RASplus (Remote Administration System)

Digital Video Recorder Software

User Guide
### Revisions

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<td>12/07</td>
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</tr>
</tbody>
</table>
Contents

Camera Title ................................................. 46
Aspect Ratio ................................................. 46
Antialiasing ................................................. 47
Camera Disconnection ................................. 47
Sequence Monitoring .................................... 48
Additional Functions .................................. 48
Playback and Search .................................. 50
Search View Panel ......................................... 51
Search Mode ................................................... 52
Additional Functions .................................. 56
Panic Recording .............................................. 58
Status View ..................................................... 59
Function Buttons ........................................ 60
Status Display Window .................................. 61

Appendix A  Reviewing Video Clips ..................... 63
MiniBank Player ............................................. 63
Clip Player ..................................................... 65

Appendix B  DVR Name Service (DVRNS) ................. 69
System Configuration ....................................... 69

Appendix C  Map Editor ...................................... 71
Background Image Setting ......................... 72
Option Menu ................................................. 72
Device Setting .............................................. 75
Link Setting ................................................. 77
Figures

Figure 2-1 RASplus License Agreement .................................................. 10
Figure 2-2 Installation Confirmation ..................................................... 10
Figure 2-3 Welcome to RASplus Setup Wizard ....................................... 11
Figure 2-4 RASplus Ready to Install ................................................... 11
Figure 2-5 RASplus Language Option ................................................ 12
Figure 2-6 RASplus Exit Setup ............................................................ 12
Figure 2-7 Welcome to MSXML Setup Wizard ......................................... 13
Figure 2-8 MSXML End-User License Agreement ................................... 13
Figure 2-9 MSXML Customer Information ............................................ 13
Figure 2-10 MSXML Choose Setup Type .............................................. 14
Figure 2-11 MSXML Exit Setup ........................................................... 14
Figure 3-1 RASplus GUI .......................................................................... 15
Figure 3-2 RASplus Viewing Screen .................................................... 16
Figure 3-3 Four Position Arrow Icon .................................................. 17
Figure 3-4 Four Position Arrow with Tab Icon ..................................... 17
Figure 3-5 Remote Sites Panel ............................................................. 18
Figure 3-6 Favorite Sites Panel ............................................................. 18
Figure 3-7 Status View Panel ............................................................... 19
Figure 3-8 Search View Panel ............................................................... 19
Figure 3-9 Map Panel ............................................................................ 20
Figure 3-10 Map Popup Options Menu ................................................ 21
Figure 3-11 PTZ Controls ....................................................................... 21
Figure 3-12 Screen Option ..................................................................... 21
Figure 3-13 Color, PTZ and Alarm Out Control Panels .......................... 22
Figure 3-14 Image Processing Panel .................................................... 22
Figure 3-15 Emergency Event View Panel .......................................... 22
Figure 3-16 Watch Event View Panel ................................................... 23
Figure 3-17 Report View Panel .............................................................. 23
Figure 3-18 RASplus Menu Bar ............................................................. 24
Figure 3-19 System Menu ..................................................................... 24
Figure 3-20 Setup Screen — System 1 .................................................. 25
Figure 3-21 Drawing Mode Screen ....................................................... 25
Figure 3-22 Recording Mode Setup Screen .......................................... 27
Figures

Figure 4-18 Search Data Source Screen .......................................................... 56
Figure 4-19 Screen Format Toolbar ................................................................. 56
Figure 4-20 Image Processing Panel ................................................................. 56
Figure 4-21 Save Type Screen ............................................................................ 57
Figure 4-22 Save As Video Screen ..................................................................... 57
Figure 4-23 Save As MiniBank Screen ............................................................... 58
Figure 4-24 Status View Panel ......................................................................... 60
Figure A-1 MiniBank Self Player User Interface .................................................. 64
Figure A-2 Clip Player User Interface ............................................................... 66
Figure B-1 DVRNS Server System Configuration ................................................. 69
Figure C-1 Map Editor ....................................................................................... 71
Figure C-2 Property [Canvas] Tab ...................................................................... 72
Figure C-3 Option Menu ................................................................................... 72
Figure C-4 Site Information Window ............................................................... 72
Figure C-5 Site Item Window ............................................................................ 73
Figure C-6 Popup Dwell Time Dialog Box ......................................................... 73
Figure C-7 Status Color Window ....................................................................... 74
Figure C-8 Name Table Window ....................................................................... 75
Figure C-9 Property [Camera/AlarmOut/AlarmIn] Tab ......................................... 75
Figure C-10 Event [Camera] Tab ....................................................................... 77
Figure C-11 Event [AlarmOut] Tab .................................................................... 77
Figure C-12 Event [AlarmIn] Tab ....................................................................... 77
Figure C-13 Property [Link] Tab ....................................................................... 78
About This Document

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

Overview of Contents

This document contains the following chapters and appendixes:

- **Chapter 1, Overview**, describes the Remote Administration System and lists its features.
- **Chapter 2, Installation**, provides the procedures necessary to install RASplus.
- **Chapter 3, Configuration**, covers the configurations and settings available with RASplus.
- **Chapter 4, Operation**, provides the procedures necessary for RASplus operation.
- **Appendix A, Reviewing Video Clips**, covers the functions and features of the MiniBank Self Player program.
- **Appendix B, DVR Name Service (DVRNS)**, explains how to set up a remote DVR using a DVRNS server.
- **Appendix C, Map Editor**, describes the map editor and its features.

Related Documents

For more information about topics that are relevant to the subject of this manual, see the documents listed below.

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<tr>
<th>Document title</th>
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<tr>
<td>HRSD8, HRSD16 DVR User Guide</td>
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Overview

This manual describes the installation and operation of RASplus (Remote Administration System Plus) software, which is designed to be used with remote digital video recorders (DVRs).

Features

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

- Checks and reports status of remote DVRs
- Notification of events detected at remote sites
- Remote monitoring of live camera images
- One-touch panic recording of currently displayed images
- Time-lapse and event searching of recorded images
- Remote software upgrades and system programming
- View system and event log information of remote DVRs
- Remote monitoring of multiple remote sites using 3D maps
- Connect up to 16 remote sites at a time
Overview

Product Information

Package Components

- RASplus User Guide (this document)
- Multilingual RASplus Software and User Guide (RASplus CD-ROM)
- DVRNS Server Software and User Guide (RASplus CD-ROM)

System Requirements

Playing back digital video puts a high demand on your computer system. To use the RASplus video monitoring and playback functions, your personal computer (PC) must meet the minimum system requirements listed below:

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

Installing RASplus

**Caution** If an older version of RASplus has already been installed on your computer, you should uninstall the older version before installing the new one.

**Note** In the Start menu in Windows, go to your Control Panel. Double-click **Power Options** to open the Management Properties dialog box. Under the **Power Schemes** tab, set both Turn off monitor and Turn off hard disks to **Never**.

1. Insert the installation CD.
2. Run the **Setup.exe** file.
3. When *Figure 2-1* appears, click **Accept**.
Note Installing .NET Framework is required for RASplus to operate properly. This installation step will be skipped if .NET Framework is already installed on your computer.

4. When Figure 2-2 appears, click **Install**.

Note Installing the Visual C++ Runtime Libraries is required for RASplus to operate properly. This installation step will be skipped if the Visual C++ Runtime Libraries are already installed on your computer.

5. When Figure 2-3 appears, click **Next**.
Installation

Figure 2-3  Welcome to RASplus Setup Wizard

6. Click **Next**.

Figure 2-4  RASplus Ready to Install

7. Set the language option by selecting either **Select language when starting RASplus** or **Always start RASplus using the language below**. If you select to **Always start RASplus using the language below**, select the desired startup language from the list of available languages and then click **OK**.
Figure 2-5  RASplus Language Option

Note To properly display the selected language, your PC’s operating system should be set up to support the selected language.

Note In order to change RASplus’ language after selecting the Always start RASplus using the language below option, the RASplus software must be re-installed.

8. When Figure 2-6 appears after finishing the RASplus installation, select the Install MSXML check box and click Finish. Installing the MSXML application is required for RASplus to initiate.

Figure 2-6  RASplus Exit Setup

9. Click Next.
Installation

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

11. Enter a User Name and Organization, and click Next.

12. Select Install Now.
13. Click **Finish** to complete the MSXML installation.
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 viewing screen, 12 docking panels, menus and toolbar.

Figure 3-1  RASplus GUI
RASplus Viewing Screen

The Viewing screen displays images from selected cameras in live monitoring or playback mode. RASplus provides various multi-screen layouts; single-screen, quad, 1+7, 3x3, 4x4, 5x5, 1+32, 6x6, 7x7, 8x8 and full-screen.

RASplus Panels

RASplus has many powerful tools that can be used to streamline your work. Most of the tools are located on 12 docking panels that can be placed on the screen where they are most convenient. You can keep your screen free of clutter by displaying only the panels you use most frequently.

Clicking ▶️ in the upper right corner of a panel enables the auto-hide feature. Tabs for auto-hidden panels are displayed on the side of the screen. Scrolling over an auto-hidden panel tab will cause the panel to fly out. You can cause the panel to lock back into its original display position by clicking ⏳️. Clicking ❌ hides the panel without a tab. Hidden panels can be displayed by selecting them from the drop-down menus.

Panels can be resized, moved and combined with other panels to create a workspace that fits your needs. To resize a panel:
1. Scroll the cursor over the edge of the panel until the cursor changes to ↔ or ↑. Then click the left mouse button and drag the panel border to enlarge or reduce its size.

To move a panel to a different position on the screen:

1. Scroll the cursor over the title bar of the panel until it changes to ◄. Once you click and drag, position arrows will display on the screen.
   The four position arrows along the outer edges allow you to place the panel along the given edge independent of the other panels.
2. When you drag the panel over a position arrow, a transparent blue box will display showing the new panel position.
3. If you are satisfied with the position, release the left mouse button and the panel will move to its new position.

You can also move a panel so that it is associated with another panel:

1. Drag the panel over the panel you want it associated with, and the icon with four position arrows will center over that panel.
2. Scrolling the cursor over the icon arrows will cause a transparent blue box to display where the panel will be located.
3. If you are satisfied with the position, release the left mouse button and the panel moves to its new position.

![Figure 3-3 Four Position Arrow Icon](image)

It is possible to combine panels so that they take up less space on the screen. Combined panels have a row of tabs across the bottom. Clicking a tab brings that panel to the foreground. To combine panels:

1. Move the cursor to the title bar of the panel you want to move.
2. Click and drag the panel onto the panel you want to combine it with. If they can be combined, the four-position arrow icon will have a tab symbol in the center.
3. Drag the cursor over the tab symbol ▼, and a new tab appears on the panel.
4. Release the mouse button to combine the panels.

![Figure 3-4 Four Position Arrow with Tab Icon](image)

The layout possibilities are virtually unlimited. With a little experimentation you will be able to lay out the RASplus screen so that it best meets your requirements.
Remote Sites Panel

The **Remote Sites** panel displays a list of remote sites registered during RASplus System setup and a list of installed cameras at each remote site. Entering the site name in the query box and clicking ![l] allows you to find the remote site easily in the Remote Sites list. Clicking ![r] allows you to register the remote site, while clicking ![d] removes the selected remote site from the list, and clicking ![e] allows you to edit the site information of the selected remote site. To connect to a remote site:

1. Select the site or camera you want to connect to from the list.
2. Drag and drop the site or camera in the desired position on the screen or the Status View panel.
3. The screen displays images from selected cameras, and the Status View panel displays the system status information of the connected remote site.

For an alternate way to connect to the Status View Panel:

1. Select a site from the list and click the right mouse button.
2. Select **Connect Status View** from the popup menu.
   This popup menu initiates the remote menu including **Remote Setup**, **Remote System Log**, and **Remote Event Log**. Refer to **Remote Menu**, page 37, for more details.

Favorite Sites Panel

The **Favorite Sites** panel displays the list of Favorite sites registered during RASplus System setup. Selecting the Favorite site you want to connect to from the list and then dragging and dropping it in the desired position on the screen automatically connects all the remote sites registered in the Favorite site.
The **Status View** panel displays the event, alarm out, system check and recording status information of the connected remote site in real-time. To connect to the remote site, select the site or camera you want to connect to from the Remote Site or Map panel and then drag and drop it into the Status View panel. Refer to *Status View*, page 63, for more details.

**Search View Panel**

Use the Search View panel to perform time-lapse or event searching of recorded data on the remote DVR. Refer to *Search Mode*, page 56, for more details.
Map Panel

The **Map** panel allows efficient monitoring of the remote sites by displaying a three-dimensional map of the selectable site:

- Click the right mouse button on the map panel to select the map image file (.rmp) you want to monitor from the list. When the selected map is linked with sub-maps, clicking the linked image moves to the sub-map.

- To connect to the remote site, select the device you want to connect to from the Map panel and then drag and drop it in the desired position on the screen or the Status View panel.

- 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 appear (maximum of 4).

<table>
<thead>
<tr>
<th>Status Icon</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Icon" /></td>
<td>Unplugged</td>
</tr>
<tr>
<td><img src="image2" alt="Icon" /></td>
<td>Event off</td>
</tr>
<tr>
<td><img src="image3" alt="Icon" /></td>
<td>Irregular</td>
</tr>
<tr>
<td><img src="image4" alt="Icon" /></td>
<td>Video Loss</td>
</tr>
<tr>
<td><img src="image5" alt="Icon" /></td>
<td>Motion</td>
</tr>
<tr>
<td><img src="image6" alt="Icon" /></td>
<td>Alarm In</td>
</tr>
<tr>
<td><img src="image7" alt="Icon" /></td>
<td>Alarm Out</td>
</tr>
</tbody>
</table>

**Note**  
The status of devices is displayed as **Irregular** based on the settings in System Check and as **Video Loss**, **Motion**, **Alarm In** and/or **Alarm Out** according to the event detection settings on the remote DVR.

- The Map panel pops up another screen when alarm-in, motion or video loss events are detected or when you click the device icon according to the Map Editor settings. Refer to *Appendix C, Map Editor, page 75*, for more details on the popup function.

Change the popup screen location and/or size:

- Click the left mouse button on the screen and drag it to where you want it located.
- Click the right mouse button on the popup screen to display *Figure 3-10*. Choose one of the following options:
Figure 3-10    Map Popup Options Menu

- **x0.25** to **x2**: Sets the desired size of the Map popup screen.
- **Full Screen**: Enters the full-screen mode of the Map popup screen.
- **Transparency...**: Adjusts the transparency of the popup screen (Windows XP or Vista).
- **PTZ Set...**: Controls pan, tilt and zoom of the selected PTZ camera.

Figure 3-11   PTZ Controls

- **Original Ratio**: Displays the Map popup screen in its original aspect ratio.
- **Antialiasing Screen**: Enhances image display quality on the popup screen by eliminating staircase (aliasing) effects on the enlarged image.
- **User Set...**: Sets the mode of the current popup screens displayed on the monitor. For example, the monitor displays the current popup screen with enough frames for 16 cameras when you select **4x4**.

Figure 3-12   Screen Option

---

**Note**  Refer to *Appendix C, Map Editor* for details on editing maps.

Color, PTZ and Alarm Out Control Panels

These three panels in *Figure 3-13* allow color control, PTZ control and alarm out control while live monitoring a remote site. Refer to *Live Monitoring* on page 49 for more details.
The **Image Processing** panel allows enhancing of played back images. Refer to *Playback and Search* on page 54 for more details.

The **Emergency Event View** panel displays a list of events (preset for notification at the remote site) that were called from individual remote sites (LAN connection only).
Configuration

Watch Event View Panel

The **Watch Event View** panel displays events detected at individual remote sites while RASplus is in the live monitoring mode. The description of event icons is as follows:

<table>
<thead>
<tr>
<th>Icon</th>
<th>Event</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Event" /></td>
<td>Normal Event</td>
<td>Recorder Bad</td>
</tr>
<tr>
<td><img src="image" alt="Alarm" /></td>
<td>Alarm In On</td>
<td>Disk S.M.A.R.T.</td>
</tr>
<tr>
<td><img src="image" alt="Alarm" /></td>
<td>Alarm In Off</td>
<td>Disk Bad</td>
</tr>
<tr>
<td><img src="image" alt="Motion" /></td>
<td>Motion Detection</td>
<td>Disk Full</td>
</tr>
<tr>
<td><img src="image" alt="Video" /></td>
<td>Video Loss</td>
<td>Disk Temperature</td>
</tr>
<tr>
<td><img src="image" alt="Text" /></td>
<td>Text In</td>
<td>Panic Recording On</td>
</tr>
<tr>
<td><img src="image" alt="Alarm" /></td>
<td>Alarm In Bad</td>
<td>Panic Recording Off</td>
</tr>
</tbody>
</table>

Report View Panel

The **Report View** panel displays the system status information of remote sites. RASplus checks the remote site and reports system status. Report Setup must be configured during RASplus System setup for this feature to function. Refer to **System Menu** on page 24 for more details.
Note  Some report options may not be supported, depending on the specifications of the remote DVR.

RASplus Menus

Figure 3-18  RASplus Menu Bar

System Menu

Figure 3-19  System Menu

Setup

The Setup screen allows setting up the system operation and remote site configuration.

System 1 Tab

Set up the date/time format for RASplus, display options, and panic recording function.
Figure 3-20  Setup Screen — System 1

Date/Time Format  Select the date/time format.

Display Option  Set up the screen display, drag & drop popup option, display acceleration and OSD.

- **Screen Option**: Select **Watch Screen** to use RASplus for live monitoring only, **Search Screen** to use RASplus for searching only, or **Watch and Search Screen** to use RASplus for both live monitoring and searching.

- **Drag & Drop Popup Option**: Select which mouse button will be used when displaying popup menu screens from **Use Left Mouse Button**, **Use Right Mouse Button** or both (Watch and Search Screen mode only).

- **Drawing Mode Setup...**: Select the draw mode level.

Figure 3-21  Drawing Mode Screen

- **Normal Drawing**: Depends on the CPU performance of your PC and displays images in low speed (Dib Draw Mode).
**Configuration**

- **Fast Drawing (Default):** Displays images in normal speed (Direct Draw Mode).

- **Fast Drawing (YUV420/RGB32):** Depends on the performance of the video card installed in your PC and displays images in high speed (Direct Draw Mode (YUV420/RGB32)).

- **Overlay Drawing (YUV420/RGB32/RGB565):** Displays images in high speed (Direct Draw Overlay Mode (YUV420/RGB32/RGB565)).

---

**Note** If the image cannot be displayed properly because of your PC’s specifications, lower the drawing mode level.

---

**Note** While in the Fast Drawing mode, the drawing speed might decrease when the RASplus screen is not located on the primary monitor.

---

**Note** The Overlay Drawing mode may not be supported, depending on the type of video card installed in your PC. Video cards with an ATI chipset are recommended.

---

**Note** When using dual monitors, selecting Overlay Drawing will display the image only on the primary monitor.

---

- **OSD Setup…:** Select options (Title, Time Info, Date Info, Text-In and Overlay Text-In Data) to display on the screen.

**Recording Setup** Set up the use (On or Off) of the panic recording function and overwriting option of the recording folder (On or Off). When using the panic recording function and overwriting option, RASplus continues recording when the hard disk drive is full by overwriting the oldest video. Designate a recording folder path and set the recording folder size from 640 MB to 2048 MB. **Capacity** shows the remaining space of the recording folder.
Configuration

**Note**  The recording folder size cannot be changed once it has been set. Designate another recording folder path if you want to expand the recording space.

- **Recording Mode Setup...**: Set up the panic recording mode.

  **Figure 3-22  Recording Mode Setup Screen**

  ![Recording Mode Setup Screen](image)

  - **Visible Watch Camera**: Records camera channels currently displayed on the Watch screen.
  - **User Assignment Setup**: Record camera channels assigned by the user on the Watch screen.
  - **Camera Range Setup**: Records camera channels within preset channel range. Select the boxes beside **Camera** and adjust camera range up to 16 channels.

**Note** Panic recording will NOT be made for the cameras not currently displayed on the Watch screen even though they are set up to be recorded.

**Note** When selecting the **User Assignment Setup** mode, the user can manually assign camera channels to record on the Watch screen. Select a camera on the Watch screen and click the right mouse button then select **Select Record Camera** in the text menu screen. The gray 📸 icon displays on the selected camera screen.

**System 2 Tab**

Set up the modem connection information for remote access, system password, network option, report function and DVRNS server.
Figure 3-23  Setup Screen — System 2

Dial-up Network  Select **Use Modem** if you want to use a modem for remote access.

Security Option  Designate whether password confirmation is required **Before Setup**, **Before Startup**, or **Before Shutdown** of RASplus. Click **Change** to change the password.

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.

---

**Note**  The IP port number you enter should match the value set during the network setup of the remote DVR.

---

Report Setup  Set up the use (On or Off) and check intervals (from 1 to 24 hours) of the report function. When using the report function, RASplus checks on the remote site based on the user-defined interval and reports system status.

DVR Name Service  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 values set during the DVRNS setup of the remote DVR you want to connect to.
Remote Sites Tab

Configures the connection list for remote access.

**Figure 3-24  Screen Setup — Remote Sites**

Add  Click **Add** and enter the information about the remote site you want to add.
Figure 3-25  Add Site Screen

- **Reference Group**: The site should be assigned to a Reference Group for effective management of multiple remote sites. Click **Add** to create a new reference group.

- **Remote Site Setup**: Enter a site name and the IP address of the remote site (modern telephone number for dial-up connections), acquired from your network administrator. Click **Port** to set up the IP port number of each program. The IP port number should match the value set during the network setup of 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**. Select the number of cameras at the remote site. For example, selecting **8** from the list when registering a 16-channel DVR displays video of the first 8 channels on the screen.

---

**Note**  When using DVRNS server, place a checkmark in the **Use DVRNS** box, and enter the site name and DVR name of the remote site in the IP address box. The DVR name you enter should match the DVR name set during the DVRNS setup of the remote DVR.

---

- **Login Setup**: Enter the user ID and password of the remote site to be accessed. If you have entered a user ID and a password, the site will be connected automatically without a dialog box requesting a password. Select **No Password** for remote systems that do not require a password (for example, guest login).

---

**Note**  Up to 32 characters may be used for the site names, telephone numbers and user IDs. Up to 10 characters may be used for passwords.
Change  Select the group or site you want to edit and click **Change**, or double-click the group or the site to change. Edit the site information.

Remove  Select the group or site you want to remove and click **Remove**.

List All  Displays all registered remote sites.

Find  Enter the group or site name to search for and click **Find** to display the matching groups or sites in the list.

**Favorite Sites Tab**

The **Favorite Site** is a user-defined connection list that combines more than one remote site so that multiple sites can be monitored at the same time with a single connection. Add a new Favorite Site and define it by dragging and dropping sites and/or cameras to the Favorites map. Up to 64 cameras can be monitored at a time when each camera is assigned to its own position on the Favorites map.

**Figure 3-26  Setup Screen — Favorite Sites**

**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 **Change**. Then change the site name.

**Remove**  Select the Favorite site to remove from the Site Name list and click **Remove**.
**Configuration**

**Remove Selected Camera**  Removes selected cameras from the Favorites map. Cameras can also be removed by clicking the right mouse button after selecting the camera.

**Remove All Cameras**  Removes all cameras from the Favorites map.

---

**Note**  Cameras can be selected by clicking the left mouse button on the camera in the Favorites map. 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.

---

**Note**  [W] (Watch Screen) and [S] (Search Screen) displayed to the left of the camera number indicates the display option of each camera. The display option can be selected when registering a Favorite site. Selecting the remote site from the Group List and dragging and dropping it to the Favorites map using the right or left mouse buttons (this is user-defined and must be set during system setup) displays the text menu screen. Select the desired displays option between Watch Screen and Search Screen. If you do not select the display option, Watch Screen display will be assigned to all cameras of the registered Favorite site by default.

---

**Note**  Clicking on the toolbar will save the current screen layout of the Watch screen or Search screen directly to the Favorite site.

---

**Note**  The Favorite Site list does not function with modem connections.

---

**Sequence Site Tab**

Configure the sequenced sites. RASplus connects to the registered sites sequentially allowing connection to more than one remote site.
Sequence Dwell Time  Adjust sequence intervals (from 5 seconds to 1 hour) for each connection.

Add  Select the site to add from the Group List and click **Add**.

Add All  Adds all sites in the Group List to the Auto Sequencing list.

Remove  Select the site to remove from the Auto Sequencing list and click **Remove**.

Remove All  Removes all sites in the Auto Sequencing list.

**Note**  The Auto Sequencing list is not valid with modem connections.

**Batch Job Setup**

Multiple remote sites can be upgraded or set up using the Batch Job Setup screen.
Configuration

Upgrade Tab

Sets up the remote upgrade job for remote sites. First, select the remote sites to upgrade from the Group List, and add them to the Upgrade Sites list by clicking **Add**. Then, click **Upgrade Now** to initiate the remote upgrade job for registered Upgrade Sites.

![Batch Job Setup Screen — Upgrade](image)

- **Add** Select the site to add from the Group List and click **Add**.
- **Add All** Adds all sites in the Group List to the Upgrade Sites list.
- **Remove** Select the site to remove from the Upgrade Sites list and click **Remove**.
- **Remove All** Removes all sites in the Upgrade Sites list.
- **Upgrade Now** Upgrades the software on the listed Upgrade Sites.

![Enter File Name Dialog](image)
Configuration

Setup Tab

Sets up the remote setup job for remote sites. First, select a remote site to set up from the Group List, and add it to the Setup Sites list by clicking Add. Then, click Setup Now to initiate the remote setup job for registered Setup Sites.

![Batch Job Setup Screen](image)

**Add**  Select the site to add from the Group List and click Add.

**Remove All**  Removes a site in the Setup Sites list.

**Setup Now**  Performs the setup on the listed Setup Sites.

Disconnect

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

Log

Log displays the RASplus system log and batch job log information, as well as the log information of emergency events called in from remote sites. It displays up to 5,000 log entries.
Configuration

Figure 3-31 Log Setup Screen

- Log File Open: Opens a saved log file.
- Save As....: Saves the log information as a text file.
- Print: Prints the log information.
- Exit: Closes the Log dialog box.

View

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

- New Log First: Displays the newest log first.
- Old Log First: Displays the oldest log first.
- Column Add or Remove: Adds or removes columns in the Log dialog box.
Exit

Disconnects all current connections and exits the RASplus program.

View Menu

Displays or hides the selected toolbar and panels.

Remote Menu

The Remote menu can also be activated by clicking the right mouse button after selecting the remote site on the Remote Sites panel.

Remote Setup

Remote Setup can be used to change the setup of a remote DVR. Select the remote site on the Remote Sites panel, initiate the Remote Setup menu, and the setup screen displays.
Remote System Log/Remote Event Log

These selections display the system log and event log information of a remote DVR. Set the time range of interest and click **Find**. The log entries within the time range display on the list. 100 results can be displayed in a single page. Click the Move buttons to display additional results.

![Remote System/Event Log](image)

**From** Adjust the search starting date and time. When **First** is selected, it will search from the first logged item.

**To** Adjust the search ending date and time. When **Last** is selected, it will search to the last log.

**Find** Displays remote log entries within the selected time period.

**Print...** Prints the log information.

**Save...** Saves the log information as a text file.

**Move Buttons** Moves to the first page (1), previous page ( Previous ), next page ( Next ) or last page ( Last ). You can also go directly to a log page by clicking the corresponding page number.

**Close** Closes the Log dialog box.
Configuration

**Favorite Menu**

<table>
<thead>
<tr>
<th>Note</th>
<th>The Favorite menu can also be accessed using the toolbar controls.</th>
</tr>
</thead>
</table>

**Figure 3-36 Favorite Menu**

Saves the current screen layout directly to the Favorite site.

**Sequence Menu**

<table>
<thead>
<tr>
<th>Note</th>
<th>The Sequence menu can also be accessed using the toolbar controls.</th>
</tr>
</thead>
</table>

**Figure 3-37 Sequence Menu**

Starts or ends auto sequencing.

**Record Menu**

<table>
<thead>
<tr>
<th>Note</th>
<th>The Record menu can also be accessed using the toolbar controls.</th>
</tr>
</thead>
</table>
Figure 3-38 Record Menu

Starts or ends panic recording. Selecting Record Play initiates the Record Player program and plays recorded video. See Panic Recording, page 62, for more details.

Image Menu

Figure 3-39 Image Menu

Note The Image menu can also be accessed using the Image Processing panel controls and the toolbar controls.

Save Saves the current image as a bitmap or JPEG file.

Print Prints the current image.

Note Refer to Live Monitoring on page 49, and Playback and Search on page 54, for more details.

Layout Menu

Figure 3-40 Layout Menu
Configuration

**Note**  The Layout menu can also be accessed using the toolbar controls.

---

**Screen Layout**

![Screen Layout](image)

**Layout Change**  Select the desired screen layout using the Layout Change menu. When changing the screen layout, the selected camera on the current screen will be located in the first cell of the new layout.

**Previous/Next Layout**  When in one of the multi-view formats, selecting Previous Layout or Next Layout will move to the previous or next page. In other words, when viewing Cameras 1 to 4 in the quad format, selecting Previous Layout will display Cameras 61 to 64 and selecting Next Layout will display Cameras 5 to 8.

**Full Screen**  Selecting Full Screen enters the full-screen mode, and returns to the previous screen mode by pressing the Esc key on the keyboard or selecting Full Screen Close (x) from the popup menu displayed by clicking the right mouse button.

---

**Frame Layout**

![Frame Layout](image)

**Layout Load**  Select the desired frame layout and click Load to apply the selected frame layout to RASplus.
Configuration

**Figure 3-43  Layout Load**

- **Default Layout**: Displays all the panels on the screen.
- **Watch Layout**: Displays only the panels that are used most frequently in the Watch screen mode.
- **Search Layout**: Displays only the panels that are used most frequently in the Search screen mode.
- **Admin Layout**: Displays only the panels that are used most frequently in the Admin screen mode.
- **User Defined Layout**: Displays the user-defined layout.

**Layout Setup**  The user can configure the frame layout by displaying panels on the screen where they are most convenient. Set up the user-defined frame layout.

**Figure 3-44  Layout Setup**

- **Save**: Enter a layout name and click **Save** to save the current frame layout as a new user-defined layout.
- **Rename**: Select the layout from the Layout List and click **Rename**. Then change the layout name.
- **Delete**: Select the layout to delete from the Layout List and click **Delete**.

---

**Note**  Up to 10 user-defined layouts can be saved.
Configuration

Help Menu

Displays RASplus version information.

Toolbar

The Toolbar allows convenient access to desired functions.

The controls on the toolbar perform functions as described below:

Select the desired screen layout using the layout toolbar. When changing the screen layout, the selected camera on the current screen will be located in the first cell of the new layout. When in one of the multi-view formats, clicking or will move to the previous or next page.

Clicking (Layout Load) will apply the selected frame layout to RASplus, and clicking (Layout Setup) allows you to set up the user-defined frame layout.
Operation

Live Monitoring

RASplus provides remote monitoring functions for viewing video images in real time from either a single site or multiple sites. In addition, when events are detected at a remote site while in the live monitoring mode, RASplus displays the event information on the Watch Event View panel. In order to perform live monitoring, the display option must be set to **Watch Screen** or **Watch and Search Screen** during System setup.

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

**Note**

Some DVR models will only transmit images to a remote site while recording video.

**Note**

When selecting the display option of **Watch and Search Screen** during System setup, the remote site can also be set to connect using the right or left mouse buttons (this is user-defined and must be set during System setup). Select **Watch Screen** to connect to the selected site on the Watch screen when the following text menu screen appears.

![Watch Search Screen Selection](image)
Screen Layout and Frame Layout

RASplus provides multiple screen layout options. The layouts available are single-screen, quad, 1+7, 3x3, 4x4, 5x5, 1+32, 6x6, 7x7, 8x8 and full-screen. When in one of the multi-view formats, clicking left or right will move to the previous or 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.

Clicking (Layout Load) will apply the selected frame layout to RASplus, and clicking (Layout Setup) allows you to set up the user-defined frame layout.

Camera Title

The user can change the camera name displayed on the screen:

1. Select a camera on the screen and click the right mouse button.
2. Selecting Change Camera Title in the text menu screen displays the following Camera Title box.

3. Enter the camera name and click OK. Leaving the Camera Title blank causes the camera name set up on the remote site to display.

Note Changing the camera title is available in the both Watch and Search screens, and it does not affect the camera name set up on the remote site.

Aspect Ratio

The user can change the image aspect ratio displayed on each camera screen:

1. Select a camera on the screen and click the right mouse button.
2. Selecting **Aspect Ratio** in the text menu screen displays the following menu.

![Figure 4-4 Aspect Ratio Menu](image)

3. Select one of the following options:
   - **Fit to Screen**: Displays images by fitting them to the screen size.
   - **Original Ratio**: Displays images by fitting them to the screen size while maintaining their original ratio.
   - **Half Size (x0.5) to Quadruple Size (x4)**: Select the desired image size.

---

**Note**  
Half Size (x0.5) to Quadruple Size (x4) will be enabled when the selected camera screen can display images in those sizes.

---

**Antialiasing**

The user can enhance the image quality of the screen by eliminating staircase (aliasing) effects on the enlarged image. Click the right mouse button on the screen and select **Antialiasing Screen** in the text menu screen.

![Figure 4-5 Selecting Antialiasing](image)

---

**Note**  
When using the low specification computer, the image drawing speed might decrease while the Antialiasing Screen is activated.

---

**Camera Disconnection**

The user can release the camera connection on the screen. Select a camera on the screen and click the right mouse button. Selecting **Disconnect Camera** in the text menu screen releases the connection of the selected camera.
Sequence Monitoring

Clicking on the toolbar connects to the registered sites sequentially, allowing connection to more than one remote site, and displays images from selected cameras. For sequence monitoring to function, the sequence sites should be registered during System setup. Refer to Sequence Site Tab on page 36 for details on configuring the sequence site.

Note While in the sequence monitoring mode, you cannot manually connect to sites by dragging and dropping with the mouse.

Additional Functions

Color Control

Adjust the brightness, contrast, saturation and hue for each camera by clicking the corresponding buttons on the Color Control panel. Clicking 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 cameras are properly adjusted. These adjustments cannot make up for improperly adjusted cameras when the images are recorded.
**PTZ Control**

Select a PTZ camera at the remote site, and control pan, tilt and zoom operations. Only the administrator can control a PTZ dome from a remote site. The \( \text{PTZ icon} \) will display on each camera screen on which a PTZ can be controlled remotely.

**Figure 4-8 PTZ Controls**

![PTZ Controls](image)

**Note**  
PTZ control using the mouse is supported. Click the left mouse button on the image drag the mouse to move that image in the direction you want. Roll the mouse wheel to zoom in or out.

**Alarm Out Control**

Control alarm out devices on the remote DVRs by clicking the **ON** or **OFF** buttons. Only the administrator can control an alarm out from a remote site.

**Figure 4-9 Alarm Out Controls**

![Alarm Out Controls](image)

**Note**  
Not all DVRs support remote control of color, PTZ and alarm out. Refer to your DVR’s documentation.

**Save**

Clicking \( \text{Save icon} \) on the toolbar saves the image currently displayed on the screen as a bitmap or JPEG file. By placing a checkmark in the box beside **Include Image Info**, text information about the site will be included when saving the image.
Print

Clicking on the toolbar prints the image currently displayed on the screen on a printer connected to your computer. By placing a checkmark in the box beside Include Image Info, text information about the site will be included when printing the image.

Playback and Search

RASplus allows you to play back and search recorded images on remote DVRs. It also provides additional functions including zoom, various image enhancements, image saving and printing. To use remote playback and search functions, the display option must be set to Search Screen or Watch and Search Screen during System setup.

To connect to a remote site on the Search screen, select the site or camera you want to connect to in the Remote Site or Favorite Sites panel and then drag and drop it in the desired position on the screen. The icon will be displayed on each Search screen. The remote site connection on the Search screen will automatically be disconnected if there is no activity for a specified time. Click on the toolbar or select Disconnect from the System drop-down menu to disconnect the current connection manually.

Note Connecting to a Favorite site will be available if the Search Screen display option was set up to connect to selected Favorite sites. Refer to Favorite Sites Tab on page 35 for more details on Favorite Site setup.

Note When selecting the display option of Watch and Search Screen during System setup, the remote site can be also be set to connect using the right or left mouse buttons (this is user-defined and must be set during System setup). Select Search Screen to connect to the selected site on the Search screen when the following text menu screen appears.

Figure 4-10 Watch Search Screen Selection

It is possible to display cameras in both the Watch Screen mode (live view) and Search Screen mode at the same time. For example, you can connect to a remote DVR site with nine cameras. Drag and drop the site into the first frame on the viewing screen and select Watch Screen. Live video will display in the first nine frames on the screen. Then,
drag and drop the site into the 10th frame on the viewing screen and select **Search Screen**. You will be able to view any video recorded on the remote DVR in frames 10 through 18.

**Search View Panel**

The Search View panel consists of playback and search controls, a time-lapse search table, and an event search table. The playback buttons on the Search View panel perform the following functions:

<table>
<thead>
<tr>
<th>Button</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>⏪</td>
<td>Fast Backward Play</td>
</tr>
<tr>
<td></td>
<td>Stop</td>
</tr>
<tr>
<td>⏯</td>
<td>Play</td>
</tr>
<tr>
<td>⏯</td>
<td>Fast Forward Play</td>
</tr>
<tr>
<td></td>
<td>Go to the First Image</td>
</tr>
<tr>
<td></td>
<td>Go to the Previous Image</td>
</tr>
<tr>
<td></td>
<td>Go to the Next Image</td>
</tr>
<tr>
<td></td>
<td>Go to the Last Image</td>
</tr>
</tbody>
</table>

**Note** The speed of fast forward depends on network bandwidth and the number of images per second recorded.

You can control the playback speed of images that are currently being played back by using the control slider. You can control the fast forward or fast backward playback speed of images that are currently being played back fast forward or fast backward by using the control slider.

You can enlarge 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 the mouse. Click the left mouse button on the enlarged image and drag to move its position. You can change the brightness of the current image using the control slider.

**Note** Zoom in/out and brightness control work only while the image is paused.
Search Mode

RASplus supports two search modes: time-lapse and event. The time-lapse search mode searches for recorded data by time and date and then plays back images found within the time parameters. The event search mode searches for event log entries using specific conditions and plays back the images associated with those event entries. These two modes have different panel configurations and search methods.

**Note**
Using two search modes at the same time will NOT be available.

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

### Time-Lapse Search

![Time-Lapse Search Screen](image)

**Note**
The timetable of the time-lapse search panel will differ depending on the model of remote DVR that is connected to RASplus.

1. Click on the Search View panel to enter the time-lapse search mode.
2. Selecting a date from the calendar initiates the time-lapse search. The dates for which recorded images are available are enabled.

When first entering the time-lapse search, the latest date with recorded images will be selected (highlighted) in the calendar.

3. Click (Reload) to reload the date information. Recorded information available from the selected date will be displayed on the timetable.
The recorded data is displayed by time in one-hour segments and bar-shaped segments indicate there are recorded data during that time. A yellow-highlighted segment indicates the selected time that will be played back.

4. Select 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.

5. To view an image at a specific time, click \( \text{(Go To)} \).

\[ \text{Figure 4-13 Go To Time Screen} \]

\[ \text{Note} \quad \text{If the remote DVR’s time and date have been reset to a time that is earlier than some recorded video, it is possible for the DVR to have more than one video segment in the same time range. Click } \text{Segment} \text{ and select the video segment you want to search. The active segment will be highlighted with pink, and the inactive segment will be highlighted with gray on the timetable chart.} \]

\[ \text{Figure 4-14 Select Segment Screen} \]

\[ \text{Event Search} \]

\[ \text{Figure 4-15 Event Search Panel} \]

1. Click \( \text{Search View} \) on the Search View panel to enter the event search mode.

2. Click \( \text{Search} \).

3. Set up the search condition in the \textbf{Event Search} dialog box (\textit{Figure 4-16}).

When loading the event search for the first time, this \textbf{Event Search} dialog box appears automatically.
4. Set up the search criteria for the event search in the **Event Search** dialog box, and click **Find**.

**Note** When **First** is selected for the search starting time, the search will be from the first recorded data. When **Last** is selected for the search ending time, the search will be to the last recorded data.

5. The results will be displayed in the event list. A total of 100 results can be displayed at a time.

6. Click **Query Next** to display the next 100 results.

7. Select an event in the list to play back the recorded data associated with that event. The images may be played back using the playback buttons.

---

**Text-In Event Search**

Event Search offers the capability of searching for video associated with text.
If it is desired to view the video with text overlay, ensure that Overlay Text-In Data is enabled when setting up RASplus (System menu ➤ Setup ➤ System 1 ➤ OSD Setup ➤ Overlay Text-In Data).

1. Enter video search criteria based on text strings in the Event Search Text-In dialog box (Figure 4-17).

![Figure 4-17 Text-In Event Search Dialog Box](image)

2. Select the target cameras to search for text-in data.
3. If needed, enable or disable the Case Sensitive check box. When enabled, the DVR distinguishes between upper and lower case letters.
4. Enter the text string you are searching in the Name field.
5. Select a comparison operator from the Comp drop-down list that is used to compare the Name and Value fields.
6. Enter the numerical value you are comparing to the text entered in the Name field in the Value field.

The Column and Line fields can be used for more specific searches of text-in data. Column (0–80) is used to identify a desired number location within multiple columns of numbers. Line (0–5) is used to search for desired data in a line below the text string that is entered into the Name field. When Line = 0, the search criteria will be based on the numerical value found in the same line that the text string content is found.

7. After you set your desired search conditions, click Find to display the search results.
Operation

Additional Functions

Search Data Source

Click to set up the data source to be searched.

### Figure 4-18 Search Data Source Screen

**Search on Local**  Searches recorded data on primary storage installed in the DVR.

**Search on Archive**  Searches archived data on backup storage installed in the DVR.

Screen Layout and Frame Layout

**Figure 4-19 Screen Format Toolbar**

RASplus provides multiple screen layouts for playback. The available layouts are single-screen, quad, 1+7, 3x3, 4x4, 5x5, 1+32, 6x6, 7x7, 8x8 and full-screen. When in one of the multi-view formats, clicking or will move to the previous or 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 playback window.

Clicking (Layout Load) will apply the selected frame layout to RASplus, and clicking (Layout Setup) allows you to set up the user-defined frame layout.

Image Processing

**Figure 4-20 Image Processing Panel**

The **Image Processing** panel allows enhancing played back images using processing controls.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Blurs the image</td>
<td>Reduces the alias effect that occurs when using the zoom feature.</td>
</tr>
<tr>
<td></td>
<td>Sharpens the image</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Equalizes the image</td>
<td>Reloads the original image</td>
</tr>
</tbody>
</table>
Save

Clicking on the toolbar saves the image currently displayed on the screen as a bitmap or JPEG file. By placing a checkmark in the box beside Include Image Info., text information about the site will be included when saving the image.

Clicking on the Search View panel saves recorded video.

**Figure 4-21  Save Type Screen**

**Save As Video...** Saves any video clip of recorded data in an AVI (Audio Video Interleaved) file format. Set up the save parameters in Figure 4-22. Click Start and then set the file name and the video compression codec.

---

**Note**  When saving clips larger than 1GB, clips will be saved in the unit of 1GB. For example, 3 individual files of each 1GB will be created when saving clips of 3GB.

**Figure 4-22  Save As Video Screen**

**Save As MiniBank...** Saves any video clip of recorded data as an executable file. Set up the save parameters in Figure 4-23. Click Start, and select Save in. Enter a File name and select Save as type (.exe) for the video you are saving. Then click Save.
Figure 4-23  Save As MiniBank Screen

![Save As MiniBank Screen](image)

**Note**  The backup file size must be less than 2 GB because of Microsoft limitations.

**Note**  The Save As Minibank dialog box will differ depending on the specifications of the remote DVR that is connected to RASplus.

**Print**

Clicking on the toolbar prints the image currently displayed on the screen on a printer connected to your computer. By placing a checkmark in the box beside **Include Image Info**, text information about the site will be included when printing the image.

**Panic Recording**

Clicking on the toolbar starts panic recording of cameras currently displayed on the Watch screen. Clicking the button again stops panic recording. Up to 16 channels can be recorded at a time, and you can select which cameras are to be recorded during the System setup. Clicking on the toolbar initiates the Record Player program and plays video saved in the recording folder designated during the System setup. The Record Player GUI and its controls are almost identical to the Clip Player. Refer to **Appendix A, Reviewing Video Clips** for more details.

If you want to play back video saved in another recording folder, run the Record Player program first. Move to the Start menu in Windows. Then, select **Record Player** from the RASplus options and select the recording folder path you want.
Recorded video can be saved in a bitmap or as an executable file using the save function of the Record Player.

**Note**

Panic recording will be available only if you select the **Use Recording** check box in the recording options during the System setup.

**Note**

The date and time displayed on the Record Player indicates when the recording was made on RASplus.

**Note**

The \[ \text{R} \] icon will display on each screen when panic recording starts.

---

**Status View**

RASplus provides a display of event, alarm out, system check and recording status information from 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 in the Status View panel. Or, you can select **Connect Status** from the popup menu displayed by clicking the right mouse button after selecting the site from the Remote Site list.
Function Buttons

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

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

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

Note  Refer to the manual for each applicable remote DVR for more details on system setup.

Remote System Log: Displays the system log information of the remote DVR connected to the Status View panel.
Remote Event Log: Displays the event log information of the remote DVR connected to the Status View panel.

Note Refer to Remote Menu, page 41, for more details on the Remote System Log and Remote Event Log.

Note When the remote site is not connected to the Status View panel, Remote Setup, Remote System Log and Remote Event Log menus can be accessed by clicking the right mouse button after selecting the remote site on the Remote Sites panel.

Status Display Window

The Status Display Window displays the event, alarm out, system check and recording status information of the remote system connected to the Status View panel in real-time.

- Event: Displays events detected by the internal motion detector or by an 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 Display of some system icons may not be supported and depends on the specifications of the remote DVR.
Operation

- **Record From/To**: Displays the record period.
- **Status**: Displays the recording, playback, archiving, clip-copy status.
  - On (Recording, Playback, Archive, Clip-Copy)
  - Off

---

**Note**

Display of some status icons may not be supported and depends on the specifications of the remote DVR.

---

- **Version**: Displays the system version information.
Reviewing Video Clips

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

**Note**
The Player GUI will differ depending on the model of the remote DVR that is connected to RASplus when reviewing the video saved as a MiniBank file.

---

MiniBank Player

**Note**
It is suggested that the computer used for the MiniBank Player program has at least an 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.
Reviewing Video Clips

Figure A-1  MiniBank Self Player User Interface

The Monitoring Screen displays the backed up images. 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 Quit exits the Player program.

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

Click Print 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 Image Search Slide Bar displays the current playback position. The user can move to another image by clicking and dragging the slide bar.
Reviewing Video Clips

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 **Brightness Control Slide Bar** adjusts the brightness of the backup images by clicking and dragging the slide bar. Minute brightness change can be made using ▲ and ▼ located at each end of the bar.

The **Brightness Revert Button** reloads to the original image.

Click the **Zoom Out / In** buttons to zoom in or out of the current image. Scrolling the mouse wheel up or down on the image also zooms in or out.

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

Clicking **Mute** mutes the recorded audio.

Double-clicking the 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 an 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 a VGA card with 16 MB or higher video RAM is recommended for proper operation.

**Note**

You will be asked to enter the password to initiate the Clip Player program if you select the **Save Password** option when saving recorded video.
Reviewing Video Clips

The Clip Player screen displays the clip images.

**Note**  
Proper image display depends on the PC display settings. 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**. Then select **Advanced > Troubleshoot**, and set the **Hardware Acceleration** to **Full**. If the display problem continues, make sure that DirectX version 8.0 or higher has been installed. To check the version of DirectX, click **Start > RUN** and type `dxdiag`. Hit the **Enter** key to display the DirectX Diagnostic Tool dialog box. Move to the Display tab and make sure **DirectDraw Acceleration** is set to **Enabled**. Test DirectDraw by selecting the **DirectDraw Test** button. After changing the settings, update the driver version of the VGA card. If you still have display problems after changing all display settings described above, try replacing the video card. Video cards with an ATI chipset are recommended.

Clicking ✗ exits the Player program.

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

Click ◄ to play the video clip in fast reverse.
Click \( \text{Back Frame} \) to go back one frame of the video clip.

Click \( \text{Play} \) to play the video clip.

Click \( \text{Forward Frame} \) to go forward one frame of the video clip.

Click \( \text{Fast Forward} \) to play the video clip in fast forward.

Click \( \text{End of Clip} \) to go to the end of the video clip.

Click \( \text{Previous Page} \) to show the previous page.

Click \( \text{Screen Layouts} \) to cycle through the screen layouts. It cycles through 2x2, 3x3 and 4x4.

Click \( \text{Next Page} \) to show the next page.

Click \( \text{Options} \) to select from Save, Print, Info, Image Processing, Video Format and Show Text In. Selecting Save saves the current image in a bitmap file format on 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, Type, Size and Resolution information about the image. Selecting Image Processing allows you to control brightness, blur and sharpness of playback images. Selecting Video Format allows you to find appropriate display settings for the type of graphics card installed in your PC. Use the Video Format option when you are experiencing improper image display. Selecting Show Text In displays video with text-in data if the video has been recorded with text-in data.

**Note** Image Processing only works in the single-screen layout while video is paused.

**Note** If you are not sure about the appropriate Video Format option, try each option until the image displays properly.

Click \( \text{Normal} \) and \( \text{Double} \) screen views. You can move the enlarged image by clicking the left mouse button and dragging.

Click \( \text{Full Screen} \) to display the image full screen.

Encryption icons display in the bottom-right corner. ✓ indicates the clip file has not been tampered with, and ✘ indicates the system has detected tampering.
Reviewing Video Clips

**Note** If the VGA card or monitor does not support 640x480 video resolution, **Full Screen** might not display properly. If this happens, press the **ESC** key on your keyboard 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 it will cause that image to display full frame.
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. Use the following steps to set up a system using DVRNS.

**System Configuration**

**Figure B-1   DVRNS Server System Configuration**

1. DVRNS Server
2. DVR
3. RASplus
4. STEP 4

**STEP 4**

**STEP 1**

**STEP 2**

**STEP 3**
DVR Name Service (DVRNS)

**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 DVR and DVRNS Server guides for detailed information on the DVRNS and DVRNS Server setup. DVRNS Server software and user guide are on the RASplus CD.

---

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

---

**STEP 2** **(RASplus > 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 > RASplus)**

The DVRNS server notifies the RASplus of the requested IP address.

**STEP 4** **(RASplus > 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 any time.
Map Editor

The Map Editor program allows you to create 3-D maps of remote sites. With the drag-and-drop and link function, you can create and edit the map easily and efficiently. Run the program by selecting Map Editor from the RASplus options under the Start menu in Windows.

Figure C-1 Map Editor
Background Image Setting

1. Prepare the image in a bitmap or JPEG file format.
2. Click (Background) on the toolbar and select the background image of the map.
3. Go to the Property [Canvas] tab and set the background image information.

Figure C-2 Property [Canvas] Tab

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

Option Menu

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

Figure C-3 Option Menu

**Site Information Setting** Select the **Site Information Setting**... in the **Option** menu to set the information about the remote DVR connections, and the following **Site Information** setup window appears.

Figure C-4 Site Information Window

1. Click **Add**. **Figure C-4** appears.
2. In the **Remote Site Setup** area, enter the site name and IP address of the DVR connected to the devices you want to include on the map.

3. Click **Port...** and enter the network IP port number (8000 to 12000) that matches the value set during the LAN setup of the DVR.

4. Check the box beside **Use DVRNS (DVR Name Service)** if you want to use the DVR name service.

---

**Note**

If you use DVR Name Service, you can enter the name registered on the DVRNS server instead of the IP address of the DVR, and you do not need to enter the network IP port number.

---

5. Under **Login Setup**, enter the user ID and password for the DVR associated with devices.

6. Under **DVRNS Server**, enter the IP address and port number (10000 to 12000) of the DVRNS server, which matches the values set during the DVRNS setup on the DVR.

7. Clicking **OK** saves the setting.

**Popup Dwell Time**  Select **Popup Dwell Time...** in the **Option** menu to set the duration that the Map popup screen displays when events are detected. *Figure C-6* appears.

---

**Figure C-6**  **Popup Dwell Time Dialog Box**

Check the box beside **Use Timeout** and adjust the dwell time from 1 second to 5 minutes.
Note **Popup Dwell Time** will be applied to all maps displayed on the map panel.

**Status Color Setting** Select **Status Color Setting…** in the **Option** menu and **Figure C-7** appears. You can set the device to display a unique color reflecting its status on the Map panel.

![Status Color Window](image)

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

- **Unplugged**: Either connection to the remote DVR has failed, or the **Device No.** for the device is not supported by the DVR.
- **Event off**: Event detection 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 Devices are displayed as **Irregular** based on the settings in **System Check** and as **Video Loss, Motion, Alarm In, and Alarm Out** based on the event detection settings on the remote DVR.

Note The device displays mixed colors when detecting more than two statuses at the same time.
**Name Table** Select **Name Table...** in the **Option** menu to display the name instead of the IP address of the DVR on the Map panel. **Figure C-8** appears.

![Name Table Window](image)

Click the **Display Name** field of each IP address and enter the name of the DVR to display on the popup screen.

---

**Device Setting**

1. Selecting , , or on the toolbar displays the **Camera**, **AlarmOut** and **AlarmIn** tabs under the **Image Bar**.
2. Select the icons, and drag and drop them at the desired locations on the background image.
3. Go to the **Property [Camera/AlarmOut/AlarmIn]** tab and set the device information.

![Property Tab](image)

**Table C-1** Property Tab Device Information

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General</strong></td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Enter a device name.</td>
</tr>
<tr>
<td>Description</td>
<td>Enter a description of the device.</td>
</tr>
</tbody>
</table>
Map Editor

Table C-1  Property Tab Device Information

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Information</td>
<td>Select a proper site for the device in the list, and the <strong>Equipment</strong> fields (<strong>User</strong>, <strong>Password</strong>, <strong>IP Address</strong> and <strong>Port</strong>) are filled automatically with the information set in <strong>Site Information Setting</strong>….</td>
</tr>
<tr>
<td>Image</td>
<td>Select an image of a device.</td>
</tr>
<tr>
<td>Ratio</td>
<td>Adjust the size of the device image.</td>
</tr>
<tr>
<td>X Coordinates / Y Coordinates</td>
<td>Adjust the position of the device image by clicking each field and changing the numbers.</td>
</tr>
<tr>
<td>Horizontal / Vertical</td>
<td>Adjust the size of the device image by clicking each field and changing the numbers.</td>
</tr>
<tr>
<td>Popup Camera</td>
<td>Under the <strong>Property [Alarmin]</strong> tab, you can associate a camera with the sensor. Enter the camera name to associate with the sensor.</td>
</tr>
</tbody>
</table>

**Equipment**

<table>
<thead>
<tr>
<th>IP Address / User / Password / Port</th>
<th>Each field is filled in automatically with the information (user ID, password, and port number) set in <strong>Site Information Setting</strong>…, or you can enter it manually.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Device No.</td>
<td>Set the device number (1 ~ 32) for each device.</td>
</tr>
<tr>
<td>DVRNS Use</td>
<td>Select Yes to use DVR Name Service, and the <strong>DVRNS</strong> field appears. Enter the IP address (or domain name) and the port number of the DVRNS server, and the name of the DVR registered on the DVRNS server.</td>
</tr>
</tbody>
</table>

**Note**

You should not select numbers that are not supported for devices on the remote DVR when selecting **Device No.**. Otherwise, the map cannot detect the device and it displays the device status as **Unplugged**. For example, the device number should be from 1 to 16 when the device is connected to a 16-channel DVR.

**Note**

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

**Note**

The DVRNS function is supported only with the devices associated with a DVR providing the DVRNS (DVR Name Service) function.
4. Go to the Event [Camera/AlarmOut/AlarmIn] tab and set the option for the devices.

**Figure C-10 Event [Camera] Tab**

- **Event [Camera]**: Selecting an event from a drop-down list and checking the Watch View Popup box sets the Map panel to pop up another screen when an event occurs. Selecting Click from a drop-down list and checking the Watch View Popup box pops up another screen by clicking the mouse button on the camera icon on the Map panel regardless of event detection.

**Figure C-11 Event [AlarmOut] Tab**

- **Event [AlarmOut]**: Checking the Switch on/off box controls the alarm-out remotely by clicking the alarm-out icon on the Map panel.

**Figure C-12 Event [AlarmIn] Tab**

- **Event [AlarmIn]**: Selecting Alarm-in Event from the drop-down list and checking the Watch View Popup box sets the Map panel to pop up another screen when an alarm-in event occurs. Selecting Click from a drop-down list and checking the Watch View Popup box pops up another screen by clicking the mouse button on the alarm-in icon on the Map panel regardless of event detection.

---

**Note**
The popup camera should be associated with the alarm in device to use the popup function. Refer to Device Setting on page 75 for the popup camera association.

---

**Link Setting**

1. Click (Link) on the toolbar and place it on the screen linked with a sub-map.

2. The Link Map box appears. Select the individual link boxes by using the Ctrl key on the keyboard, and then adjust the size and position of the link box using a mouse, a keyboard or the icons shown below.

   **Interval adjustment**: Equalizes the distance between three or more selected boxes.
Map Editor

**Size adjustment**: Equalizes the size of two or more selected boxes. Clicking the arrow keys while holding the `Shift` key on the keyboard changes the size of the selected boxes.

**Position adjustment**: Arranges two or more selected boxes towards one direction or towards the center. Clicking the arrow keys while holding the `Ctrl` key on a keyboard changes the position of selected boxes.

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

3. Go to the **Property [Link]** tab and set the properties of the selected link box.

![Figure C-13 Property [Link] Tab](image)

### Table C-2 Property Tab Device Information

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Enter a name for the link box.</td>
</tr>
<tr>
<td>Image</td>
<td>Double-click the field and select an image to insert in the link box.</td>
</tr>
<tr>
<td>Link Document</td>
<td>Double-click the field and select a map to be linked with the link box.</td>
</tr>
<tr>
<td>Ratio</td>
<td>Adjust the image size within the link box.</td>
</tr>
<tr>
<td>X Coordinates / Y Coordinates</td>
<td>Adjust the position of the link box on the screen by clicking each field and changing the numbers.</td>
</tr>
<tr>
<td>Horizontal / Vertical</td>
<td>Adjust the link box size by clicking each field and changing the numbers.</td>
</tr>
<tr>
<td>Text Show</td>
<td>Select <strong>Yes</strong> to display the name of the link box on the selected image.</td>
</tr>
</tbody>
</table>

4. Clicking **(Save)** on the toolbar saves the map.