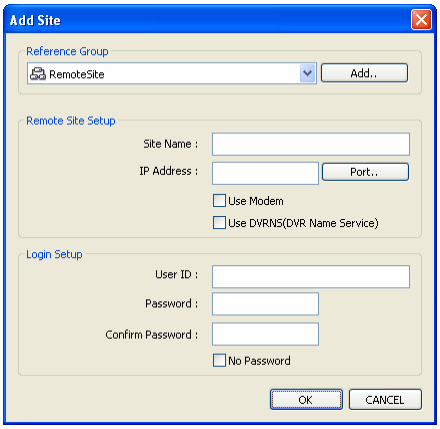
NOTE: The DVRNS server cannot be configured by modem connections. Refer to the *Appendix B* for the details of the DVR Name Service.

- Report Setup: Set up the Use (on and off) and check intervals (from 1 to 24 hours) of the report function. When using the report function, the RASplus checks on the remote site according to the user-defined dwell and report the system status.



Remote Site: Configure the connection list for remote access.

- Add: Click the Add button and enter the information of the remote site to register.



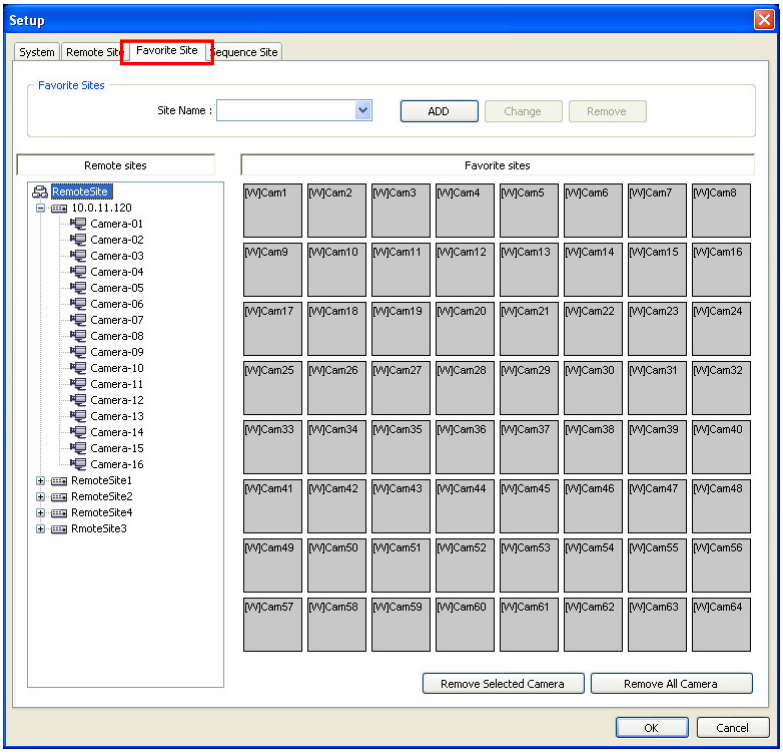
– Reference Group: For the effective management of multiple remote sites, it is suggested the site be assigned to a Reference Group. Click the Add button to make a new reference group.
– Remote Site Setup: Enter a site name and the IP address of the remote site (modem phone number for dial-up connection), acquired from your network administrator. Click the Port button to set up the IP port number of each program. The IP port number you enter should match the value set during the network setup on the remote DVR. If the remote DVR version does not allow you to set the IP port numbers, use the following values: "8200" for Admin, "8016" for Watch, and "10019" for Search.

NOTE: When using the DVRNS server, place a checkmark in the *Use DVRNS (DVR Name Service)* box. And enter a site name and the DVR name (in the IP address box) of the remote site. The DVR name you enter should match the DVR name set during the DVRNS setup on the remote DVR.

– Login Setup: Enter a user ID and password of the remote site for remote access. If you have entered a user ID and a password, the site will be connected automatically without a dialog box asking for a password. Select No Password in case connecting the remote system requiring no password (e. g. guest login).

NOTE: Up to 32 characters may be entered for the site name, telephone number and user ID, and 10 characters entered for the password.

- Change: Select the group or site to change and click the Change button, or double click the group or the site to change. And then change the site information.
- Remove: Select the group or site to remove and click the Remove button.
- All List: Displays all registered remote sites.
- Search: Enter the group name or site name to search for and click the Search button to display the found group or site in the list.



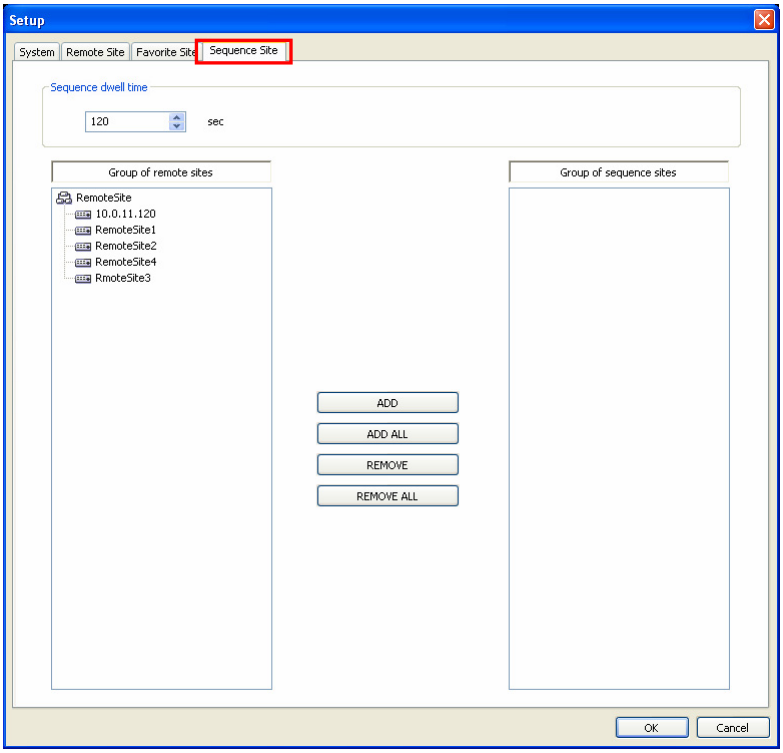
Favorite Site: The Favorite Site is the user-defined connection list that combines more than one remote site, so multiple sites can be monitored at the same time with a single connection to the Favorite Site. Add a new Favorite Site, and then assign the location by dragging and dropping the site or camera to the Favorite site map. Up to 64 cameras can be monitored at a time when each camera is assigned to the different location.

- Site Name: Select a registered Favorite site from the drop-down list.
- ADD: Adds a new Favorite site.
- Change: Select the Favorite site to change from the Site Name list and click the Change button. And then change the site name.
- Remove: Select the Favorite site to remove from the Site Name list and click the Remove button.
- Remove Selected Camera: Removes selected cameras on the Favorite site map.
- Remove All Camera: Removes all cameras on the Favorite site map.

NOTE: Cameras can be selected by clicking the left mouse button on the camera on the Favorite map and selected cameras will be outlined in red. Clicking the left mouse button on the camera while holding the Ctrl key toggles camera selection On and Off. Multiple cameras can be selected by clicking the left mouse button while holding the Shift key. Clicking the right mouse button on the selected camera selects its display option between *Watch Screen* and *Search Screen*.

NOTE: Clicking the ☆ button on the toolbar can save the current screen layout on the Watch screen or Search screen directly to the Favorite site.

NOTE: The Favorite Site list is not valid with modem connections.



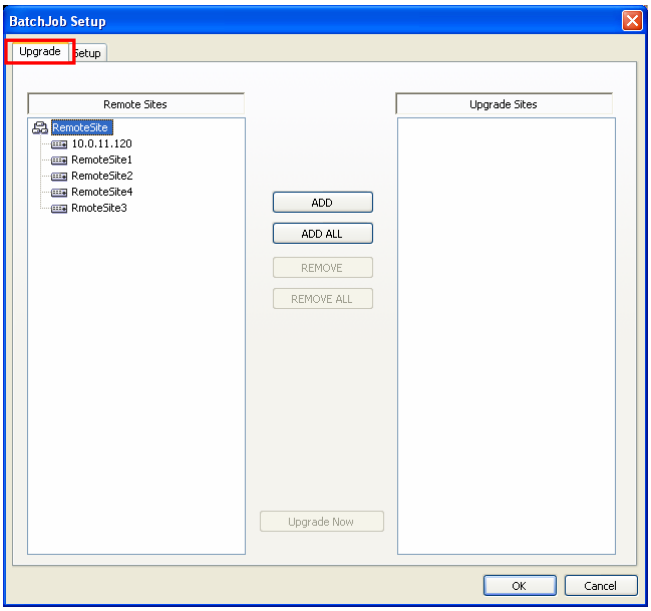
Sequence Site: Configure the sequence site. The RASplus connects to the registered sites sequentially allowing the connection of more than one remote site.

- Sequence dwell time: Adjust sequence intervals (from 5 second to 1 hour) for each connection.
- ADD: Select the site to add from the Remote Site list and click the Add button.
- ADD ALL: Adds all sites in the Remote Site list to the Sequence Site list.
- REMOVE: Select the site to remove from the Sequence Site list and click the Remove button.
- REMOVE ALL: Removes all sites in the Sequence Site list.

NOTE: The Sequence Site list is not valid with modem connections.

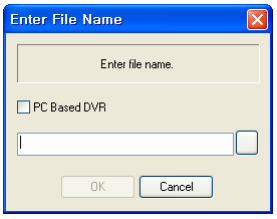
▶ Batch Job Setup

Set up the batch job of remote upgrade and remote setup for multiple remote sites.

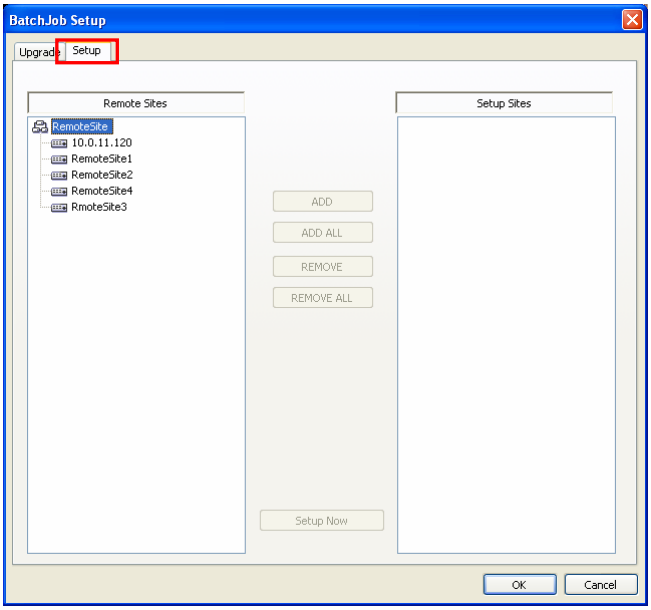


Upgrade: Set up the remote upgrade job for remote sites. First, select the remote site to upgrade from the Remote Site list, and add it to the Upgrade Sites list by clicking the ADD button. Then, click the Upgrade Now button to initiate the remote upgrade job for registered Upgrade Sites.

- ADD: Select the site to add from the Remote Site list and click the Add button.
- ADD ALL: Adds all sites in the Remote Site list to the Upgrade Sites list.
- Remove: Select the site to remove from the Upgrade Sites list and click the Remove button.
- Remove ALL: Removes all sites in the Upgrade Sites list.
- Upgrade Now: Upgrades the software on the Upgrade Sites.



NOTE: When upgrading the PC-based DVR, select *PC Based DVR* and then select the desired upgrade folder.



Setup: Set up the remote setup job for remote sites. First, select the remote site to upgrade from the Remote Site list, and add it to the Setup Sites list by clicking the ADD button. Then, click the Setup Now button to initiate the remote setup job for Setup Sites.

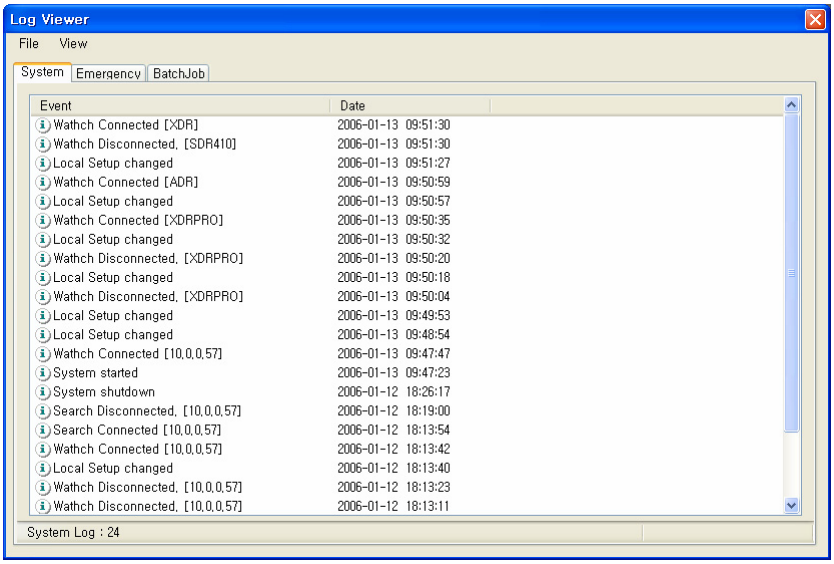
- ADD: Select the site to add from the Remote Site list and click the Add button.
- ADD ALL: Adds all sites in the Remote Site list to the Setup Sites list.
- Remove: Select the site to remove from the Setup Sites list and click the Remove button.
- Remove ALL: Removes all sites in the Setup Sites list.
- Setup Now: Upgrades the software on the Setup Sites.

▶ Disconnect

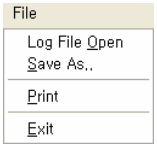
Disconnects all the current connections. Disconnection can also be performed by clicking the button on the toolbar.

▶ Log

Log Viewer displays the system log and batch job log information of the RAS plus, and the log information of emergency events called back from remote sites. It displays up to 5,000 log entries.

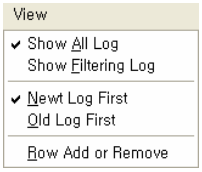


File

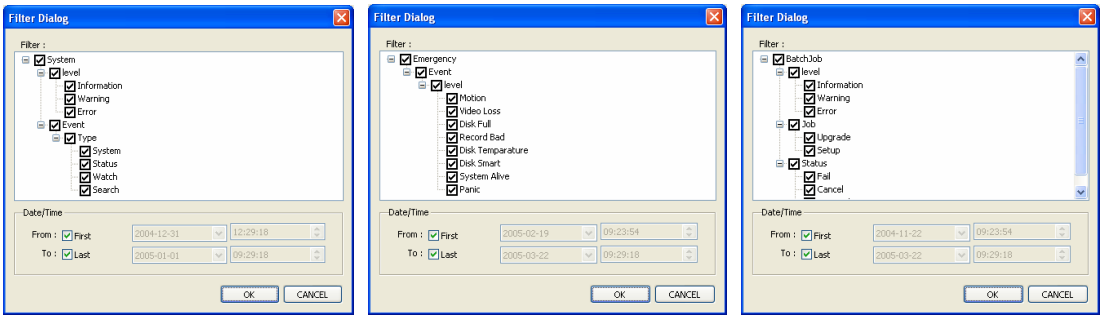


- Log File Open: Opens the saved log file.
- Save As…: Saves the log information to the text file.
- Print: Prints the log information out.
- Exit: Closes the Log Viewer dialog box.

View



- Show All Log: Displays all log entries.
- Show Filtering Log: Displays log entries within the period according to the filter options. Select the filter options and set the search starting date/time and ending date/time.

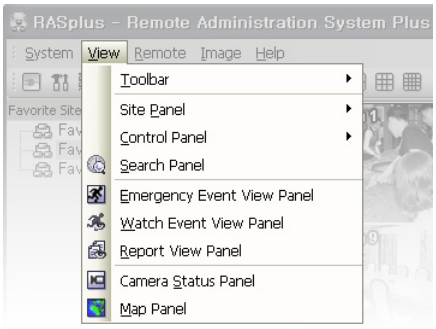


- New Log First: Displays from the new log.
- Old Log First: Displays from the old log.
- Row Add or Remove: Adds or removes the column of the Log Viewer dialog box.

▶ Exit

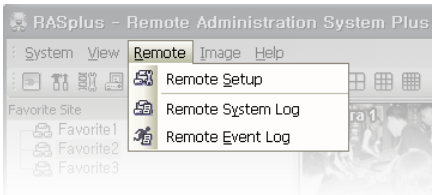
Disconnects all the current connections and exits the RASplus program.

View Menu



Enables or disables the view of each toolbar and panel.

Remote Menu



NOTE: Remote menu can also be performed by clicking the right mouse button after selecting the remote site on the Remote Site panel.

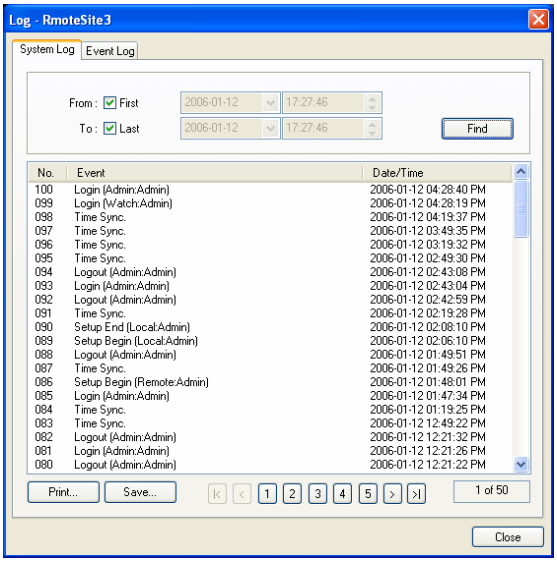
▶ Remote Setup

Allows changing the setup of a remote DVR. Select the remote site on the Remote Site panel and initiate the Remote Setup menu, and the setup screen displays.

NOTE: Refer to the manual for each applicable remote DVR for the details of system setup.

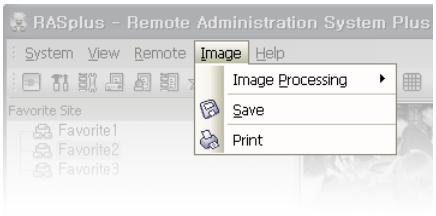
▶ Remote System Log / Remote Event Log

Displays the system log and event log information of a remote DVR. If the user sets the period of interest and clicks the Find button, the log entries within the period displays in the list. A total of 100 results can be displayed in one page, so click the move buttons to display the next results.



- From: Adjust the search starting date and time. When selecting First, search from the first log.
- To: Adjust the search ending date and time. When selecting Last, search until the last log.
- Find: Displays remote log entries within preset period.
- Print...: Prints the log information out.
- Save...: Saves the log information to the text file.
- Move Buttons: Moves to the first page (|<), previous page (<), next page (>) or last page (>|). You can go directly to a log page by clicking the page number button.
- Close: Closes the Log dialog box.

Image Menu



NOTE: Image menu can also be available using the Image Processing panel controls and the toolbar controls.

- Image Processing: Allows enhancements to be made to played back images.
- Save: Saves the current image.
- Print: Prints the current image.

NOTE: Refer to the *4.1 Live Monitoring* and *4.2 Playback and Search* for details.

Help Menu

Displays the RASplus version information.

3.4 Toolbar

Performs the desired function conveniently using the toolbar.

The individual controls on the toolbar perform the following functions as described below:

- Disconnect
- Local Setup
- Batch Job Setup
- System Log
- Emergency Event Log
- Batch Job Log
- Save Favorite Site
- Auto Sequence
- Save
- Print

Select the desired screen format using the layout toolbar.

Chapter 4 — Operation

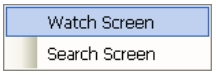
4.1 Live Monitoring

The RASplus provides remote monitoring function for video images in real time from either a sing site or multiple sites. In addition, when events are detected at a remote site while in the live monitoring mode, the RASplus displays the event information on the Watch Event View panel. For the live monitoring, the displays option of Watch Screen or Watch and Search Screen should be selected during System setup.

To connect the remote site on the Watch screen, select the site or camera you want to connect to in the Remote Site or Favorite Site panel and then drag and drop it to the desired position on the screen. Click the button on the toolbar or select Disconnect from the System drop-down menu to disconnect from the current connection.

NOTE: When used at remote site, some DVR models will only transmit images while recording video.

NOTE: When selecting the displays option of *Watch and Search Screen* during System setup, the remote site can also be connected using the right mouse button. Select *Watch Screen* to connect the selected site on the Watch screen when the following text menu screen appears.



Screen Format

The RASplus provides multi-screen monitoring function. The available multi-screen formats are single-screen, quad, 3x3, 4x4, full-screen, 5x5, 6x6, 7x7 and 8x8. When in one of the multi-view format, clicking the current screen format button again goes to the next page.

To view a specific image in the single-screen mode, move the cursor to that image and double click the left mouse button. To return to the previous screen mode from the single-screen mode, double click the left mouse button in the monitoring window.

Sequence Monitoring

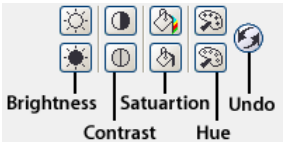
Clicking the button on the toolbar connects to the registered sites sequentially allowing the connection of more than one remote site and displays images from selected cameras. For the sequence monitoring, the sequence site should be registered during System setup. Refer to the 3.3 Menu – System Menu for details of configuring the sequence site.

Additional Functions

▶ Color Control

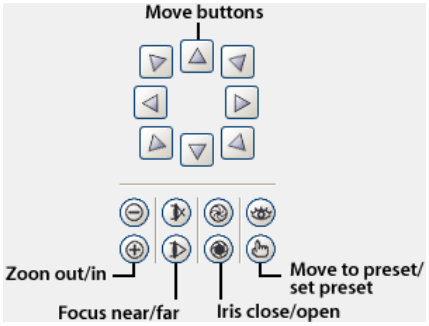
Adjust the brightness, contrast, saturation, and hue for each camera by clicking the target icons on the Color Control panel. Clicking the icon cancels the image processing operation and reloads the original image. Only the administrator can adjust the image from a remote site.

NOTE: It is important that images are properly adjusted. These adjustments cannot make up for improperly adjusted images when the images are recorded.



▶ PTZ Control

Select the PTZ camera of the remote site, and control pan, tilt and zoom. Only the administrator can control PTZ from a remote site.



▶ Alarm Out Control

Control the alarm out device of the remote DVR by clicking the ON or OFF button. Only the administrator can control alarm out from a remote site.

NOTE: Color control, PTZ control, and alarm out control may not be supported, depending on the specification of the remote DVR.

▶ Save

Clicking the button on the toolbar saves the current image as viewed on the screen in a bitmap or JPEG file format. Text information can be included when saving the image.

▶ Print

Clicking the button on the toolbar prints the current image as viewed on the screen on the printer connected to your computer. Text information can be included when printing the image.

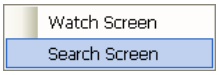
4.2 Playback and Search

The RASplus provides playback and search functions for recorded images on the remote DVR. Also, it provides additional functions including zoom, various image enhancement, image saving and image printing. For the remote playback and search, the displays option of Search Screen or Watch and Search Screen should be selected during System setup.

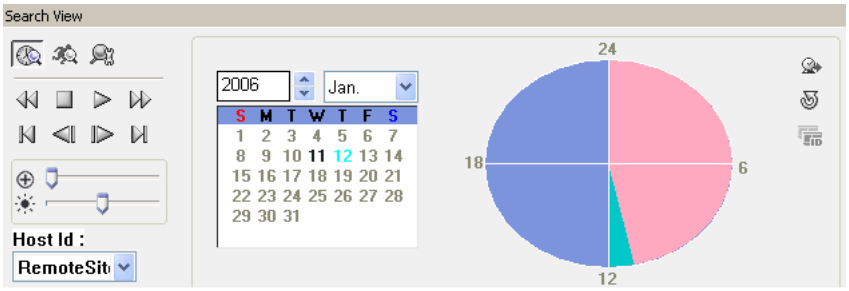
To connect the remote site on the Search screen, select the site or camera you want to connect to in the Remote Site or Favorite Site panel and then drag and drop it to the desired position on the screen. Click the button on the toolbar or select Disconnect from the System drop-down menu to disconnect from the current connection.

NOTE: Connecting the Favorite site will be available only when selecting the *Search Screen* display option to the selected Favorite site during Favorite Site setup. Refer to the *3.3 Menu – System Menu* for details of Favorite Site setup.

NOTE: When selecting the displays option of *Watch and Search Screen* during System setup, the remote site can be connected using the right mouse button. Select *Search Screen* to connect the selected site on the Search screen when the following text menu screen appears.



Search View Panel



The Search View panel consists of playback and search controls, time-lapse search table, and event search table.

The playback buttons on the Search View panel perform the following functions as described below:

- Fast Backward Play
- Stop
- Play
- Fast Forward Play
- Go to the First Image
- Go to the Previous Image
- Go to the Next Image
- Go to the Last Image

NOTE: The speed of fast forward is dependent on the network bandwidth and the number of images per second.

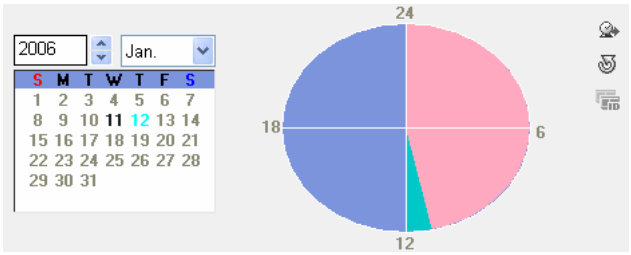
Enlarges a specific part of the image up to five times using the control slider. The user can electronically pan and tilt within the enlarged image by dragging the image using a mouse. Clicking the left mouse button on the enlarged image moves its position. Changes the brightness of the current image using the control slider.

Search Mode

The RASplus supports two search modes of operation: time-lapse mode and event mode. The time-lapse search is a process that the system searches for recorded data by time and then plays back the found images. The event search is a process that the system searches for event log entries using specific conditions and plays back the images associated with those event entries. These two modes have different in panel configuration and search method.

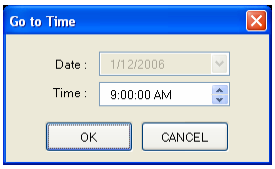
NOTE: When multiple remote sites are connected on the Search screen, you can select the remote site you want to search for by clicking any camera of the remote site on the screen or select the remote site name from the Host ID list at the bottom left corner of the Search View panel.

▶ Time-Lapse Search

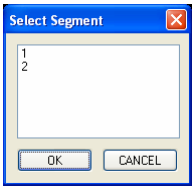


Click the button on the Search View panel to enter the time-lapse search mode. Selecting a date from the calendar initiates the time-lapse search. The dates for which recording is available are enabled. When first entering the time-lapse search, the newest recorded date will be selected (highlighted) in the calendar. Click the (Reload) button to reload the date information. Recorded information available from the selected date is shown on the timetable. The recorded data are displayed by time (in hour segments). A highlighted hour segment indicates the selected time that will be played back. Go to a specific hour by clicking the mouse on the desired hour segment. Video images will be played back starting with the first image captured within the one-hour segment.

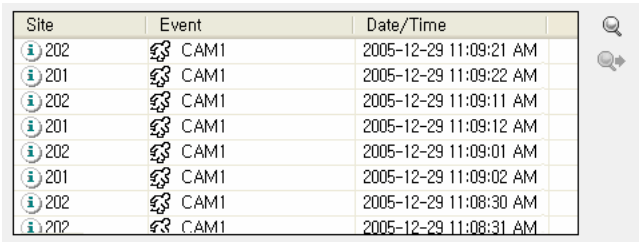
To view an image at a specific time, click the (Go To) button.



If the remote DVR's time and date have been reset to a time that is earlier than some recorded video, it is possible for the DVR to have more than one video segment in the same time range. Click the (Segment) button and select the video segment you want to search. A time bar of the active segment will be highlighted.

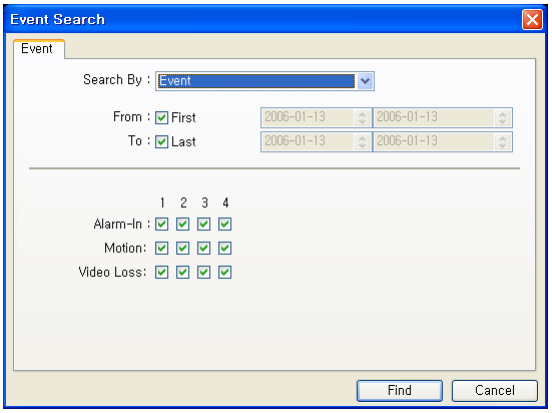


▶ Event Search

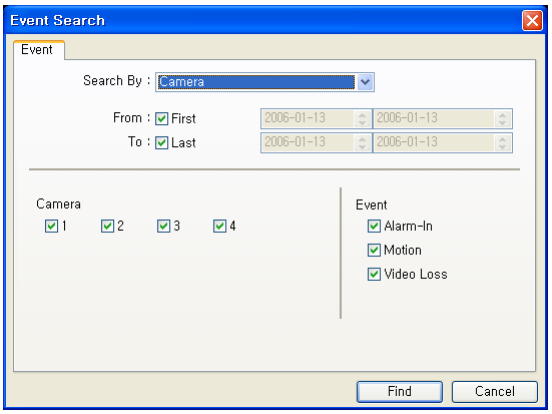


Click the button on the Search View panel to enter the event search mode. First, click the button, and set up the search condition in the following Event Search dialog box.

Search By Event: Searches for the detection results of the target event(s) by selecting the target event(s) as the search condition



Search By Camera: Searches for the event results of the target camera(s) associated with optional event(s), and also search for more specific results by selecting the event(s) type.



NOTE: When selecting *First* for the search starting time, search from the first recorded data. When selecting *Last* for the search ending time, search until the last recorded data.

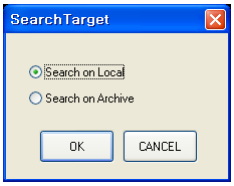
NOTE: The information of search methods in the *Event Search* dialog box can vary with the specification of the remote DVR.

Set up the search criteria for the event search in the Event Search dialog box. Select the search method first, and then click the Find button after setting the search period and the other conditions according to the search method. The results will be displayed in the event list, and a total of 100 results can be displayed at a time. Click the (Query Next) button to display the next results. If you select the target event in the list, the recorded data associated with that event will be displayed on the screen. The images may be played back using the play back buttons.

Additional Functions

▶ Searching Data Source

Click the button to set up the data source to be searched.



- Search on Local: Searches recorded data on primary storage installed in the remote DVR.
- Search on Archive: Searches archived data on backup storage installed in the remote DVR.

▶ Screen Format

The RASplus provides multi-screen playback function. The available multi-screen formats are single-screen, quad, 3x3, 4x4, full-screen, 5x5, 6x6, 7x7 and 8x8.

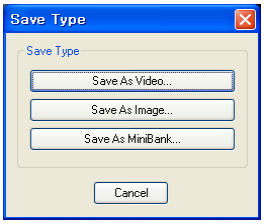
▶ Image Processing

Allows enhancements to be made to played back images using processing controls on the Image Processing panel.

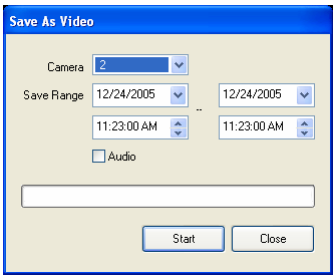
Blurs the given image.
Sharpens the given image.
Equalizes the given image.
Reduces the alias effect that occurs when using the zoom function.
Reloads the original image.

▶ Save

Clicking the button on the toolbar saves recorded video.



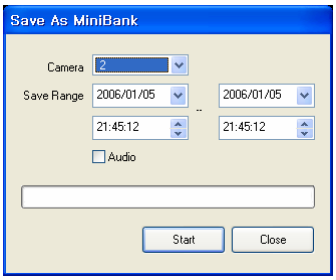
- Save As Video…: Saves any video clip of recorded data in an AVI (Audio Video Interleaved) file format. Set up the saving condition in the following dialog box, and then click the Start button then set the file name and the video compression codec.



NOTE: The Save As Video dialog box can differ according to the model of remote DVR that is connected with the RASplus.

- Save As Image…: Saves the current image in a bitmap or JPEG file format.

- Save As MiniBank…: Saves any video clip of recorded data in an .exe file format. Select the camera number for which you want to save video in the Camera, and set the time range you want to save in the Save Range. Placing a checkmark in the Audio box saves audio with video. Click the Start button, and select a Save in, enter a File name and then select a Save as type (.exe) for the video you are saving. Then click the Save button



NOTE: Do not save files larger than 2GB.

▶ Print

Clicking the button on the toolbar prints the current image as viewed on the screen on the printer connected to your computer. Text information can be included when printing the image.

4.3 Status View

Function Buttons

Disconnect: Disconnects all the current connection on the Status panel.

NOTE: If you want to connect to another site, disconnect from the currently connected system on the Status panel first by clicking the button.

Remote Setup: Allows changing the setup of the remote DVR connected on the Status panel.

NOTE: Refer to the manual for each applicable remote DVR for the details of system setup.

Remote System Log: Displays the system log information of the remote DVR connected on the Status panel.

Remote Event Log: Displays the event log information of the remote DVR connected on the Status panel.

NOTE: Refer to the *3.3 Menu – Remote Menu* for the details of the Remote System Log and Remote Event Log.

NOTE: When the remote site is not connected on the Status panel, Remote Setup, Remote System Log and Remote Event Log menus can be performed by clicking the right mouse button after selecting the remote site on the Remote Site panel.

Status Display Window

Displays the event, alarm out, system check and recording status information of the remote system connected on the Status panel in real-time.

- Event: Displays the events detected by the internal motion detector or external sensor. The status display of event detection will continue during the preset dwell time of the event-driven recording.

Event Detection (Motion Detection, Sensor)
No Event Detection
Event Off

- Alarm Out: Displays status of the alarm-out signals.

Alarm Out
No Alarm Out
Alarm Out Off

- System Check: Displays the function status of the camera, alarm, and recording of the remote DVR.

Normal (Camera, Alarm, Recording)
Irregular
System Check Off

NOTE: Displaying some system check icons may not be supported, depending on the specification of the remote DVR.

- Record From / To: Displays the record period.

- Status: Displays the recording, playback, archiving, clip-copy status.

On (Recording, Playback, Archive, Clip-Copy)
Off

NOTE: Displaying some status icons may not be supported, depending on the specification of the remote DVR.

- Version: Displays the system version information.

Appendix A — Reviewing Video Clips

You do not need to install any special software on you personal computer to review the video saved as MiniBank. The backup file contains the Player program. Double-clicking the target backup file starts the Player program.

NOTE: The Player GUI can differ according to the model of remote DVR that is connected with the RASplus.

MiniBank Player

NOTE: It is suggested that the computer used for the MiniBank Player program has at least a 800MHz Pentium III. If your CPU is slower than this, video clips recorded at maximum speed with very high image quality will be played back slowly.

Click the Save button to save the current image in a bitmap file format to the local hard disk drive or floppy disk.

Click the Print button to print the current image on the printer connected to your computer.

The Backup File Information window displays information regarding the backup file. Location displays the site description of the DVR where the backup was made. Record displays the time span of the video backup file. Encryption displays whether the backup file has been tampered with. Normal means the file has not been tampered with, Wrong means the system has detected tampering, and no mark means the user cancelled the encryption check.

The Current Image Information window displays information about the current image. Camera Title displays the camera name of the current image, and Time displays the date and time the image was recorded.

The Playback Function Buttons include fast backward, backward, play, pause, fast forward, go to the first image, go to the previous image, go to the next image, and go to the last image buttons.

The Image Search Slide Bar displays the current playback position. The user can move to another image clicking the mouse and dragging along the slide bar.

The Brightness Revert Button reloads to the original image.

The Brightness Control Slide Bar adjusts the brightness of the backup images by clicking the mouse and dragging along the slider bar. Minute brightness change can be made by using the arrow buttons located at each end of the bar.

Clicking the OSD (On-Screen Display) Button switches the OSD option. The OSD information includes camera location and date/time.

Clicking the Mute Button mutes the recorded audio.

The Monitoring Screen displays the backed up images. Click the right mouse button on the image to zoom in and click the right mouse button while holding the Ctrl key to zoom out. Scrolling the mouse wheel up or down on the image also zooms in or out. Clicking the right mouse button on the image while holding the Shift key switches the screen size. Click and hold the left mouse button and drag the image to move its position.

Clicking the Quit button exits the Player program.

Clicking the Player logo at the top left corner while holding the Shift key switches video formats when you are experiencing improper image display.

Clip Player

NOTE: It is suggested that the computer used for the Clip Player program has at least a 800MHz Pentium III. If your CPU is slower than this, video clips recorded at maximum speed with very high image quality will be played back slowly. Also DirectX 8.0 or higher is required to install, and the VGA card with 16MB or higher video RAM is recommended for proper operation.

The ClipPlayer Screen displays the clip images.

NOTE: Proper image display depends on the display settings of your PC. If you are experiencing display problems, click the right mouse button on the background screen and select Properties → Settings then set the *Color quality* to "*32 bit*". And then select Advanced → Troubleshoot then set the *Hardware Acceleration* to "*Full*". Please make sure that DirectX version 8.0 or higher has been installed if the display problem continues to occur. To check the version of DirectX, click Start → RUN and type "dxdiag" then hit the enter key which will display DirectX Diagnostic Tool dialog box. And then move to the Display tab and make sure *DirectDraw Acceleration* is set to "*Enabled*" then test the DirectDraw by selecting the *DirectDraw Test* button. After changing the settings, update the driver version of the VGA card. If still have display problems after changing all display settings as described above, try to replace the video card. The video cards with an ATI chipset are recommended.

Clicking the X exits the Player program.

Click the ⏮ to go to the beginning of the video clip.

Click the ⏪ to play the video clip in fast reverse.

Click the ◀| to go back one frame of the video clip.

Click the ▶ to play the video clip.

Click the |▶ to go forward one frame of the video clip.

Click the ⏩ to play the video clip in fast forward.

Click the ⏭ to go to the end of the video clip.

Click the ◀⊞ to show the previous page.

Click the ⊞ to cycle through the screen layouts. It cycles through 2x2, 3x3 and 4x4.

Click the ⊞▶ to show the next page.

Click the to select from Save, Print, Info, Image Processing and Video Format. Selecting Save saves the current image in a bitmap file format to the local hard disk drive or floppy disk. Selecting Print lets you print the current image on the printer connected to your computer. Selecting Info. displays Channel, Title, Time, Flag, Size and Resolution information about the image. Selecting Image Processing allows you to control brightness, blur and sharpen for play back images. Selecting Video Format allows you to find appropriate display environments that can be varied according to the types of graphic card installed in your PC. Use Video Format option when you are experiencing improper image display.

NOTE: *Image Processing* works only in the single-screen layout and also in the pause mode.

NOTE: If you are not sure about the appropriate *Video Format* option, try each option until proper image display is being set.

Click the to select from Normal and Double screen views. Clicking the left mouse button on the enlarged image moves its position.

Click the ⛶ to display the image full screen.

Encryption icons display in bottom-right corner. ✅ indicates the clip file has not been tampered with, and ❌ indicates the system has detected tampering.

NOTE: If the VGA card or monitor for your PC does not support 640x480 video resolution, *Full Screen* might not display properly when selected. If this happens, press the ESC key on your PC to return to the normal screen mode.

Click the slider bar and move it left or right to move through the video clip.

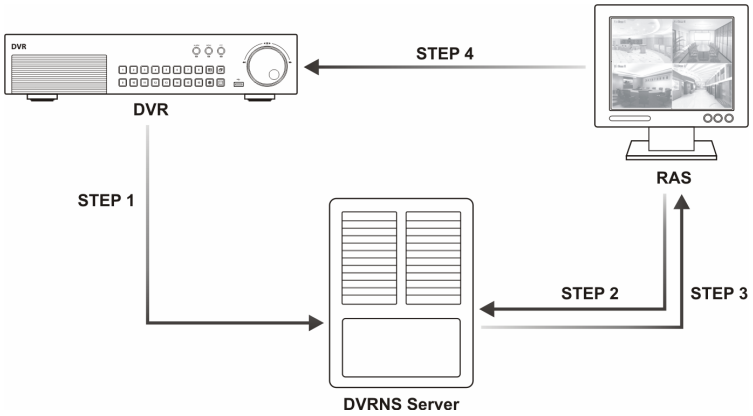
Placing the mouse cursor on an image and clicking will cause that image to display full frame.

Appendix B — DVR Name Service (DVRNS)

Overview

Using Static IP addresses in LAN/WAN networks requires high management overhead and increases the cost burden to users. Therefore, it has become essential for DVRs to support Dynamic IP addresses in ADSL/VDSL networks using DHCP (Dynamic Host Configuration Protocol). This reduces cost burdens and increases cost effectiveness for system users.

System Configuration



STEP 1 (DVR → DVRNS Server): Register the unit name and IP address of the DVR during the DVRNS setup on the Remote DVR. This unit name and IP address will be registered on the DVRNS server directly.

NOTE: Refer to the manual for each applicable remote DVR for the details of the DVRNS setup.

CAUTION: The DVRNS registration is limited to only one DVRNS server. The DVR cannot be registered to multiple DVRNS servers.

STEP 2 (RAS → DVRNS Server): Request the IP address of the remote DVR using the registered unit name of the DVR you want to connect to.

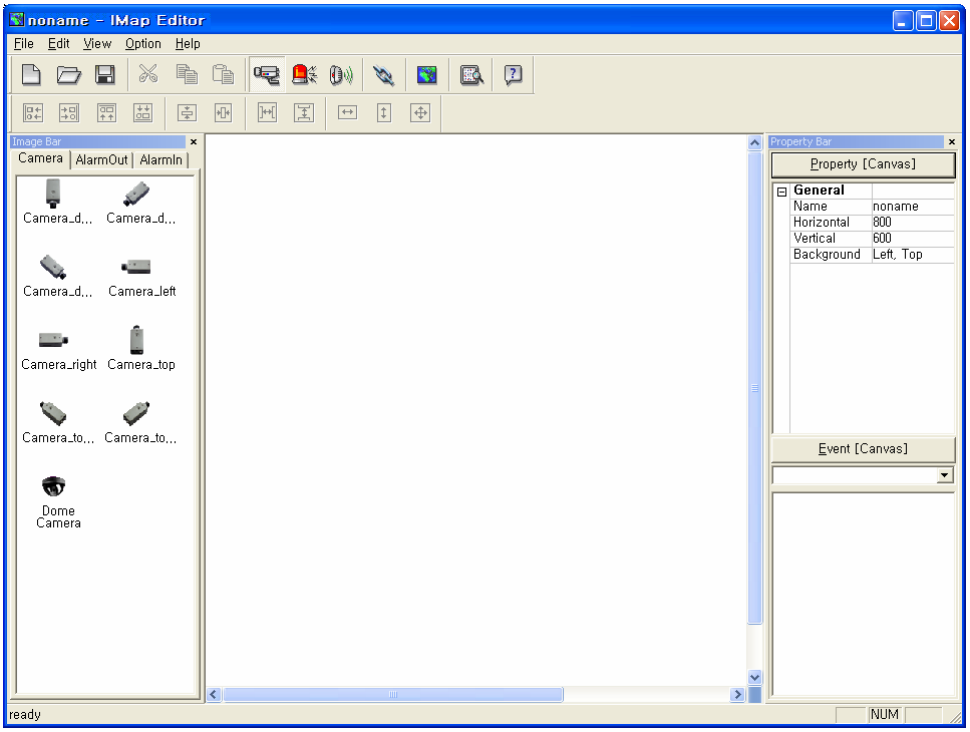
STEP 3 (DVRNS Server → RAS): The DVRNS server notifies the RAS of the requested IP address.

STEP 4 (RAS → DVR): Connect to the target DVR using the IP address returned from the DVRNS server.

NOTE: You should follow steps 2 to 4 whenever connecting to the remote site because the DVR name and IP address might change at anytime.

Appendix C — Map Editor

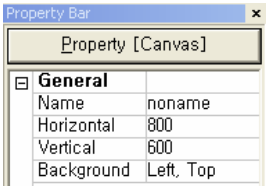
IMap Editor, the main administration software program of IMap, provides the map composition function for the remote site monitored. With the drag&drop and link function, you can compose and edit the map easily and efficiently. Run the program by selecting ImapEditor from RASplus options under the Start menu in Windows.



Background Image Setting

Click the (Background) button on the toolbar and select the background image of the map.

Go to the Property [Canvas] tab and set the background image information.



- Name: Enter a name of the background image.
- Horizontal / Vertical: Adjust the background image size by clicking each field and changing the numbers.
- Background: Adjust the position of the background image on the screen. Select Auto Fit to fit the map screen size to the background image.

Link Setting

Click the (Link) button on the toolbar and place it on the screen linked with a sub-map. Then the Link box appears. Adjust the size and position of the link box using a mouse, a keyboard or icons shown below.

- Interval adjustment: Equalizes the interval between selected boxes.

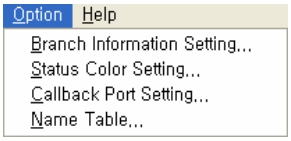
- Size adjustment: Equalizes the size of selected boxes. Clicking arrow keys while holding the Shift key on a keyboard changes the size of selected boxes at a time.

- Position adjustment: Fits the selected boxes to one direction or to the center. Clicking arrow keys while holding the Ctrl key on a keyboard changes the position of selected boxes at a time.

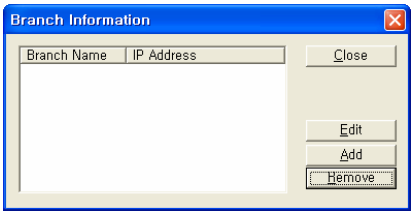
- Cut, Copy, Paste: Cuts, copies or pastes the link box.

Option Menu

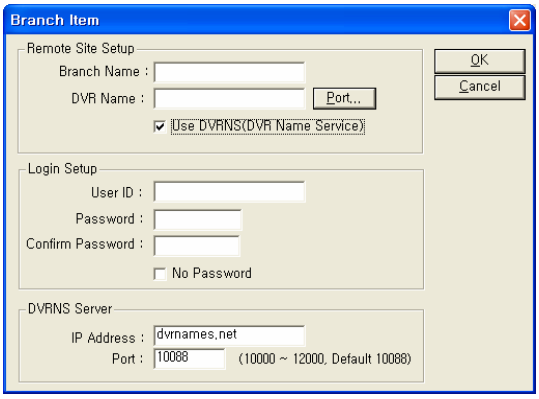
Click the Option menu to set up the DVR information, device status display and callback.



Branch Information Setting: Select the Branch Information Setting… in the Option menu to set the information of DVR connected with devices, and the following Branch Information setup window appears.



Click the Add button, and the following Branch Item box appears.



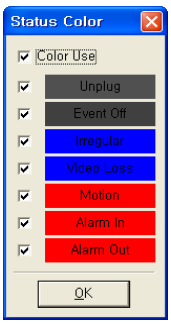
- Remote Site Setup: Enter the branch name and IP address of the DVR connected with devices. Click the Port… button and enter the network IP port number (8000~12000) that is the same with the value set during the LAN setup on the DVR. Check the box beside Use DVRNS (DVR Name Service) to use the DVR name service.

NOTE: In case that you use the DVR name service, you can enter the name registered on the DVRNS server instead of the IP address of the DVR and don't need to enter the network IP port number.

- Login Setup: Enter the user ID and password of the DVR associated with devices.
- DVRNS Server: Enter the IP address and port number (10000~12000) of the DVRNS server, which are the same with the value set during the DVRNS setup on the DVR.

Clicking the OK button saves the setting.

Status Color Setting: Select the Status Color Setting… in the Option menu to set the device to display its unique color reflecting its status on IMap Viewer, and the following Status Color window appears.



Check the box beside Color Use and select each status box to use. Click each selected status box, select the desired color, and click the OK button.

Unplug	:	The connection to the DVR connected with the device failed.
Event off	:	Event detection function is not set up.
Irregular	:	The device is not working properly.
Video Loss	:	Video loss is detected.
Motion	:	Motion is detected.
Alarm In	:	Alarm in is detected.
Alarm Out	:	Alarm out is detected.

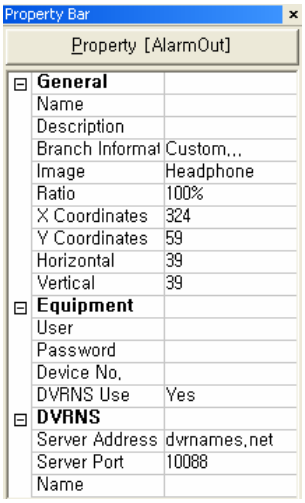
NOTE: It displays the status of its devices as *Irregular* according to the setting on *System Check* and as *Video Loss* / *Motion* / *Alarm In* / *Alarm Out* according to the event detection settings on the remote DVR.

NOTE: The device displays mixed color when detecting more than two statuses at the same time.

Device Setting

Selecting , , or button on the toolbar displays the Camera, AlarmOut or AlarmIn tabs under the Image Bar. Select the icons, and drag & drop them at the desired spot on the background image.

Go to the Property [Camera/AlarmOut/AlarmIn] tab and set the device information.



General

- Name: Enter a device name.
- Description: Enter a description about the device.
- Branch Information: Select a proper branch for the device in the list, and the Equipment fields (IP Address, User, Password and Port Number) are filled automatically with the information set in Branch Information Setting….
- Image: Select an image of a device.
- Ratio: Adjust the size of the device image.
- X Coordinates / Y Coordinates: Adjust the position of the device image by clicking each field and changing the numbers.
- Horizontal / Vertical: Adjust the size of the device image by clicking each field and changing the numbers.
- Popup camera: Under the Property [AlarmIn] tab, you can associate a camera with the sensor. Enter the camera name to associate with the sensor.

Equipment

- User / Password / Port: Each field is filled automatically with the information (user ID, password, and port number) set in Branch Information Setting…, or you can enter it manually.
- Device No.: Set the device number (1 ~ 32) for each device.
- DVRNS Use: Select Yes to use DVR name service, and DVRNS field appears. Enter the IP address and the port number of the DVRNS server, and the name of the DVR registered on the DVRNS server.

NOTE: If you set the IP address and port number of the DVRNS server in *Branch Information Setting…*, DVRNS fields are filled with the information automatically.

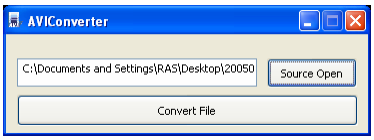
NOTE: *DVRNS* function is supported only with the devices associated with the DVR providing DVRNS (DVR Name Service) function.

Clicking the (Save) button on the toolbar saves the map.

Appendix D — AVI Converter

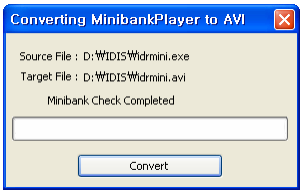
AVI Converter program converts .exe file saved as Minibank to an AVI (Audio Video Interleaved) file format. Run the program by selecting AVIConverter from RASplus options under the Start menu in Windows.

Click the Source Open button and select the file to convert. And then click the Convert File button.

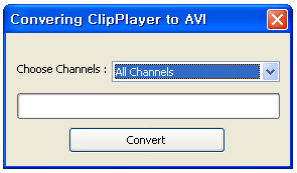


NOTE: The source file list can include minibank player file or clip player file according to the model of remote DVR that is connected with the RASplus.

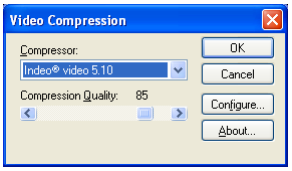
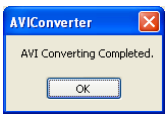
When selecting the minibank player file, the program checks whether the backup file has been tampered with. Click the Covert button when the checking process completes.



When selecting the clip player file, you can select the camera channel including the backup file you would like to covert. Click the Covert button after selecting the camera channel.



When the following dialog box appears, select the video compression codec and then click the OK button to start converting.



A message "AVI Converting Completed" displays when converting to an AVI file completes.