Trademarks and Copyrights

CCS, CCS CoPilot, CCS Navigator, CCS Pilot, Command Control System, CineTone, CinePhase, CineSound, DigiBus, DigiPeek, Digital Glue, DigiWorks, DTV Glue, EventWORKS, EZ HD, Genesis, HDTV Glue, Image Q, Inca, Inca Station, InfoCaster, Inscriber, Inscriber CG—FX, Integrator, LeFont, Leitch, LogoMotion, MediaFile, MIX BOX, NEO, the NEO design, NEOSCOPE, NewsFlash, Nexio, Opus, Panacea, PanelMAPPER, Portal, PROM-Slide, RouterMAPPER, RouterWORKS, Signal Quality Manager, SpyderWeb, SuiteView, TitleMotion, UNIFRAME, Velocity, VelocityHD, VideoCarte, Videotek, and X75 are trademarks of Leitch Technology International Inc. which may be registered in the United States, Canada, and/or other countries. All other trademarks are the property of their respective owners.

Copyright 1996-2005, Leitch Technology International Inc. All rights reserved. This publication supersedes all previous releases. Printed in Canada.

Warranty Information

The Leitch Limited Warranty Policy provides a complete description of your warranty coverage, limitations, and exclusions, as well as procedures for obtaining warranty service. See the inside back cover of this manual for a warranty summary. To view the complete warranty, visit [www.leitch.com>Support>Warranties](http://www.leitch.com>Support>Warranties).
# Contents

**Chapter 1: Introduction**

- What’s New ......................................................... 2
- System Requirements .............................................. 2
- System Limitations .................................................. 3
- Firmware Requirements ........................................... 4
- Using this Manual ................................................... 5
- Using RouterWorks On-Line Help ................................. 6
  - General Help .................................................. 6
  - Context-Sensitive Help ......................................... 6
  - Full-Text Help Search .......................................... 6
- Features .............................................................. 8
  - Single-Bus Panel ............................................... 9
  - Multi-Bus Panel ............................................... 11
  - Matrix Panel ................................................ 13
  - Panel Wizard ................................................ 16
  - RouterMapper ................................................ 17
  - Remote Dial-Up ................................................ 18
  - TCP/IP .......................................................... 18
  - Demo Mode .................................................... 18
- Related Leitch Products ........................................... 19
- Contacting Leitch .................................................. 19
  - Technical Support .............................................. 19
  - Product Information ............................................ 19

**Chapter 2: Installation**

- Installing RouterWorks Software ............................... 21
Installing RouterWorks v 5.06 on PCs Using Microsoft® Windows® 95, Windows® 98, or Windows® Me Operating System 26
Connecting RouterWorks to a Router 27
Editing the Database 27
Launching RouterWorks Applications 28

Chapter 3: Operation
Selecting a Destination 29
Connecting a Source 31
AFV (Audio Follow Video) Switching 32
Breakaway Switching 35
Performing a Multiple Take (Matrix Panels Only) 38
Disconnecting and Replacing Sources (Matrix Panels only) 41
Source Disconnect 41
Multiple Disconnect 43
Source Replace 44
Undoing a Take 46
Locking and Protecting Destinations 47
Locking a Destination 47
Unlocking a Destination 53
Protecting a Destination 57
Unprotecting a Destination 62
Allowing Overrides 66
Alarms (Matrix Panels Only) 69
Executing and Editing Salvos 70
Adding a Salvo 72
Capturing the Existing State of the Router 73
Adding a Crosspoint to a Salvo 74
Deleting a Crosspoint from a Salvo 74
Copying an Existing Salvo 75
Executing a Salvo 76
Editing a Salvo 76
Deleting a Salvo 76
Active Salvos Control 77
Bidirectional Take 78
Configuring the Router 78
Editing the .PAN File 80
Using the Bidirectional Take Feature 81
Chapter 4: Customizing Panels

Using the Panel Wizard ...................................................... 88
  Setting Up a New Panel via Panel Wizard ......................... 88
  Editing an Existing Panel via Panel Wizard ....................... 98
  Advanced Options ........................................................... 100

Modifying On-Screen Display via the .PAN File ..................... 109
  Determining .PAN File Location ................................. 109
  Designating the Router Database ...................................... 109
  Setting the Locks and Protects Preferences ...................... 109
  Changing the Control Panel Preferences ......................... 110
  Setting Control Panel Size Attributes ............................. 111
  Adding/Deleting Logical Sources ....................................... 114
  Adding/Deleting Logical Destinations .............................. 116
  Activating Levels .......................................................... 116
  Activating Active Salvos Control ..................................... 117
  Activating Signal Presence Indicators .............................. 118
  Activating Bidirectional Take .......................................... 118

Creating Control Panels for Individual Users ....................... 122
Creating Control Panels for Multiple Remote Sites ................ 123

Index

  Keywords ................................................................. 125
Leitch’s RouterWorks router control software provides an easy-to-use graphical user interface for the entire line of Leitch signal routers. RouterWorks is a group of Windows®-based applications that can be easily navigated using only basic Windows skills. Sources and destinations in a routing system are graphically represented on on-screen control panels, and can be selected or deselected using a standard mouse or touch screen. Control panels may be customized for each routing system or for each operator, enabling any user to quickly and easily locate and select appropriate sources and destinations in the system.

RouterWorks software may be used as the only controlling device in a system or it may be used in conjunction with traditional hardware control panels. Multiple RouterWorks control stations may control the same routing system. RouterWorks continually monitors the routing system and reports all changes in the status of the system, regardless of the type of controlling device that initiated the change. The RouterWorks package is modem-ready and can control an unlimited number of remote routing systems using only a modem, phone line, router, and PC. Appropriate wherever “ease-of-use” is an issue, RouterWorks is an effective, powerful tool that will greatly simplify the use of your Leitch signal router.
What’s New

An index has been added to edition K of the *RouterWorks Router Control Software Reference Guide*.

System Requirements

You may use RouterWorks with any IBM-compatible computer that meets these minimum requirements.

- **CPU**: 266 MHz Pentium II
- **RAM**: At least 128 MB
- **Hard disk space**: At least 30 MB free
- **Additional disk drives**: CD-ROM or CD-RW
- **Port(s)**: Serial port, RS-232 or RS-422 / 9600 baud or higher
  (Optional) Ethernet port, if used with an Ethernet Gateway device
- **Display resolution**: 800x600, 256 colors
  1024x768, high color (16 bit) recommended
- **Pointing device**: Mouse, trackball, touch screen, or other pointing device
  Microsoft® Internet Explorer 4.0 or later

*Windows 95, Windows 98, Windows NT, Windows 2000, Windows ME, Windows XP, and Microsoft Internet Explorer are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
System Limitations

Table 1-1 shows the various system limitations of RouterWorks.

Table 1-1. RouterWorks System Limitations

<table>
<thead>
<tr>
<th>System Item</th>
<th>Limitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum number of levels</td>
<td>8</td>
</tr>
<tr>
<td>Maximum number of logical sources</td>
<td>3072</td>
</tr>
<tr>
<td>Maximum number of logical destinations</td>
<td>3072</td>
</tr>
<tr>
<td>Maximum number of sources usable with non Power-PC based alphanumeric panels (panels that do not have serial &amp; Ethernet ports) when in program mode — DIP switch mode is only limited by router system size</td>
<td>128</td>
</tr>
<tr>
<td>Maximum number of panels in one router system</td>
<td>128</td>
</tr>
<tr>
<td>Maximum number of salvos — The actual number of salvos that can be downloaded to panels is limited by the panel memory and number of buttons on the panel, but RW/RM supports up to 254 salvos total</td>
<td>254</td>
</tr>
<tr>
<td>Maximum number of Integrator frames in one router system</td>
<td>128</td>
</tr>
<tr>
<td>Maximum number of matrices per Integrator frame</td>
<td>8</td>
</tr>
<tr>
<td>Maximum number of components per Integrator frame matrix</td>
<td>5</td>
</tr>
</tbody>
</table>
Firmware Requirements

RouterWorks may be used to control any Leitch router that meets the following requirements:

<table>
<thead>
<tr>
<th>Frame Type</th>
<th>For Direct Control via the Serial Port</th>
<th>For Remote Control via Modem</th>
</tr>
</thead>
<tbody>
<tr>
<td>HD Series</td>
<td>SCE-101 or RSCE-101, version 2.0 or later, or SPT-1000-XY</td>
<td>SCE-101 or RSCE-101, version 3.0 or later, or SPT-1000-XY</td>
</tr>
<tr>
<td>Xplus®</td>
<td>Version 2.0 or later</td>
<td>Version 3.0 or later</td>
</tr>
<tr>
<td>VIA32®</td>
<td>Version 1.0 or later</td>
<td>Version 1.0 or later</td>
</tr>
<tr>
<td>Integrator™</td>
<td>Version 1.0 or later</td>
<td>Version 1.0 or later</td>
</tr>
</tbody>
</table>

Note

To identify the firmware version in use, check the X-Y bus connections on the frame. Version 2 and higher frames will use mini-XLR connectors instead of the RJ-11 connectors used in earlier versions. Earlier version frames cannot be upgraded. If serial control is desired for these earlier version frames, discuss the RSCE-101 option with your Leitch representative.

If all the serial ports on a frame are currently being used, and serial control is desired, additional ports can be created using the SPT-1000-SXY Serial Protocol Translator. Contact your Leitch representative for more information.

If your router system requires a firmware upgrade, please contact Leitch Customer Service.
Using this Manual

This manual is intended as a reference to the RouterWorks software and is not organized in step-by-step tutorial fashion.

The manual has the following writing conventions:

**Table 1-3. Writing Conventions**

<table>
<thead>
<tr>
<th>Term or Convention</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bold</strong></td>
<td>Indicates dialog boxes, property sheets, fields, buttons, check boxes, list boxes, combo boxes, menus, submenus, windows, lists, and selection names</td>
</tr>
<tr>
<td><strong>Italics</strong></td>
<td>Indicates email addresses, the names of books or publications, and the first instances of new terms and specialized words that need emphasis</td>
</tr>
<tr>
<td><strong>CAPS</strong></td>
<td>Indicates a specific key on the keyboard, such as ENTER, TAB, CTRL, ALT, or DELETE</td>
</tr>
<tr>
<td><strong>Code</strong></td>
<td>Indicates variables or command-line entries, such as a DOS entry or something you type into a field</td>
</tr>
<tr>
<td>&gt;</td>
<td>Indicates the direction of navigation through a hierarchy of menus and windows</td>
</tr>
<tr>
<td>hyperlink</td>
<td>Indicates a jump to another location within the electronic document or elsewhere</td>
</tr>
<tr>
<td><strong>Internet address</strong></td>
<td>Indicates a jump to a Web site or URL</td>
</tr>
<tr>
<td><strong>Note</strong></td>
<td>Indicates important information that helps to avoid and troubleshoot problems</td>
</tr>
</tbody>
</table>
Using RouterWorks On-Line Help

The stand-alone help offers complete information on all RouterWorks functions. General Help and Help search functions are available.

General Help

When you need help on any RouterWorks topic, choose Help from the Leitch Routing Switchers display window (see page 8 for a graphical representation of this window). This will allow you to locate information by category. Figure 1-1 shows an illustration of the General Help window.

![General Help Window](image)

Figure 1-1. General Help Window

Context-Sensitive Help

Context-sensitive Help gives you instant help whenever a menu command is highlighted, a dialog box is open, or a pop-up message box is displayed.

Press F1 for context-sensitive help.

Full-Text Help Search

RouterWorks Help includes a full text search capability so that you can find help topics containing the text string you specify. Two options are available that allow you to refine your search: the Index option and the Database Find option. Figure 1-2 shows an illustration of the results of a full-text Help search using the Index option. Figure 1-3 shows an
illustration of the results of a full-text Help search using the Database Find option.

Figure 1-2. Full-Text Help Search — Index Option

Figure 1-3. Full-Text Help Search — Database Find Option
Features

The RouterWorks package includes a single-bus panel, a multi-bus panel, a matrix panel, a Panel Wizard, and RouterMapper™ applications.

Figure 1-4. RouterWorks Display Window
Single-Bus Panel

The RouterWorks single-bus panel provides control over one destination at a time. User-access to the destination may be restricted via Locks and Protects to prevent inadvertent changes to crosspoint selections. Sources may be connected to a selected destination in either AFV or Breakaway modes. Source status on each individual level is clearly indicated on the on-screen panel by color-coded LED bars. Logical source connections may be easily changed from the on-screen control panel. Changes made on other control panels in the system will also be reflected on the single-bus panel whenever the affected destination is selected from the drop-down list box.

The single-bus panel is divided into two main sections: destinations are on the left, and sources are on the right. The Source section includes a Status display that lists the sources connected on each level to the selected destination. The destination is selected via the drop-down list box located at the bottom of the Destination section. Lock and Protect buttons are also included in this section of the control panel, and are described in detail in other chapters of this manual.

The Sources section of the single-bus panel includes a separate Breakaway button for each level in the router. A Follow button, a salvo button, a set of source buttons representing each logical source, and a set of LEDs representing each level and each source on each level is also included.

Figure 1-5. Single-Bus Panel Window
Optionally (for Panacea panels only), a single-bus panel display can show Source Signal presence indicators. Signal presence is indicated by a circle display located directly above each source button on a RouterWorks panel. For each level on which a valid signal is detected and reported by the router, a wedge of the signal presence indicator circle display will be filled using the Level’s assigned color. If the router reports that the input does not detect a valid input signal, the wedge will be colored using the color that signifies loss of input signal. (The default color is black.) The circle display for a single-bus panel is illustrated in Figure 1-5 on page 9.

If a panel controls more than one level, the circle is divided into sections based on the number of levels that the RouterWorks panel controls. Each source will display one section for each level on which signal presence has been reported. If no signal presence is reported for a level of a source (e.g., a router that does not support signal presence reporting or for a source that is not defined for a particular level), the wedge for that level will not be displayed.

You can activate the display of source signal presence indicators via the Advanced Options function in Panel Wizard (see “Signal Presence Settings” on page 104). Alternatively, you can edit the panel initialization (.PAN) file directly (see “Activating Signal Presence Indicators” on page 118).
Multi-Bus Panel

With the RouterWorks multi-bus panel you can easily monitor and control several router destinations from one panel. Multiple sources and destinations are simultaneously displayed on the on-screen panel. Access to destinations may be restricted via Locks and Protects to prevent unintentional changes to crosspoint selections. Sources may be connected to selected destinations in either AFV or breakaway modes. Source status is clearly displayed for each level. Changes made on other control panels in the system will also be reflected on the multi-bus panel.

The multi-bus panel is divided into three main sections: destinations are on the top, sources are on the bottom, and category/index control is to the right.

- The Destination section includes a status display that lists the sources connected on each level to the selected destination. Destinations are selected by clicking on the Destination button desired. Lock and Protect buttons (used to protect the destination from being inadvertently changed) are also included in this section of the control panel and are described in detail in the sections that
follow. An *Active Salvo Control* display window displays the names of all salvos that are completely engaged. If a salvo has all levels of every crosspoint engaged, then the name will appear in the *Active Salvos Control* list box.

- The Sources section includes a separate **Breakaway** button for each level in the router. A **Follow** button, a **salvo** button, a set of source buttons representing each logical source, and a set of LEDs representing each level and each source on each level is also included.

- Optionally (for Panacea panels only), a multi-bus panel display can show source signal presence indicators. Signal presence is indicated by a circle display located directly above each source button on a RouterWorks panel. For each level on which a valid signal is detected and reported by the router, a wedge of the signal presence indicator circle display will be filled using the Level’s assigned color. If the router reports that the input does not detect a valid input signal, the wedge will be colored using the color that signifies loss of input signal. (The default color is black.) The circle display for a multi-bus panel is illustrated in Figure 1-6 on page 11.

If a panel controls more than one level, the circle is divided into sections based on the number of levels that the RouterWorks panel controls. Each source will display one section for each level on which signal presence has been reported. If no signal presence is reported for a level of a source (e.g., a router that does not support signal presence reporting or for a source that is not defined for a particular level), the wedge for that level will not be displayed.

You can activate the display of source signal presence indicators via the **Advanced Options** function in Panel Wizard (see “**Signal Presence Settings**” on page 104). Alternatively, you can edit the panel initialization (.PAN) file directly (see “**Activating Signal Presence Indicators**” on page 118).

- The category/index control section of the multi-bus panel provides another way to perform switching based on categories and indexes. With this function you may group related inputs or outputs into categories (e.g., VTR, CAM, MIC, etc.) with each having an index “identifier” (e.g., 2, 17, 36, etc.) to make it easier for you to locate. The Category/Index control function is particularly useful in systems with very large numbers of inputs and outputs.
Matrix Panel

With the RouterWorks matrix panel, the status of an entire router system may be monitored and controlled from a single screen. A complete 16x16 router can be displayed on a 1024x768 screen with reasonable legibility. (A 32x32 router can be displayed as well;
however, the names and icons in the Source and Destination buttons will not be visible.

Crosspoints are displayed in a matrix format with intersecting source and destination lines. Sources appear horizontally across the top and destinations appear vertically down the right side. Sources and destinations are connected by double-clicking at the desired crosspoint.

The sources and destinations in a router are displayed on the matrix panel as a row of control buttons along the top and right sides of the panel. Sources are displayed along the top, and destinations down the right-hand side. Each control button includes the source or destination name and icon, although names and icons may not be readable in the full-screen view. For greater legibility, any portion of the panel may be enlarged using the Zoom-In button at the right of the screen.

Crosspoints in the router are monitored via colored markers at the intersection of the source and destination lines. The markers are displayed as pie-shaped wedges that correspond to the colors of the Breakaway Level buttons. If, for example, a video Breakaway Level button is colored blue, a blue marker at the intersection of a source and destination line indicates that the source is connected on the video level. If more than one colored marker is present at an intersection, the source is connected on each of the levels displayed. If a source is selected on ALL levels in the system (AFV switching), the crosspoint marker will appear as a multi-colored circle, consisting of all colors of the active levels.

Optionally (for Panacea panels only), a matrix panel display can show Source Signal presence indicators. Signal presence is indicated by a circle display located directly above each source button on a RouterWorks panel. For each level on which a valid signal is detected and reported by the router, a wedge of the signal presence indicator circle display will be filled using the Level's assigned color. If the router reports that the input does not detect a valid input signal, the wedge will be colored using the color that signifies loss of input signal. (The default color is black.) The circle display for a matrix panel is illustrated in Figure 1-7 on page 13.

If a panel controls more than one level, the circle is divided into sections based on the number of levels that the RouterWorks panel controls. Each source will display one section for each level on which signal presence has been reported. If no signal presence is reported for a level of a source (e.g., a router that does not support signal presence
reporting or for a source that is not defined for a particular level), the wedge for that level will not be displayed.

You can activate the display of source signal presence indicators via the Advanced Options function in Panel Wizard (see “Signal Presence Settings” on page 104). Alternatively, you can edit the panel initialization (.PAN) file directly (see “Activating Signal Presence Indicators” on page 118).

The matrix panel may be operated in either of two configurations: Preset/Take or No-Take configuration. The configuration is determined by the setting of the UseTake= line in the MATRIX.PAN file. (See “Modifying On-Screen Display via the .PAN File” on page 109 for more information about selecting the panel configuration.)

- In No-Take configurations, crosspoints are switched as soon as they are selected. The crosspoint markers will be presented as solid, colored wedges. The Take button will not appear on these panels.
- In Preset/Take configurations, crosspoints are preset on the panel prior to actual switching. The switch only occurs when you press the Take button. Any number of crosspoints may be preset before the Take is executed. Crosspoint markers in Preset/Take configured panels will appear as hollow, colored wedges (outlines only) when the crosspoint is preset, and will change to solid markers when the Take is executed.

### Zooming the Matrix Panel Window

To enlarge a section of the matrix panel, click on the Zoom-In (+) button located on the right side of the panel. The mouse cursor will change shapes to indicate Zoom mode. Click on a crosspoint within the section that will be enlarged. The panel will automatically zoom-in to display five sources and five destinations around the crosspoint selection.

**To display more than five crosspoints, follow these steps:**

1. Select the Zoom-In button, then place the cursor over the top left corner of the matrix section that will be enlarged.
2. Click and hold the left mouse button.
3. Drag the cursor diagonally across the screen. A rectangle will be drawn over the area selected. (Draw the rectangle over the crosspoint matrix only — do not include the source or destination buttons. The associated source and destination buttons will be automatically included in the zoomed-in view.)
4. When the rectangle is large enough to include all of the crosspoints desired in the enlarged view, release the mouse button. The screen will redrawn in the zoomed-in view.

To return to the full-screen view, click on the Zoom-Out (−) button. Clicking on the Zoom-Out button will always take you all the way back to the full screen view, regardless of the number of times you have zoomed in.

Sizing the Matrix Panel Window

1. Move the mouse cursor over an edge of the window. The cursor will change to a two-headed arrow.
2. While this cursor is visible, click and hold the left mouse button.
3. Drag the edge of the window into the desired position.
4. When the mouse button is released, the window will be redrawn in the new position, and the buttons will be resized.

Panel Wizard

RouterWorks includes a panel creation utility called Panel Wizard. It takes you through a step-by-step process to create or edit a RouterWorks software panel. The Panel Wizard utility “asks” you questions about what type of panel you would like to create, then creates a new panel for you.

![Panel Wizard Introduction Window](image)

**Figure 1-8. Panel Wizard Introduction Window**
RouterMapper

Leitch’s RouterMapper configuration utility is an easy-to-use Microsoft® Windows®-based application for programming RouterWorks, router frames, control panels, and the Opus master controller. Using RouterMapper, you may create a database that describes a routing system (i.e., available levels, sources, and destinations). That database may be downloaded to a control panel and/or router frame, and may also be used in conjunction with RouterWorks software applications. Function keys and selection keys (on Programmable Panel series panels only) may also be defined, and keycap inserts printed.

RouterMapper allows control panels to be customized for specific systems or operators. Unique names and icons can be assigned to each source and destination in the routing system, enabling a user to locate and select the desired inputs and outputs quickly and easily. Different on-screen control panels may also be designed for each operator with only the sources and destinations required by that operator. This level of customization protects the system resources from inadvertent changes.

RouterMapper also allows mapping of the logical sources and destinations that appear on the RouterWorks control panels. The Editor assigns these logical sources and destinations to physical sources and destinations in a routing system. For example, when operators select a source labeled “VTR-12” (the logical source), they may in reality be selecting Source 1, Source 2 or any other source (the physical source) in the system. Because the physical design of the routing system is transparent to the RouterWorks user, changes may be made to the routing system without affecting the overall image that the operator sees.

RouterMapper can also set the levels on which logical sources and destinations will be valid. A logical source for a camera, for example, could be set without corresponding audio. This “camera” source would be clearly indicated on the on-screen control panel as a video-only source and, when selected, will leave the audio levels unchanged. This form of “automatic breakaway” is especially useful for devices such as still stores, paint boxes, microphones, speakers, monitors, and cameras.
Remote Dial-Up

The RouterWorks application also includes a remote dial-up feature that allows a routing system to be controlled from a remote location. Your system should be set up for Dial-Up control at the RouterMapper Communications Settings dialog box. For more information, see your RouterMapper Configuration Utility Reference Guide.

TCP/IP

The RouterWorks application also allows you to control a routing system via Transmission Control Protocol/Internet Protocol (TCP/IP). Your system should be set up for TCP/IP control at the RouterMapper Communications Settings dialog box. For more information, see your RouterMapper Configuration Utility Reference Guide.

Demo Mode

If the PC is not connected to a routing system, but the user wants to see how the RouterWorks software will operate with a routing system, your
system should be set up for Demo Mode at the RouterMapper Communications Settings dialog box. Selecting Demo Mode will simulate the presence of a router and will allow the software to be operated normally.

**Related Leitch Products**

RouterWorks may be easily integrated with other Leitch routing control products, including EventWorks™ and the Programmable Panel Series control panels.

- EventWorks is a Microsoft® Windows®-based program (similar to RouterWorks) that is used to automate takes and salvos according to a user-defined schedule or sequence.
- The Programmable Panel Series control panels are the hardware equivalent of EventWorks and the RouterWorks panels. These programmable panels use the same database as the RouterWorks and EventWorks panels, and may be used in conjunction with these products to control a routing system. For additional information on these or any other Leitch products, contact the Leitch Sales Department or visit our Web site at [www.leitch.com](http://www.leitch.com).

**Contacting Leitch**

If you have questions about this or other Leitch products, contact us for technical support and product information.

**Technical Support**

Leitch Technology is committed to providing round-the-clock, 24-hour service to our customers around the world. Visit our Web site at [www.leitch.com > Support > Technical Support](http://www.leitch.com) for information on how to contact the Leitch Customer Service team in your geographical region.

**Product Information**

If you would like the latest Leitch product information or documentation, contact your Leitch dealer or the Leitch Sales Department at one of the locations listed above; or, visit our Web site at [www.leitch.com](http://www.leitch.com) for more information.
Installing RouterWorks Software

1. Place the program disk or CD into the correct drive on your personal computer.
2. From the taskbar’s Start menu, select Run.

![Run Dialog Box](image)

Figure 2-1. Run Dialog Box

3. In the Command Line box, enter [drive designator]:\setup.exe.
4. Click OK to launch the RouterWorks setup program.
5. The setup program will display an installation confirmation dialog box.
   - Click OK to continue program installation.
   - Click on Cancel to abort the installation.
6. Click **OK** to continue the installation process.
7. The *Install Directory* dialog box will appear.

![Image of Install Directory dialog box]

**Figure 2-3. Install Directory Dialog Box**

At this screen, designate the directory in which the RouterWorks program files will be stored. The default is **C:\LEITCH\RTRWRKS**. To change the destination directory, enter the complete path of the desired directory in the highlighted box. RouterWorks will create the specified directory (if it does not already exist) and store all program files in this directory.

8. Click **OK**. The *Install Dynamic Routing Fabric Manager* dialog box will appear.
The optional Dynamic Routing Fabric Manager function allows you to manage the dynamic routing thread connections between Integrator frames and other large routing systems based on Integrator frames. Contact your Leitch sales representative to discuss what is required for this option.

9. Click OK to continue the installation process.

10. The *Install Electronic Documentation* dialog box will appear.

   ![Install Electronic Documentation Dialog Box](image)

   **Figure 2-5. Install Electronic Documentation Dialog Box**

This dialog box provides you with the opportunity to install “electronic” copies of the printed RouterMapper documentation. In addition, you may download a copy of Adobe® Acrobat® Reader version 5. If you would like either the PDF files or the Acrobat Reader (or both) installed, click the appropriate check boxes.
11. Click OK. A Leitch Program Group dialog will appear. You may select the Windows Program Group where the application icons will appear.

![Figure 2-6. Leitch Program Group Dialog Box](image)

12. If you are re-installing RouterWorks, the Preserve Settings dialog box will appear. This message refers to the EDITRTR.INI file (which is stored in the Windows subdirectory). The EDITRTR.INI file stores all information concerning any application preferences originally created in RouterWorks.

![Figure 2-7. Preserve Settings Dialog Box](image)
• Click on **Yes** to keep your existing preferences.
• Click on **No** to overwrite existing preferences.

13. When the program installation is complete, a *Read Me* box will appear on the screen.

This box includes up-to-date information that may or may not have been incorporated into the manual at the time of program release. Select **File > Exit** to close the *Read Me* dialog box and return to the Windows desktop.

---

**Caution**

If you click “No” at the *Preserve Settings* dialog box, RouterWorks will overwrite your existing preferences with a new *EDITRTR.INI* file.

---

**Figure 2-8. Read Me Dialog Box**
If the RouterWorks program has been successfully installed, the Start menu should now include a new group titled *Leitch Routing Switchers.*

![Figure 2-9. Leitch Routing Switchers Group Window](image)

- Select the *Read Me* icon to reopen the text notes that were displayed on installation.
- Select the *Un-Install* icon to launch an application by which the RouterWorks software can be removed from the system.
- Select any of the *Help* icons to open a standard Windows Help file.
- Select the *single-bus panel, multi-bus panel,* or *matrix panel* icons to open those applications, each of which is described in detail in the chapters that follow.
- Select the RouterMapper icon to launch the RouterMapper application

### Installing RouterWorks v 5.06 on PCs Using Microsoft® Windows® 95, Windows® 98, or Windows® Me Operating System

If you want to install RouterWorks version 5.06 on a PC that uses a Windows 95, Windows 98, or Windows Me operating system, you may need to manually remove the following files and Windows registry entries.
Editing the Database

Files and Directories

1. At the Leitch root directory (C:\Leitch)
   a. Move any previously-created databases that you want to save to another location.
   b. Move any previously-created PAN files that you want to save to another location.
   c. Delete all files and subdirectories.
2. At the Windows root directory (C:\Windows [or WINNT, etc.])
   a. Move the EDITRTR.INI file that you want to save to another location.
   b. Delete EDITRTR.INI file in the Windows root directory.

Registry Entries

Use REGEDIT to remove the following key, sub-keys and values:
HKEY_CURRENT_USER\Software\Leitch Routers and Switchers

Connecting RouterWorks to a Router

To control a router with the RouterWorks software, the PC must be connected to a serial port in the routing system. For more information about connecting your PC to a serial port, please refer to your RouterMapper Configuration Utility Reference Guide.

Editing the Database

Before RouterWorks can be used to control a router, a database for the routing switcher must be created. Sources, destinations, and switching levels that are to appear on the on-screen control panels must first be defined using the RouterMapper application. Procedures for creating and editing databases can be found in the RouterMapper manual that was provided with your software.

A database created in RouterMapper can be used with RouterWorks and the Programmable Panel series control panels, as each product uses the same RouterMapper configuration utility. If you have already defined a router database using RouterMapper, it is not necessary to create a new one. Simply designate your existing database as the RouterWorks database by editing the panel initialization files as described in “Designating the Router Database” on page 109.
Launching RouterWorks Applications

1. Open the *Leitch Routing Switchers* group window. (See Figure 2-9 on page 26 for a graphic representation of this window.)

2. Choose one of the following options:
   - Select the *single-bus panel, multi-bus panel, or matrix panel* icons to open those applications.
   - Select the *Panel Wizard* icon to quickly set up a control panel.
   - Select the *Read Me* icon to reopen the text notes that were displayed on installation.
   - Select the RouterWorks *Help* icon to open the Help file.

**Note**

If your PC is not connected to a routing system, but you want to see how RouterWorks operates, select “Demo Mode” from the *Comm Settings* menu in RouterMapper. Selecting Demo Mode will simulate the presence of a router and will allow the software to be operated normally.
Selecting a Destination

Destinations available for use with a control panel are defined via RouterMapper and the panel definition file.

- To add, delete, or change a destination in the database, refer to the RouterMapper Configuration Utility Reference Guide.
- For instructions on how to include or exclude a destination from this panel, see “Adding/Deleting Logical Destinations” on page 116.

To select a destination on a single-bus panel, follow these steps:

1. Click the arrow button located to the right of the drop-down destination list.
2. The list will expand to reveal the destinations available for use with this control panel.
3. Scroll through the list of destinations, and click the desired destination. Sources currently connected to the selected destination will be reflected in the Source Status window and on the Source LEDs.
To select a destination on a multi-bus panel, follow these steps:

1. Click the desired Destination button.
2. If the desired destination is not visible on the screen, scroll through the list of available destinations using the scroll bar immediately below the Destination buttons. The destination name and icon will appear in each status window, along with sources currently connected to the destination.
To select a destination on a matrix panel: Procedures for connecting sources and destinations on the matrix panel depend on the configuration (Preset/Take or No-Take) of the panel. Switching procedures will be covered separately in “AFV (Audio Follow Video) Switching” on page 32 and “Breakaway Switching” on page 35.

Connecting a Source

Sources available for use with a control panel are defined via RouterMapper and the panel definition file.

- To add, delete, or change a source in the database, refer to the RouterMapper Configuration Utility Reference Guide.
- To include and exclude sources and destinations, refer to “Adding/Deleting Logical Sources” on page 114 and “Adding/Deleting Logical Destinations” on page 116.

To connect a Source to a currently selected destination on a single-bus or a multi-bus panel, click the appropriate source button. The source will be reflected in the Source status window, and the LEDs for that source will light to reflect the new connection. Click the scroll bar located beneath the source buttons to view additional sources.

![Connecting a Source: Single-Bus Panel](image)

Figure 3-3. Connecting a Source: Single-Bus Panel
To connect a source on a matrix panel: Procedures for connecting sources on the matrix panel depend on the configuration (Preset/Take or No-Take) of the panel. Switching procedures will be covered separately in “AFV (Audio Follow Video) Switching” on page 32 and “Breakaway Switching” on page 35.

AFV (Audio Follow Video) Switching

Single- and Multi-Bus Panels

Clicking on a source when all levels are enabled (when each Level button is lit) will change all levels for that source simultaneously (AFV switching).

To perform an AFV switch for single- or multi-bus panels, follow these steps:

1. Enable all Level buttons (or press the Follow button). Each Level button should be lit.
2. Click the desired Source button. The source will be switched on all levels simultaneously.
1 Only the levels enabled for a particular source will be changed when a source is selected at the single-bus panel. If, for example, a Camera source has been configured at the Database Editor as video-only, only the video level LED will be lit when the Camera source is selected. The LEDs for other levels will be blank for the source. Clicking on the Camera source will change only the enabled level. Other sources connected to the selected destination on other levels will not be affected.

2 A particular source may be enabled only on specific levels. A logical source for a camera, for example, could be set without corresponding audio. This “camera” source would be clearly shown on a multi-bus panel as a video-only source and, when selected, would leave the audio levels unchanged. Only the levels enabled for a particular source will be changed when the source is selected at the multi-bus panel. LEDs corresponding to the enabled levels will be lit. All other level LEDs will be blank for that source.
Matrix Panels

Selecting a crosspoint when all levels are enabled (when each Level button is lit) will change all levels for that source simultaneously (AFV switching).

![AFV Switching — Matrix Panel](image)

**Figure 3-7. AFV Switching — Matrix Panel**

*To perform an AFV switch - Preset/Take configuration, follow these steps:*

1. Enable all Level buttons, or click Follow. (Each Level button should be lit.)
2. Click the desired crosspoint(s).
3. Click Take. The crosspoint(s) will be switched on all levels.

*To perform an AFV switch - No-Take configuration, follow these steps:*

1. Enable all Level buttons, or click Follow. (Each Level button should be lit.)
2. Double-click the desired crosspoint. The crosspoint will be switched on all levels.

**Breakaway Switching**

A source may be changed on selected levels without affecting the sources already connected on other levels (breakaway switching).

**Single- and Multi-Bus Panels**

*To perform a Breakaway switch for single- or multi-bus panels, follow these steps:*

1. Enable the **Level** button(s) corresponding to the level(s) that are to be switched independently. Only those buttons that have been enabled should be lit.

2. Click the desired **Source** button. The source will be switched on the selected breakaway level only. Sources connected on other levels will not be affected.

![Figure 3-8. Breakaway Switching — Single-Bus Panel](image-url)
Figure 3-9. Breakaway Switching — Multi-Bus Panel

To return to AFV switching for single- or multi-bus panels, click Follow. All Level buttons will now be lit. Sources connected with all Level buttons lit will be switched on all levels simultaneously.
Matrix Panels

Figure 3-10. Breakaway Switching — Matrix Panel

To perform a Breakaway switch - Preset/Take configuration, follow these steps:

1. Enable the Level button(s) corresponding to the level(s) that are to be switched independently (only those buttons that have been enabled should be lit).
2. Click the desired crosspoint(s).
3. Click Take. The source will be switched only on the selected breakaway level(s). Sources connected on other levels will not be affected.

To perform a Breakaway switch - No-Take configuration, follow these steps:

1. Enable the Level button(s) corresponding to the level(s) that are to be switched independently (only those buttons that have been enabled should be lit).
2. Double-click the desired crosspoint. The source will be switched only on the selected breakaway level(s). Sources connected on other levels will not be affected.

*To return to AFV switching,* click **Follow**. All **Level** buttons will now be lit. Sources connected with all **Level** buttons lit will be switched on all levels simultaneously.

### Performing a Multiple Take (Matrix Panels Only)

The **Multiple Take** feature allows you to take several destinations on selected levels to a single source.

**To perform a multiple take, follow these steps:**

1. Double-click the panel name to start up RouterWorks. (If necessary, use Windows Explorer to navigate to the file location.)

2. Right-click somewhere within the matrix grid under the source that you want to take to your multiple destinations. A pop-up menu will appear (see Figure 3-11)
3. Click the **Take <Source name> to Multiple Destinations** selection. The **Take Multiple Destinations to <Source name>** drop-down list box will appear (see Figure 3-12).
4. Select as many destinations as you like from the drop-down list box.
   - To select a sequential range of destinations, click the first selection in the range, then hold the \(<\text{Shift}\) key while you click the last one in the range. All of the destination names in the range will be highlighted.
   - To select several non-sequential destinations, press and hold the \(<\text{Ctrl}\) key while clicking destination selections. All selected destination names will be highlighted.

5. Click \textbf{OK} to perform the Take operation. (Click \textbf{Cancel} at any time to close the dialog box without performing the Take. This will not affect the existing state of the system.)

\textbf{Note}

If you have selected “Demo Mode” for RouterMapper, any multiple Takes that you select will be discarded when you close the .\text{PAN} file. See “Selecting Serial, Remote, TCP/IP, or Demo Connection Settings” in the \textit{RouterMapper Configuration Utility Reference Guide} for information on how to switch from Demo mode.
Disconnecting and Replacing Sources (Matrix Panels only)

RouterWorks’ advanced features include Source Disconnect, Source Replace, and Multiple Disconnect.

Source Disconnect

Note
You will not be able to use this feature on destinations that are locked or protected.

The Source Disconnect feature allows you to quickly disconnect all destinations connected to a specified source.

To process a Source Disconnect, follow these steps:
1. If necessary, edit the existing matrix panel via Panel Wizard to set up the Options > Enable Source Disconnect capability.
   - To learn how to edit a matrix panel, see “Editing an Existing Panel via Panel Wizard” on page 98.
   - To learn how to quickly create a panel, see “Setting Up a New Panel via Panel Wizard” on page 88).
2. Double-click the panel name to start up RouterWorks. (If necessary, use Windows Explorer to navigate to the file location.)

3. In the matrix grid control, select the Source by right-clicking the crosspoint marker. A pop-up menu will appear (see Figure 3-14 on page 43).

**Figure 3-13.** Enabling Source Disconnects via Panel Wizard
Disconnecting and Replacing Sources (Matrix Panels only)

Figure 3-14. **Disconnect Source Window**

4. Highlight **Disconnect Source In [Source XX]**, then press **<Enter>**.

RouterWorks will search through all destinations and disconnect the ones that are connected to the source you specified.

**Multiple Disconnect**

The *Multiple Disconnect* feature allows you to disconnect several destinations connected to a single source.

**To process a multiple disconnect, follow these steps:**

1. Double-click the panel name to start up RouterWorks. (If necessary, use Windows Explorer to navigate to the file location.)
2. Right-click somewhere within the matrix grid. A pop-up menu will appear (see Figure 3-11 on page 39).

**Note**

You will not be able to use this feature on destinations that are locked or protected.
3. Click the **Take <Source name> to Multiple Destinations** selection. The **Take Multiple Destinations to <Source name>** drop-down list box will appear (see Figure 3-12 on page 40).

4. In the **Sources** list box, select **<Disconnect>**. The list box name will change (see Figure 3-15).

![Take Multiple Destinations to <Disconnect> Drop-Down List Box](image)

**Figure 3-15. Take Multiple Destinations to <Disconnect> Drop-Down List Box**

5. Select as many destinations as you like from the drop-down list box.
   - To select a sequential range of destinations, click the first selection in the range, then hold the `<Shift>` key while you click the last one in the range. All of the destination names in the range will be highlighted.
   - To select several non-sequential destinations, press and hold the `<Ctrl>` key while clicking destination selections. All selected destination names will be highlighted.

6. Click **OK** to perform the Disconnect operation. (Click **Cancel** at any time to close the dialog box without performing the Disconnect. This will not affect the existing state of the system.)

---

**Source Replace**

You will not be able to use this feature on destinations that are locked or protected.

The **Source Replace** feature allows you to move all destinations from one specified source to another specified source.

**To process a Source Replace, follow these steps:**

1. If necessary, edit the existing matrix panel via Panel Wizard to set up the **Options > Enable Source Disconnect** capability.
Disconnecting and Replacing Sources (Matrix Panels only)

- For instructions on how to edit a matrix panel, see “Editing an Existing Panel via Panel Wizard” on page 98.
- For instructions on how to quickly create a panel, see “Setting Up a New Panel via Panel Wizard” on page 88.

2. Double-click the panel name to start up RouterWorks. (If necessary, use Windows Explorer to navigate to the file location.)

3. In the matrix grid control, select the Source by right-clicking the crosspoint marker. A pop-up menu will appear (see Figure 3-16 on page 45).

![Figure 3-16. Move Destinations Window](image)

4. Highlight Move Destinations on Source In [Source XX], then press <Enter>.

RouterWorks will search through all destinations in the selected source and move them to the new source you specified.
Undoing a Take

The *Undo Last Take* feature allows you to reverse up to eight consecutive *Take* commands issued from the control panel.

**To undo a Take command, follow these steps:**

1. Click the system menu icon (the icon located to the direct left of the title bar).
2. Scroll down to *Undo Last Take* (or press <Ctrl> Z).

![System Menu Icon with Undo Last Take Feature Highlighted](image)

3. The last *Take* command you performed will be removed.

**To undo several Take commands, follow these steps:**

1. Click the system menu icon (the icon located to the direct left of the title bar).
2. Scroll down to *Undo Last Take* (or press <Ctrl> Z).
3. Repeat step 2 until you have undone as many *Take* commands as you wish. (Remember that this feature allows you to reverse up to eight *Take* commands.)
4. The last set of *Take* commands you performed will be removed.

---

**Note**

The *Undo Last Take* feature will not undo *Take* operations issued from other control panels. The *Undo Last Take* feature only remembers the status for the selected destination at the time of the most recent *Take* for that destination at the user’s panel. If a different control panel has changed that same status to another source, the *Undo Last Take* feature will restore the destination to the source that was active at the time that the last *Take* was issued from the user’s RouterWorks panel.
Aligning and Protecting Destinations

Locking a Destination

The Lock feature allows a Destination to be locked to prevent inadvertent changes to the Destination. Locking a destination prevents anyone from changing the Destination.

You can lock either a single Destination at a time, or lock multiple Destinations at the same time.

Attempting to unlock a locked Destination will cause the following pop-up to appear. This pop-up message identifies the panel ID where the destination was locked. Panels with the same IDs can unlock each others’ panels.

![Lock Error Dialog Box](image)

**Figure 3-18. Lock Error Dialog Box**

The pop-up will also include override buttons, if the panel is configured to allow users to override a lock (see “Allowing Overrides” on page 66).

**To lock a single destination for single-bus panels, follow these steps:**

1. Select the Destination from the drop-down list box by clicking the arrow located to the right of the box.
2. Connect the desired source to the Destination by clicking the appropriate source button.
3. Click **Lock**. The Destination will be locked to all users.
Chapter 3: Operation

Figure 3-19. Locking a Destination — Single-Bus Panel

To lock multiple destinations for single-bus panels, follow these steps:

1. Click the system menu icon located to the direct left of the title bar. A drop-down menu will appear.

Figure 3-20. Lock/Unlock Multiple Destinations Drop-Down Menu — Single-Bus Panel

2. Highlight Lock/Unlock Multiple, then press <Enter>. The Lock/Unlock Multiple Destinations dialog box will appear.
3. Select which Destinations you want to lock.
   You may select multiple items from the list using standard Windows selection techniques (hold down the <Shift> or <Ctrl> keys while selecting the items).

4. Click OK. The Destinations will be locked to all users.

To lock a single destination for multi-bus panels, follow these steps:

1. Select the Destination by clicking on it.
2. Connect the desired source to the Destination by clicking on the appropriate source button.
3. Click the Lock (L) button located inside the Destination button. This Destination will be locked to all users.
To lock multiple destinations for multi-bus panels, follow these steps:

1. Click the system menu icon (the icon located to the direct left of the title bar). A drop-down menu will appear.

![Figure 3-23. Lock/Unlock Multiple Destinations Drop-Down Menu — Multi-Bus Panel](image)

2. Highlight **Lock/Unlock Multiple**, then press `<Enter>`. The Lock/Unlock Multiple Destinations dialog box will appear.

![Figure 3-24. Lock/Unlock Multiple Destinations Dialog Box](image)
3. Select which Destinations you want to lock.
   You may select multiple items from the list using standard Windows selection techniques (hold down the <Shift> or <Ctrl> keys while selecting the items).

4. Click OK. The Destinations will be locked to all users.

To lock a single destination for matrix panels, follow these steps:

1. Select the Destination by right-clicking the crosspoint marker. A pop-up menu will appear.

2. Click on Lock. The Destination will be locked to all users.

If a Destination on the matrix panel is locked, an icon will be displayed at the crosspoint. Click the icon to produce a pop-up menu that will allow the lock to be disabled. Right-click the crosspoint to produce the pop-up menu.

Figure 3-25. Locking a Destination — Matrix Panels
To lock multiple destinations for matrix panels, follow these steps:

1. Select the Destination by right-clicking the crosspoint marker. A pop-up menu will appear.

![Lock/Unlock Multiple Destinations Pop-up Menu — Matrix Panels](image)

**Figure 3-26.** Lock/Unlock Multiple Destinations Pop-up Menu — Matrix Panels

2. Highlight Lock/Unlock Multiple, then press <Enter>. The Lock/Unlock Multiple Destinations dialog box will appear.
3. Select which Destinations you want to lock.
   You may select multiple items from the list using standard Windows selection techniques (hold down the <Shift> or <Ctrl> keys while selecting the items).
4. Click OK. The Destinations will be locked to all users.

Unlocking a Destination

**Note**
The Source Disconnect, Multiple Disconnect, Source Replace, and Undo Last Take features do not operate on Lock/Unlock operations.

**To unlock a single destination for single-bus panels, follow these steps:**

1. Select the Destination from the drop-down list box by clicking the arrow located to the right of the box.
2. Connect the desired Source to the Destination by clicking the appropriate source button.
3. Click **Lock**. The Destination will be unlocked to all users.

**To unlock multiple destinations for single-bus panels, follow these steps:**

1. Click the system menu icon (the icon located to the direct left of the title bar). A drop-down menu will appear.
2. Highlight **Lock/Unlock Multiple**, then press <Enter>. The **Lock/Unlock Multiple Destinations** dialog box will appear.

3. Check the box marked **Unlock Selected Items**.
4. Select which Destinations you want to unlock.
   
   You may select multiple items from the list using standard Windows selection techniques (hold down the <Shift> or <Ctrl> keys while selecting the items).

5. Click **OK**. The Destinations will be unlocked for all users.

   **To unlock a single destination for multi-bus panels**, click the **Lock (L)** button located inside the **Destination** button. This Destination will then be available to all users.
To unlock multiple destinations for multi-bus panels, follow these steps:

1. Click the system menu icon (the icon located to the direct left of the title bar). A drop-down menu will appear.

   ![Figure 3-30. Lock/Unlock Multiple Destinations Drop-Down Menu — Multi-Bus Panel](image)

2. Highlight Lock/Unlock Multiple, then press <Enter>. The Lock/Unlock Multiple Destinations dialog box will appear.

   ![Figure 3-31. Lock/Unlock Multiple Destinations Dialog Box](image)

3. Check the box marked Unlock Selected Items.
4. Select which Destinations you want to unlock.

   You may select multiple items from the list using standard Windows selection techniques (hold down the <Shift> or <Ctrl> keys while selecting the items).
5. Click **OK**. The Destinations will be unlocked for all users.

*To unlock a single destination for matrix panels, follow these steps:*

1. Click the **Lock** icon located to the right of the locked Destination. A pop-up menu will appear.
2. Remove the check mark next to **Lock**. The Destinations will be unlocked for all users.

*To unlock multiple destinations for matrix panels, follow these steps:*

1. Select the Destination by right-clicking the crosspoint marker. A pop-up menu will appear.
2. Highlight **Lock/Unlock Multiple**, then press <**Enter**>. The **Lock/Unlock Multiple Destinations** dialog box will appear.

![Lock/Unlock Multiple Destinations Dialog Box](image)

3. Select which Destinations you want to unlock.
   You may select multiple items from the list using standard Windows selection techniques (hold down the <**Shift**> or <**Ctrl**> keys while selecting the items).
4. Click **OK**. The Destinations will then be available for all users.
Protecting a Destination

The *Protect* feature also prevents inadvertent changes to the Destination, but differs from a Lock in one respect. With the *Protect* feature enabled, the user who enabled the Protect will be able to change the destination at will, but other users will be prevented from changing that destination until the Protect is removed.

**To protect a single destination for single-bus panels, follow these steps:**

1. Select the destination from the drop-down list box.
2. Connect the desired source to the destination by clicking the appropriate source button.
3. Click **Protect**. The destination will be unavailable to everyone except the person who originally enabled the Protect.

![Figure 3-33. Protecting a Destination — Single-Bus Panels](image)

**To protect multiple destinations for single-bus panels, follow these steps:**

1. Click the system menu icon (the icon located to the direct left of the title bar). A drop-down menu will appear.

![Figure 3-34. Protect/Unprotect Multiple Destinations Drop-Down Menu — Single-Bus Panels](image)
2. Highlight **Protect/Unprotect Multiple**, then press `<Enter>`. The *Protect/Unprotect Multiple Destinations* dialog box will appear.

![Protect/Unprotect Multiple Destinations Dialog Box](image)

**Figure 3-35. Protect/Unprotect Multiple Destinations Dialog Box**

3. Select which Destinations you want to protect.
   
   You may select multiple items from the list using standard Windows selection techniques (hold down the `<Shift>` or `<Ctrl>` keys while selecting the items).

4. Click **OK**. The destinations will be unavailable to everyone except the person who originally enabled the Protect.

To protect a single destination for multi-bus panels, follow these steps:

1. Click the desired destination.

2. Click the appropriate source button to connect the desired source to the destination.

3. Click the **Protect (P)** button located inside the **Destination** button. This destination will be unavailable to everyone except the person who originally enabled the Protect.
To protect multiple destinations for multi-bus panels, follow these steps:

1. Click the system menu icon (the icon located to the direct left of the title bar). A drop-down menu will appear.

2. Highlight Protect/Unprotect Multiple, then press <Enter>. The Protect/Unprotect Multiple Destinations dialog box will appear.
3. Select which destinations you want to protect.
   You may select multiple items from the list using standard Windows selection techniques (hold down the <Shift> or <Ctrl> keys while selecting the items).

4. Click OK. The destinations will be unavailable to everyone except the person who originally enabled the Protect.

*To protect a single destination for matrix panels, follow these steps:*

1. Select the destination by right-clicking the crosspoint marker.
2. Click on Protect. The destination will be unavailable to everyone except the person who originally enabled the Protect.
If a destination on the matrix panel is protected, an icon will be displayed at the crosspoint. Click the icon to produce a pop-up menu that will allow the lock or protect to be disabled. You can also right-click the crosspoint to produce the pop-up menu.

To protect multiple destinations for matrix panels, follow these steps:

1. Select the destination by right-clicking the crosspoint marker. A pop-up menu will appear.
2. Click on Protect/Unprotect Multiple. The Protect/Unprotect Destinations dialog box will appear.
3. Select which Destinations you want to Protect.
   You may select multiple items from the list using standard Windows selection techniques (hold down the <Shift> or <Ctrl> keys while selecting the items).

4. Click **OK**. The destinations will be unavailable to everyone except the person who originally enabled the Protect.

### Unprotecting a Destination

**Note**
The Source Disconnect, Multiple Disconnect, Source Replace, and Undo Last Take features do not operate on Protect/Unprotect operations.

To unprotect a single destination for single-bus panels, follow these steps:

1. Select the destination from the drop-down list box.
2. Connect the desired source to the destination by clicking the appropriate source button.
3. Click **Protect**. The destination will be available to everyone.
To unprotect multiple destinations for single-bus panels, follow these steps:

1. Click the system menu icon (the icon located to the direct left of the title bar). A drop-down menu will appear.

2. Highlight `Protect/Unprotect Multiple`, then press `<Enter>`. The `Protect/Unprotect Destinations` dialog box will appear.

3. Check the box marked `Unprotect Selected Items`.
4. Select which Destinations you want to unprotect.
   You may select multiple items from the list using standard Windows selection techniques (hold down the `<Shift>` or `<Ctrl>` keys while selecting the items).
5. Click **OK**. The destinations will be available to everyone.

*To unprotect a single destination for multi-bus panels,* click the **Protect (P)** button located inside the **Destination** button. This destination will become available to everyone.

![Unprotecting a Destination — Multi-Bus Panels](image)

*Figure 3-44. Unprotecting a Destination — Multi-Bus Panels*

*To unprotect multiple destinations for multi-bus panels, follow these steps:*

1. Click the system menu icon (the icon located to the direct left of the title bar). A drop-down menu will appear.

![Protect/Unprotect Multiple Destinations Drop-Down Menu](image)

*Figure 3-45. Protect/Unprotect Multiple Destinations Drop-Down Menu*

2. Highlight **Protect/Unprotect Multiple**, then press `<Enter>`. The **Protect/Unprotect Destinations** dialog box will appear.
3. Check the box marked *Unprotect Selected Items*.
4. Select which destinations you want to unprotect.
   You may select multiple items from the list using standard Windows selection techniques (hold down the <Shift> or <Ctrl> keys while selecting the items).
5. Click **OK**. The destinations will become available to everyone.

*To unprotect a single destination for matrix panels, follow these steps:*

1. Select the destination by right-clicking the crosspoint marker.
2. Click on **Protect**. The destination will become available to everyone.

*To unprotect multiple destinations for matrix panels, follow these steps:*

1. Select the destination by right-clicking the crosspoint marker. A pop-up menu will appear.
2. Click on **Protect/Unprotect Multiple**. The *Protect/Unprotect Destinations* dialog box will appear.
3. Check the box marked Unprotect Selected Items.

4. Select which Destinations you want to unprotect.
   You may select multiple items from the list using standard Windows selection techniques (hold down the <Shift> or <Ctrl> keys while selecting the items).

5. Click OK. The destinations will be available to everyone.

Allowing Overrides

The procedure for allowing overrides is the same for single bus, multi-bus, and matrix panels.

**Setting the Allowing Overrides Feature via Panel Wizard**

1. Highlight the file name of the matrix panel you want to edit. (If necessary, use Windows Explorer to navigate to the file location.)
2. Right-click the matrix file name. A drop-down menu will appear.

4. Click **Next** until the **Options** window appears.

5. Click **Advanced**. The **Advanced Options, Common Settings** tab will appear.

6. Choose the **Options** tab.

7. Check the **Allow Lock Override** option.
8. Click **Next**. The *Finish* window will appear.
9. Click **Finish** to complete the edit of your panel.

**Allowing Overrides via Editing the .PAN File**

1. Open the proper panel initialization file (.PAN) in any text editor.
2. Set the `AllowLockOverRide=` line to 1. (This is the default setting.) Attempting to unlock a destination will produce a *Lock Error* pop-up dialog box.
   - Click on **Ignore Lock** to temporarily override the lock (the pending operation will be performed, but the destination will remain locked).
   - Click on **UnLock** to permanently remove the lock.
Alarms (Matrix Panels Only)

The matrix panel includes an alarm LED for each level that will light when an alarm condition is detected by the router.

![Alarms LED](image1)

**Figure 3-50. Alarms LED**

If an alarm LED is lit, click the LED or **Details** and a dialog box containing information about the detected alarm condition will appear.

![Alarms Dialog Box](image2)

**Figure 3-51. Alarms Dialog Box**

Click **Refresh** at the Alarms dialog box to update any and all Alarm messages.
Executing and Editing Salvos

The Salvo feature allows point and click execution or editing of any salvo stored in the database. (A salvo is a predefined list of crosspoint operations that, when executed, occur simultaneously.) Salvos can be used to store commonly used, complex router setups involving multiple destinations for instant recall. (For example, a salvo could be created that would send a test signal to every monitor in an Edit Suite.) Executing a salvo changes only the crosspoints defined by the salvo. Other crosspoint connections in the system will not be affected.

- **For single- and multi-bus panels:** To add, edit or execute a salvo, click Salvo located at the main window. The Salvo Select dialog will appear.

![Figure 3-52. Salvo Select Dialog Box — Single-Bus Panels](image)

![Figure 3-53. Salvo Select Dialog Box — Multi-Bus Panels](image)

The Salvo Select dialog includes a drop-down list box and three function buttons: Execute, Edit, and Add. Available salvos are listed in the drop-down list box and can be selected by clicking the arrow to the right of the box.

- Click **Execute** to automatically launch the selected salvo.
• Click **Edit** or **Add** to open the Salvo Editor, which will allow the currently selected salvo to be edited or a new salvo to be added to the database.

• **For matrix panels:** To add, edit or execute a salvo, click the appropriate button located in the Salvo group at the matrix panel main window. The buttons available in the Salvo group will depend on the panel configuration (**Preset/Take** or **No-Take**) selected.

### Preset/Take Configuration

The Salvo group includes a drop-down list box and three function buttons: **Preset**, **Edit**, and **Add**. Available salvos are listed in the drop-down list box. Click the arrow to the right of the box to select an available salvo.

• Click **Preset** to preset the selected salvo and enable the **Take** button for salvo execution.

• Click **Edit** or **Add** to open the Salvo Editor and to allow the currently selected salvo to be edited; or a new salvo to be added to the database.

![Salvos Dialog Box](image)

**Figure 3-54. Preset / Take Configuration Dialog Box — Matrix Panels**

### No-Take Configuration

The Salvo group includes a drop-down list box and three function buttons: **Execute**, **Edit**, and **Add**. Available salvos are listed in the drop-down list box. Click the arrow to the right of the box to select an available salvo.

• Click **Execute** to immediately launch the selected salvo.
Click Edit or Add to open the Salvo Editor, and to allow the currently selected salvo to be edited or a new salvo to be added to the database.

**Adding a Salvo**

- For *single- and multi-bus panels only*, start at step 1 below.
- For *matrix panels*, start at step 2 below.

1. Click **Salvo** at the main window to open the **Salvo Select** dialog box.

2. Click **Add**. The panel will go off-line, and the **Salvo Editor** window will appear.

   The **Salvo Editor** window (see Figure 3-55 on page 73) is an off-line RouterWorks matrix panel. Crosspoint selections made at the **Salvo Editor** window will not affect the status of the router until the salvo is actually executed.

3. Define the salvo.

   A salvo may be defined in one of several ways.

   - The **Capture** option takes a “snapshot” view of the current state of the router and stores it as a salvo. This salvo can then be edited (crosspoints added or deleted) as needed.

   - A salvo may be created by copying an existing salvo. The copied salvo may serve as a starting point for the definition of the new salvo. Crosspoints can be added or deleted as necessary.

   - A salvo may be created “from scratch” by connecting the appropriate sources and destinations on the off-line Salvo Editor panel. For specific procedures for making crosspoint selections on the panel, refer to “Connecting a Source” on page 31 and “Selecting a Destination” on page 29.
Capturing the Existing State of the Router

- For **single- and multi-bus panels only**, start at step 1 below.
- For **matrix panels**, start at step 2 below.

1. Click **Salvo** at the main window to open the **Salvo Select** panel.
2. Click **Add**. The panel will go off-line, and the **Salvo Editor** window will appear.
3. Assign an appropriate name to the new salvo. (Highlight the default name contained in the **Name Edit** box and type a new name in the box.)
4. Click **Capture** at the **Salvo Editor** main window. The following message will appear:
Chapter 3: Operation

Figure 3-56. Capturing a Salvo Error Message

5. Click **Yes**.
6. Add or delete crosspoint assignments as necessary to edit the salvo displayed on the off-line panel.
7. Click on **Done** to exit the *Salvo Editor* and return to where you were before you created the salvo.

### Adding a Crosspoint to a Salvo

- For *single- and multi-bus panels only*, start at step 1 below.
- For *matrix panels*, start at step 2 below.

1. Click **Salvo** at the main window to open the *Salvo Select* panel.
2. From the drop-down list, select the name of the salvo to which you want to add a crosspoint.
3. Click **Edit**. The panel will go off-line, and the *Salvo Editor* window will appear.
4. Click at the intersection of the source and destination lines. (Refer to “Connecting a Source” on page 31 and “Selecting a Destination” on page 29 for more information.) The crosspoint will be added to the salvo.

### Deleting a Crosspoint from a Salvo

The procedure for deleting a crosspoint from a salvo is the same for single-bus, multi-bus, and matrix panels.

1. Position the cursor over the crosspoint to be deleted and click the right mouse button.
2. The *Lock / Protect / Clear* pop-up menu will appear.
3. Select **Clear**. The crosspoint will be deleted.
4. If you click **Clear All** at the Salvo Editor window, all existing crosspoints will be deleted from the salvo.
Copying an Existing Salvo

- For single- and multi-bus panels only, start at step 1 below.
- For matrix panels, start at step 2 below.

1. Click Salvo at the main window to open the Salvo Select dialog box.
2. From the drop-down list, select the name of the salvo from which you want to copy.
3. Click Edit. The panel will go off-line, and the Salvo Editor window will appear.
4. Click Copy at the Salvo Editor window. The Copy Salvo dialog box will appear.
5. In the Copy From Salvo box (the left side of the dialog), select the salvo that will be copied to the new salvo. The new salvo name will already be displayed in the Copy Salvo To box.
6. Click Overwrite to completely overwrite any crosspoints previously selected in the new salvo. Any previously existing crosspoints will be deleted from the new salvo.
   OR
   Click Merge to merge the two salvos. Existing crosspoints from both salvos will be stored in the new salvo. No crosspoints will be deleted.

Figure 3-57. Copy Salvo Dialog Box
## Executing a Salvo

### Single- and Multi-Bus Panels

1. Click **Salvo** at the Single-Bus main window to open the *Salvo Select* dialog box.
2. Select the salvo from the drop-down list box by clicking on the arrow located at the right of the box.
3. Click **Execute**. The selected salvo will be launched immediately.

### Matrix Panels: Preset/Take Configuration

1. Select the salvo from the drop-down list box by clicking on the arrow located at the right of the box.
2. Click **Preset**. The **Take** button will be highlighted indicating that the salvo is preset.
3. Click **Take**. The selected salvo will be executed immediately.

### Matrix Panels: No-Take Configuration

1. Select the salvo from the drop-down list box by clicking on the arrow located at the right of the box.
2. Click **Execute**. The selected salvo will be executed immediately.

## Editing a Salvo

- For *single- and multi-bus panels only*, start at step 1 below.
- For *matrix panels*, start at step 2 below.

1. Click **Salvo** at the main window to open the *Salvo Select* dialog box.
2. Select the salvo from the drop-down list.
3. Click **Edit**. The *Salvo Editor* window will appear. Redefine the salvo, as outlined in “Adding a Salvo” on page 72.

## Deleting a Salvo

- For *single- and multi-bus panels only*, start at step 1 below.
- For *matrix panels*, start at step 2 below.

1. Click **Salvo** at the main window to open the *Salvo Select* dialog box.
2. Select the salvo from the drop-down list.
3. Click **Edit**. The **Salvo Editor** window will appear.
4. Click **Delete**. The selected salvo will be deleted from the router database.

**Active Salvos Control**

The *Active Salvos Control* feature is available in single-bus, multi-bus, and matrix panel modes. This control shows the salvos that have totally intact crosspoints.

![Active Salvos Control Window](image)

**Figure 3-58. Active Salvos Control Window**

The *Active Salvos Control* displays the names of all salvos that are completely engaged.

- If a salvo has all levels of every crosspoint engaged, then the name will appear in the *Active Salvos* list box.
- If even one level of one crosspoint is not engaged the name will not appear in the window.
- If identical salvos with different names exist then both names will appear in the control’s list box simultaneously.

Activate salvos by selecting a salvo in the Salvo Control box and pressing the **Take** button in the preset box (if preset is used), or by manually setting the salvo one crosspoint at a time. The salvo name will
appear in the *Active Salvos* list box once the salvo is fully engaged. Salvo names will also appear in the *Active Salvos* list box if other instances of the application have engaged a salvo.

**Bidirectional Take**

The bidirectional Take feature allows a convenient method of establishing two-way communications pathways using a standard source-to-destination router.

Before you can use this feature, you must

- Create logical Sources that correspond to router inputs are connected to a speaking channel
- Create logical Destination assignments to indicate that the router outputs are connected to a listening channel
- Add bidirectional routing entry information in the .PAN file for the appropriate router (see “Activating Bidirectional Take” on page 118)

**Configuring the Router**

To use the bidirectional Take feature, you must configure the router in such a way that

- Its inputs are connected to the outgoing pathways used for talking from the speakers (e.g., microphones).
- Its outputs are connected to the speaker’s incoming (listening) communication pathway (e.g., headphones or other listening apparatus).

1. Via RouterMapper, create logical Sources that correspond to the router’s inputs. (Refer to the *RouterMapper Configuration Utility Reference Guide* for instructions about how create Sources and Destinations). Assign the names for the logical Sources to represent the speakers’ outgoing communication channels.

In the example below, the Source naming convention identifies the speaker and that the source corresponds to his talking channel. For example: “S 1 TLK” identifies speaker 1’s talk channel (router input assigned to Level 0 input 1).
2. Create similar logical Destination assignments to indicate that the router outputs are connected to the speaker’s listening channel (for example, “S 1 LIS” for speaker 1 listening channel assigned to router level 0 input 1).

![Logical Source index entry](image1)

**Figure 3-59.** Setting Up Sources for Bidirectional Take

![Logical Destination index entry](image2)

**Figure 3-60.** Setting Up Destinations for Bidirectional Take
Editing the .PAN File

To enable the bidirectional Take feature, add the following entry to the appropriate .PAN file (e.g., “Matrix.PAN”). The entry listed below is **not** an exact duplicate of what you must enter. Entry information should reflect your system’s setup. See “Activating Bidirectional Take” on page 118 for a more detailed explanation of the information in these entries.

```
[BidirectionalRouting]
Enabled=1
NumberOfPorts=(value)
Port0=(value)
Port1=(value)
Port2=(value)

Port999=(value)
```

**Note**
Use Microsoft® NotePad or any similar text editor to make changes to the .PAN file.
Using the Bidirectional Take Feature

1. Open a RouterWorks matrix panel (with the appropriate .PAN file entries added to enable the feature) connected to the properly configured routing system.

2. Press the “B” key on the PC keyboard to display the bidirectional Take dialog. A window similar to the one shown in Figure 3-61 will appear.

![Matrix Panel with Bidirectional Take Dialog Box](image)

Figure 3-61. Matrix Panel with Bidirectional Take Dialog Box

3. Select the two speakers (ports) that wish to have the conversation in the “Port A” and “Port B” selection list boxes. (In this example, conversation is being established between Speakers 1 and 2.)
4. Click **OK** to complete the Take operation.
5. After the Take is completed, the matrix panel will display status showing that the talk channel for speaker 1 is connected to the Listen channel of speaker 2, and vice-versa.
6. To add additional listeners to either port, simply highlight their entries in the list boxes displayed below the selected speaker in the Request Bidirectional Take dialog box.
Figure 3-64. Setting up a Conversation between Speakers 1 and 2 with Additional Listeners Selected
In the example below, a conversation will be established between speakers 1 and 2.

- Speakers 3, 4, and 5 will be “listening” to speaker 1.
- Speakers 6, 7, and 8 will be “listening” to speaker 2.

The matrix panel display will show status indicating that a conversation is established between speakers 1 and 2 (note reciprocal status indicated). Speakers 3, 4, and 5 show status indicating that they are “listening” to Speaker 1; and 6, 7, and 8 are “listening” to Speaker 2.

![Matrix Panel Display Showing Status after Establishing Conversation Between Speakers 1 and 2](image)

**Figure 3-65.** Matrix Panel Display Showing Status after Establishing Conversation Between Speakers 1 and 2
You may create and customize your panels via two different methods:

- Using Panel Wizard
- Editing the panel initialization (.PAN) file.

Panel Wizard is an easy-to-use, versatile tool that allows you to create and edit panel configurations quickly and easily. (More advanced users may want to more closely control the configuration setup by editing the .PAN file directly.)
Using the Panel Wizard

The Panel Wizard enables you to create RouterWorks panels quickly. It will take you step-by-step by asking you questions about what type of panel you would like to create, then creating it for you.

You may create a new panel via the Panel Wizard, or you may edit an existing panel via the Panel Wizard.

Setting Up a New Panel via Panel Wizard

1. At the *Leitch Routing Switchers Group* window, click the Panel Wizard icon to start the Panel Wizard. The *Introduction* window will appear.

![Figure 4-1. Panel Wizard Introduction Window](image)
2. Click **Next** to start creating your panel. The *Step 1-Panel Location* window will appear. At this window you will create a unique name for your panel, and save it to a location you specify.

![Figure 4-2. Step 1 – Panel Location Window](image)

If you select an existing panel document, the settings from that panel will be imported into the wizard for you to edit; however, if you save this panel you will overwrite the original settings with the new ones you specify.

3. Enter the location of the panel document (*PAN*) you wish to create:
   - Click **Browse**…
   - Select the directory where you want to create the panel.

4. Enter a panel name.

5. Click **Save**. You will return to the *Step 1* window.
6. Click **Next**. The *Step 2 – Database Location* window will appear. At this window you will link the newly-created panel to an existing RouterMapper database.

![Panel Wizard - Step 2 - Database Location Window](image)

**Figure 4-3. Step 2 – Database Location Window**

7. Select an existing RouterMapper database (*.da4) that stores the information about your router system:
   - Click **Browse**…
   - Select the directory where the RouterMapper database is located.
   - Select the name of the database to which you want to link the panel.
   - Click **Open**. You will return to the *Step 2* window.
8. Click **Next**. The *Step 3 – Panel Style* window will appear. At this window you will designate if the panel will be single-bus, multi-bus, or matrix.

![Panel Wizard - Step 3 - Panel Style](image)

**Figure 4-4. Step 3 – Panel Style Window**

9. Click on the drop-down arrow for this list box to display the list of panel styles available.

10. Select the type of panel you want for this panel:
   - Single-bus panels control one destination at a time.
   - Multi-bus panels control several destinations at a time.
   - Matrix panels show all the desired sources and destinations in a grid-like display.
11. Click **Next**. The *Step 3a – Panel Address and Name* window will appear. At this window you will designate a unique identification (ID) number and panel name for the panel.

![Figure 4-5. Step 3a – Panel Address and Name Window](image)

12. Give the panel a unique address between 0 and 127. This panel address will be the ID the routers will “see” when you lock or protect a destination.

13. Give the panel a unique name. This name will be the text that will appear in the RouterWorks title bar whenever you use this panel.
Using the Panel Wizard

14. Click **Next**. The *Step 4 – Active Levels* window will appear.

![Panel Wizard - Step 4 - Active Levels](image)

**Figure 4-6. Step 4 – Active Levels Window**

15. Select the levels you want to enable in this panel. You must activate at least one level.
16. Click **Next**. The *Step 5 - Sources* window will appear.

![Panel Wizard - Step 5 - Sources](image)

**Figure 4-7. Step 5 - Sources Window**

17. Select the sources you want to control in this panel and how many of them to display on the panel at a time. (See your *RouterMapper Configuration Utility Reference Guide* for a detailed explanation of Sources.) You must select at least one source.
18. Click **Next**. The *Step 6 - Destinations* window will appear.

![Panel Wizard - Step 6 - Destinations](image)

**Figure 4-8. Step 6 - Destinations Window**

19. Select the destinations you want to control in this panel and how many destinations to display on the panel at a time. (See your *RouterMapper Configuration Utility Reference Guide* for a detailed explanation of Destinations.) You must select at least one destination.
20. Click **Next**. The *Options* window will appear.

![Figure 4-9. Options Window](image)

At the *Options* window, you can
- Create a shortcut to your new panel on the Windows desktop or Start menu
- Run this panel when it is finished
- Edit advanced optional features. (See “Advanced Options” on page 100 for more detailed information about these options.)
21. Click **Next**. The *Finish* window will appear.

![Finish Window](image)

**Figure 4-10. Finish Window**

22. Click **Finish** to complete the creation of your new panel.
Editing an Existing Panel via Panel Wizard

1. Highlight the file name of the matrix panel you want to edit. (If necessary, use Windows Explorer to navigate to the file location.)
2. Right-click on the matrix file name. A drop-down menu will appear.

![Edit Drop-Down Menu](image)

**Figure 4-11. Edit Drop-Down Menu**

*To change database linked to the panel, follow these steps:*

1. Click **Next** until the *Step 2 – Database Location* window appears.
2. Select an existing RouterMapper database (*.da4) that stores the information about your router system. To do this:
   - Click **Browse**…
   - Select the directory where the RouterMapper database is located.
   - Select the name of the database to which you want to link the panel.
   - Click **Open**. You will return to the *Step 2* window.
3. Click **Next** until you reach the *Finish* window.
4. Click **Finish** to complete the edit of your panel.
To change the Panel address, follow these steps:
1. Click Next until you reach the Step 3a – Panel Address and Name window.
2. Give the panel a unique address between 0 and 127. This panel address will be the ID the routers will “see” when you Lock or Protect a destination.
3. Click Next until you reach the Finish window.
4. Click Finish to complete the edit of your panel.

To change the Panel name, follow these steps:
1. Click Next until you reach the Step 3a – Panel Address and Name window.
2. Give the panel a unique name. This name will be the text that will appear in the RouterWorks title bar whenever you use this panel.
3. Click Next until you reach the Finish window.
4. Click Finish to complete the edit of your panel.

To change the Levels displayed, follow these steps:
1. Click Next until you reach the Step 4 – Active Levels window.
2. Select the levels you want to enable in this panel. You must activate at least one level.
3. Click Next until you reach the Finish window.
4. Click Finish to complete the edit of your panel.

To change the Sources or make more Sources visible, follow these steps:
1. Click Next until the Step 5 - Sources window appears.
2. Select the sources you want to control in this panel and how many of them to display on the panel at a time. (See your RouterMapper Configuration Utility Reference Guide for a detailed explanation of Sources.) You must select at least one source.
3. Click Next until you reach the Finish window.
4. Click Finish to complete the edit of your panel.

To change the Destinations or make more Destinations visible, follow these steps:
1. Click Next until the Step 6 - Destinations window appears.
2. Select the destinations you want to control in this panel and how many destinations to display on the panel at a time. You must select at least one destination.

3. Click **Next** until the **Finish** window appears.

4. Click **Finish** to complete the edit of your panel.

**To change or add Options, follow these steps:**

1. Click **Next** until the **Options** window appears. At the **Options** window you can
   - Create shortcuts to your new panel on the Windows desktop or Start menu.
   - Run this panel when it is finished.
   - Edit advanced optional features. (See “Advanced Options” on page 100 for more detailed information.)

2. Click **Next**. The **Finish** window will appear.

3. Click **Finish** to complete the edit of your panel.

### Advanced Options

There are several separate options tabs available through the Advanced Options screen:

- Common settings
- Options
- Signal presence settings (Panacea™ frames only)
- Matrix settings (matrix panels only)
- Category/index settings (multi-bus panels only)
Common Settings

Note
These settings are explained in detail in “Setting Control Panel Size Attributes” on page 111. They are shown in Figure 4-17 on page 111 and Figure 4-18 on page 112.

The Common Settings tab in Panel Wizard enables you to set the height and width (in pixels) of some of the common control panel attributes.

![Advanced Options Window, Common Settings Tab](image)

Figure 4-12. Advanced Options Window, Common Settings Tab
Options

The *Options* tab in Panel Wizard allows you to enable extra features to make it easier to use RouterWorks panels.

![Advanced Options Window, Options Tab (Shown With Matrix Panel)](image)

**Figure 4-13.** Advanced Options Window, Options Tab (Shown With Matrix Panel)

**Allow Editing Salvos**
Check this box to enable the **Salvo Edit** button (see Figure 4-13). For more information on how to edit salvos, see page 76.

**Allow Firing Salvos**
Check this box to allow users to run preprogrammed salvo sequences.

**Allow Lock Override**
Check this box to allow users to override locks. For more information on overriding a lock, see page 66.

**Allow Resizing**
Check this box to allow users to change the size of dialog windows.

**Auto AFV**
Check this box to automatically allow audio follow video (AFV) switching. For more information on AFV, see page 32.
**Demonstration Mode**
Check this box to allow users to test RouterWorks panels without having to be attached to a router. (Users can access this option by clicking on the right-side mouse button.)

**Enable Extra Menu Items**
Check this box to access diagnostics functions that you may find useful for specialized testing and troubleshooting. (You can access this option by clicking on the right-side mouse button.)

**Enable Source Disconnects**
Check this box to allow users to enable a menu item that allows them to disconnect all destinations currently statusing a selected source. (You can access this option by clicking on the right-side mouse button.)

**Remember Last Destination**
Check this box to allow users to return to the destination they used during their last RouterWorks session. (Users can access this option by clicking on the right-side mouse button.)

**Save Window on Exit**
Check this box to allow RouterWorks to automatically save any changes that you have made to a panel when you close the application.

**Show Alarms**
Check this box to enable alarm LEDs for each level to light when an alarm condition is detected by the router (see Figure 4-13 on page 102). For more information on alarms, see page 69.

**Show All Salvos**
Check this box to enable the Salvos drop-down list (see Figure 4-13 on page 102).

**Show EDH**
(This option is reserved for future use.)

**Show Status**
(This option is reserved for future use.)

**Use Lock/Protect Bitmap**
Check this box to allow Lock and Protect icons to appear on a panel’s Lock and Protect buttons.
**Use Take**

Check this box to enable the Take button on a panel screen (see Figure 4-13 on page 102). For more information on using the Take feature, see page 71.

**Signal Presence Settings**

The *Signal Presence Settings* tab in Panel Wizard enables you to display the input signal presence feature found on the Leitch Panacea series of routing switchers. Check the *Display Source Signal Presence Indicators* box to include the signal presence indicators on a particular panel.

![Figure 4-14. Advanced Options Window, Signal Presence Settings Tab](image)
Matrix Settings

The *Matrix Settings* tab in Panel Wizard lets you adjust some settings specific to the matrix panel.

*Circle ratio may be overridden by maximum circle size and minimum circle size*

**Figure 4-15. Advanced Options Window, Matrix Settings Tab**
**Circle Ratio**

**Maximum Circle Size**

**Minimum Circle Size**

These options control the size (in pixels) of colored crosspoint markers on a matrix panel (see Figure 4-15 on page 105).

- Enter a value for the Circle Ratio option to set the size of the colored crosspoint marker.
- You may override the Circle Ratio option by entering values for the Maximum Circle Size and Minimum Circle Size options.

**Control Button Height**

**Control Button Width**

**Control Section Width**

These options control the size (in pixels) of the Levels and Alarms control buttons on the matrix panel (see Figure 4-15 on page 105).

- Enter a value for the Control Button Height to set how high you want the control buttons to be.
- Enter a value for the Control Button Width to set how wide you want the control buttons to be.
- Enter a value for the Control Section Width for how wide you want the Levels and/or Alarms control button sections to be.

**Preset Group Height**

This option controls the height (in pixels) of the Preset/Take section on a matrix panel (see Figure 4-15 on page 105). Enter a value for how tall you want the Preset/Take section to be.

**Zoom Group Height**

This option controls the height (in pixels) of the Zoom Tool section on a matrix panel (see Figure 4-15 on page 105). Enter a value for how tall you want the Zoom Tool section to be.
Category/Index Settings

The **Category/Index Settings** tab in the Panel Wizard enables you to configure the Category/Index control settings; that is, it controls the size and information displayed in the Category/Index control on the right-hand side of a multi-bus panel. This function allows you to easily monitor and control several router destinations from one panel. (See Figure 1-6 on page 11 for a graphic representation of the multi-bus panel that displays the Category/Index settings.)

**Note**
See “Understanding and Managing Category/Indexing” in the *RouterMapper Configuration Utility Reference Guide* for a detailed explanation of this topic.

![Advanced Options Window, Category/index Settings Tab](image)

**Figure 4-16.** Advanced Options Window, Category/index Settings Tab

- **Destination List, Source List, Level List:** An inclusive range of logical indices (e.g., 1-10).
  - **Destination List** shows the list of indices for destination categories
  - **Source List** shows the list of indices for source categories
  - **Level List** shows the list of indices for levels that are affected by the choices made in the Destination List and Source List.
There are three ways to designate what to put in the three lists: use a dot character (".") , use a wild card character ("*"), or enter exact numbers to specify the Destination, Source, and Levels lists.

*Use a dot character (".")*

This option is the default option that appears when you first access this window. Use this option whenever you want to use the settings assigned to a selected multibus panel.

*Use a wild card character ("*"")*

Use this option whenever you want to use all of the values defined in the router logical database.

*Enter exact numbers to specify a Destination, Source, and Levels lists*

Use this option when you want to specify exact destinations, sources, or levels.

For example, to specify Sources 1, 3 through 10, 11 through 15, 17 and 20, the Source List entry would look like this:

```
1,3-10,11-15,17,20
```

- **Control Width:** Width (in pixels) of the category/index control.
- **Preset Width:** Width (in pixels) of the preset control.
- **Align with Destination Control:** Forces the alignment of the bottom of the Category/Index panel with the bottom of the Destination control of the multi-bus panel (by default, the panel aligns with the bottom of source control). This might be desirable when the category/index control only controls 1 or 2 levels and the multibus controls several because it prevents the category/index control from stretching too much vertically. This option’s default value is zero (0).
Modifying On-Screen Display via the .PAN File

The physical appearance of a panel may be customized by editing the panel initialization file (the .PAN file). This file is similar to a Windows .INI file, and may be edited using any standard text editor. The .PAN file may also be used to design control panels that provide limited access to sources and destinations.

Determining .PAN File Location

To determine the location of the .PAN file, follow these steps:

1. Right-click on the Windows taskbar.
2. Select Properties.
3. From the Start Menu Programs tab, click Advanced.
4. In the Programs folder, find the Leitch Routing Switchers folder.
5. Find the single-bus panel, multi-bus panel, or matrix panel shortcut (as appropriate) in that folder.
6. Right-click on the shortcut.
7. Select Properties.
8. On the Shortcut tab, the command line will appear in the Target box. The second half of this command line is the path to the proper .PAN file.

Designating the Router Database

The .PAN file may be used to designate the database that will be loaded when the single-bus panel, multi-bus panel, or matrix panel is launched. To designate a specific database, edit the [Database Path] section of the .PAN file as follows:

- On the Path= line, enter the drive and path of the desired RouterWorks database file.
- On the FileName= line, enter the file name of the database that will be loaded upon startup.

Setting the Locks and Protects Preferences

The following locks and protects preferences may be changed by editing the [Locks&Protects] section of the .PAN file:
• To enable the panel to display a graphical icon for locks and protects, set the UseBitmap= line to 1. If the line is set to 0, text will be used instead.

• If text is being used for locks and protects, the color of the buttons can be designated by setting the LockColor= and ProtectColor= lines appropriately. Enter the RGB values of the desired colors. (For example, the RGB values for the color red are 255, 0, 0).

Changing the Control Panel Preferences

The following control panel preferences may be changed by editing the [Preferences] section of the .PAN file:

• To automatically save the position of the control panel upon exiting, set the SaveWindowonExit= line to 1.

• To assign a different name to the control panel, enter the new name after the “=” sign on the PanelName= line. This Panel Name will appear in the title bar of the control panel window.

• To designate the Panel Address, set the PanelAddress= line to any number between 1 and 128. Every panel must have a Panel Address, as this is the address used to identify the panel for communication on the X-Y bus. Normally, each panel is assigned a unique Panel Address; however, it is possible to assign the same Panel Address to multiple panels of the same type.

• To configure the panel to allow destination lock overrides, set the AllowLockOverRide= line to 1. (See “Allowing Overrides” on page 66 for more information on overriding locks.)

• To save the last destination displayed before exiting, set the RememberLastDest= line to 1. When the panel is next launched, this destination will be displayed upon startup.

• To designate a specific destination to be always displayed on startup, set the RememberLastDest= line to 0, and set the InitialDestination= line to the number of the desired destination.

• Set the PanelStyle= line to one of the following:
  • SingleBusPanel for a single bus panel
  • MultiBusPanel for a multi-bus panel
  • MatrixPanel for a matrix panel.

• To configure the panel to automatically revert to AFV switching mode after a breakaway switch, set the TakeSelectsAFV= line to
1. If this line is set to 0, the panel will remain in breakaway mode until it is specifically switched to AFV mode (by clicking on the Follow button). See “Connecting a Source” on page 31 for more information on AFV and Breakaway switching.

- **To enable the status display**, set the `ShowStatus=` line to 1.
- *(For matrix panels only)* **To select Preset/Take mode**, set the `Take=` line to 1. **To select No-Take mode**, set the `Take=` line to 0. The default is Preset/Take.

### Setting Control Panel Size Attributes

#### Single-Bus Control Panel Size Attributes

Various control panel size attributes may be changed via the **[Single-Bus Sizes]** section of the .PAN file.

**Figure 4-17.** Setting Panel Size Attributes: Single-Bus Panels

- **To change the width of the drop-down Destination list box**, enter the desired width in the `DestinationWidth=` line.
- **To change the width and height of the Breakaway Level buttons**, set the `LevelButtonWidth=` line and the `LevelButtonHeight=` line to the appropriate dimensions.
- **To change the spacing between the Breakaway Level buttons**, set the `LevelVerticalOffset=` line to the desired spacing.
Chapter 4: Customizing Panels

- To change the height of the LED bars, set the `StatusBarHeight=` line to the desired height. Status Bar height can be no greater than the height of the Level buttons.

- To change the width and height of the Source controls, set the `SourceButtonWidth=` line and the `SourceButtonHeight=` line to the desired dimensions.

**Multi-Bus Control Panel Size Attributes**

Various control panel size attributes may be changed via the [MultiBus Sizes] section of the .PAN file.

![Multi-Bus Control Panel Size Attributes](image)

- To change the width of the Destination controls, enter the desired width in the `DestinationWidth=` line. The height of the Destination controls is set automatically, depending on the number of levels activated and the `LevelButtonHeight=` setting.

- To change the horizontal spacing between the Destination controls, enter the desired spacing in the `DestControlOffsetx=` line. The vertical spacing of the controls is set automatically, depending on the number of levels activated, and the `LevelButtonHeight=` setting.
To change the width and height of the Breakaway Level buttons, set the `LevelButtonWidth=` line and the `LevelButtonHeight=` line to the appropriate dimensions.

To change the spacing between the Breakaway Level buttons, set the `LevelVerticalOffset=` line to the desired spacing.

To change the height of the LED bars, set the `StatusBarHeight=` line to the desired height. Status Bar height can be no greater than the height of the Level buttons.

To change the width and height of the Source controls, set the `SourceButtonWidth=` and `SourceButtonHeight=` lines to the appropriate dimensions.

Matrix Control Panel Size Attributes

Various control panel size attributes may be changed via the `[Matrix Sizes]` section of the `.PAN` file.

To change the width of the Destination controls, enter the desired width in the `DestinationWidth=` line. The height of the Destination controls is set automatically, depending on the number of levels activated, and the `LevelButtonHeight=` setting.

To change the horizontal spacing between the Destination controls, enter the desired spacing in the `DestControlOffsetx=` line. The vertical spacing of the controls is set automatically, depending on the number of levels activated and the `LevelButtonHeight=` setting.

To change the width and height of the Breakaway Level buttons, set the `LevelButtonWidth=` line and the `LevelButtonHeight=` line to the proper dimensions.

To change the spacing between the Breakaway Level buttons, set the `LevelVerticalOffset=` line to the desired spacing.

To change the height of the LED bars, set the `StatusBarHeight=` line to the desired height. Status Bar height can be no greater than the height of the Level buttons.

To change the width and height of the Source controls, set the `SourceButtonWidth=` line and the `SourceButtonHeight=` line to the proper dimensions.
Chapter 4: Customizing Panels

Adding/Deleting Logical Sources

Single-Bus Panels

The [Logical Sources] section of the .PAN file has a single parameter called NumControls. This parameter sets the number of source controls that will appear on the on-screen control panel.

The [SourceGroup1] section contains two types of parameters; GroupName and SourceX. Later versions of RouterWorks will allow you to have multiple groups of sources so you can put all of your VTRs in one group, all of your Paint Boxes in another group, etc. The GroupName parameter will allow you to give each group a unique name (e.g., VTRs, Paint-Boxes, etc.). The source groups are not supported, however, so the GroupName parameter is not used.

The SourceX= parameters designate the Logical Source to appear in each Source button in the group identified by the Section, i.e., [SourceGroup1]. Currently only a single group is supported. There must be a SourceX= entry for each Logical Source button that will appear on the panel. The entries must be in numerical sequence. (The x represents the Logical Source that will appear in the Source button. Source1=3, for example, means that Logical Source #3 will appear in button #1.)

This feature might be useful in situations where you need access to a limited number of sources, but those sources are not contiguous in the router. In such a case, a panel could be designed that includes only those necessary sources. For example, to create a four-button panel with Logical Source #3 in the first button, Logical Source #6 in the second button, Logical Source #9 in the third button, and Logical source #16 in the fourth button, enter the following text in the .PAN file:

[LogicalSources]
 NumControls=4
[SourceGroup1]
 Source1=3
 Source2=6
 Source3=9
 Source4=16
Multi-Bus Panels

The [Logical Sources] section of the .PAN file includes two parameters that may be modified.

- The **NumControls**= line sets the number of source controls that will appear on the on-screen control panel.
- The **Sourcex**= lines designate the Logical Source to appear in each Source button. There must be a **Sourcex**= entry for each Logical Source button that will appear on the panel. The entries must be in numerical sequence.

This feature is useful in situations where you need access to a limited number of sources that are not contiguous in the router. A panel could be designed that includes only those necessary sources. For example, to create a four-button panel with Logical Source #3 in the first button, Logical Source #6 in the second button, Logical Source #9 in the third button, and Logical source #16 in the fourth button, enter the following text in the [LogicalSources] section of the .PAN file:

```
[LogicalSources]
NumControls=4

[SourceGroup1]
Source1=3
Source2=6
Source3=9
Source4=16
```

Matrix Panels

The [Logical Sources] section of the .PAN file includes two parameters that may be modified.

- The **NumControls**= line sets the number of source controls that will appear on the on-screen control panel.
- The **Sourcex**= lines designate the Logical Source to appear in each Source button. There must be a **Sourcex**= entry for each Logical Source button that will appear on the panel. The entries must be in numerical sequence.

**Note**
The x represents the Logical Source that will appear in the Source button. **Source1=3**, for example, means that Logical source #3 will appear in button #1.
This feature might be useful in situations where you need access to a limited number of sources that are not contiguous in the router. In such a case, a panel could be designed for that operator that includes only those necessary sources. For example, to create a four-button panel with Logical Source #3 in the first button, Logical Source #6 in the second button, Logical Source #9 in the third button, and Logical source #16 in the fourth button, enter the following text in the [LogicalSources] section of the .PAN file:

```
[LogicalSources]
    NumControls=4

[SourceGroup1]
    Source1=3
    Source2=6
    Source3=9
    Source4=16
```

### Adding/Deleting Logical Destinations

The [Logical Destinations] section of the .PAN file operates similarly to the [Logical Sources] section. The Destinationx= lines define the logical destinations that will appear in each destination control. There must be a separate entry for each destination, and all entries must appear in numerical sequence.

### Activating Levels

The [Active Levels] section of the .PAN file defines the levels that will appear on the on-screen control panel. If a level is to appear, it must be activated in the .PAN file and enabled via RouterMapper.

- **To activate a level**, set the Levelx= (where x is the level number) line to 1.
- **To deactivate a level**, set the Levelx= (where x is the level number) line to 0.

This feature is useful when designing special purpose control panels. For example, a video-only panel could be designed for a paint station. The panel operator would only have access to video sources and would be unable to effect any changes on the audio levels.
Activating Active Salvos Control

The Active Salvos control presents itself based on three parameters from the .PAN file. The parameters are

- **ShowActiveSalvos** (used by all panel types)
- **ActiveSalvosGroupWidth** (used by single-and multi-bus panels only)
- **ActiveSalvosGroupHeight** (used by matrix panel files only)

The **ShowActiveSalvos** parameter is used by **Matrix.PAN**, **Singlbus.PAN**, and **Multibus.PAN**. The value for **ShowActiveSalvos** may be either 0 or 1.

- If the **ShowActiveSalvos** parameter is set to 0, the control will not appear and cannot be used.
- If the **ShowActiveSalvos** parameter is set to 1, the control will be visible in the panel window.

The **ActiveSalvosGroupWidth** parameter is only used by the **Singlbus.PAN** and **Multibus.PAN** files. The parameter specifies how wide (in screen pixels) the **ActiveSalvosControl** should appear in the panel. If no width is specified, a default width of 120 is furnished. This default setting should be wide enough to accommodate salvos with names approximately 16 characters or less in width.

- In **Singlebus** mode the panel window will expand to allow the specified width of the control.
- In **Multibus** mode, if the Active Salvos Group width provided is large enough to overlap the neighboring control to the left, the width will be automatically resized so that the left edge of the Active Salvos Control is adjacent to the neighboring control to the left.

The **ActiveSalvosGroupHeight** parameter is only used by the **Matrix.PAN** file for Matrix Panel mode. The parameter specifies how tall (in screen pixels) the **ActiveSalvosControl** should appear in the panel. If no height is specified a default height of 100 is provided. This default setting should be tall enough to accommodate up to 5 salvo names in the list. If the list exceeds the Active Salvos Control list box length, a vertical scroll bar will appear in the list box.

- In **Singlebus** mode the Active Salvos Control height will always span the full height of the window.
In **multibus** mode the Active Salvos Control height will always be identical to its neighbor to the left.

### Activating Signal Presence Indicators

Signal presence indicators may be enabled using the Panel Wizard to configure the RouterWorks panel definition (*.PAN) file (see page 104).

Alternatively, the file may be edited directly. Each .PAN file may contain a **SignalPresenceSettings** section as follows.

The **EnableSourceSignalPresenceIndicators** parameter allows you to turn signal presence indicators on or off. The value for this parameter may be 0 or 1.

- If this parameter is set to 0, signal presence indicators will be turned off. (The default value is 0.)
- If this parameter is set to 1, signal presence indicators will be turned on.

The **Sections** parameter allows you to define the number of sections for the circle (default value is 8).

### Activating Bidirectional Take

The **[BidirectionalRouting]** section of the .PAN file describes the parameters of the bidirectional Take feature. The bidirectional Take feature allows a convenient method of establishing two-way communications pathways using a standard source-to destination router. For this feature to become functional, it must be activated in the .PAN file and enabled via RouterMapper.

The entries are set up as follows:

```
[BidirectionalRouting]
Enabled=1
NumberOfPorts=8
Port0=0,0,Speaker 1
Port1=1,1,Speaker 2
Port2=2,2,Speaker 3
```
Port3=3,3,Speaker 4
Port4=4,4,Speaker 5
Port5=5,5,Speaker 6
Port6=6,6,Speaker 7
Port7=7,7,Speaker 8

- **[BidirectionalRouting]** identifies the section of the .PAN file corresponding to this feature.
- **Enabled=1** causes the Bidirectional Take feature to be available to users. Any value other than 1 causes the feature to be disabled (that is, unavailable to users).
- **NumberOfPorts=8** identifies the number of ports (or “bidirectional channels”) to be defined in the system. In this case, the number of ports has been set to 8 to correspond to 8 speakers.
- **Port<portno>=<logical_src_index>,<logical_dest_index>,<port_name>**
  
  The remaining entries define the ports. The fields in each entry are as follows:
  - **Port<portno>=** identifies the port number definition. Each port definition must begin with the prefix Port, followed by the port number and the equals (=) symbol (e.g., Port0=, Port1=, Port16=, etc.).
  - **<logical_src_index>** identifies the logical Source index entry in the RouterMapper database to be used as the source for this port (e.g., microphone talk channel). Since the index is zero-based, the number to be assigned here is one less than the logical Source index entry shown on the RouterMapper database display. See the sample port entry on page 121 for an example.
• `<logical_dest_index>` identifies the logical Destination index entry from the RouterMapper database to be used as the destination for this port (e.g., headphone listen channel). Since the index is zero-based, the number to be assigned here is one less than the logical destination index entry shown on the RouterMapper database display. See the sample port entry on page 121 for an example.

**Figure 4-19. Logical Source Index Entry in a RouterMapper Database**

**Figure 4-20. Logical Destination Index Entry in a RouterMapper Database**
• <port_name> is the alphanumeric text string to be assigned to this port to identify it. In the speaker example, each speaker is assigned a name such as “Speaker 1.” Any text may be entered here. The name is limited to no more than 32 characters.

Sample port entry: Port7=7,7,Speaker 8

Defines port 7 to

• Use logical Source 7 (logical Source entry #8 as shown on the RouterMapper database display; see Figure 4-19 on page 120) as port 7’s input (talk channel)

• Use logical Destination 7 (logical database Destination entry #8 as shown on the RouterMapper database display; see Figure 4-20) as port 7’s output (listen channel)

• Assign the name “Speaker 8” to the port, indicating that Speaker 8’s microphone is connected to router input #7 and headphones are fed by router output #7.

Note
Remember: Since the index is zero-based, the number to be assigned here is one less than the logical source or destination index entry shown on the RouterMapper database display.
Creating Control Panels for Individual Users

To create on-screen control panels for individual users, follow these steps:

1. Create the database for the router via RouterMapper.
2. Copy the .PAN file for each user.
3. Assign each file a unique filename.
4. Edit the .PAN file to customize the control panel.
5. Create a new Program Item for each control panel:
   a. Right-click on the Windows taskbar.
   b. Select Properties.
   c. From the Start Menu Programs tab, click Add.
   d. In the Command Line box, enter the complete path of the RTR_CTRL.EXE file, immediately followed by the complete path of the new control panel’s .PAN file.
   e. Click Next.
   f. Select the folder where the new shortcut should be placed.
   g. Click Next.
   h. Type a description of the new panel.
   i. Click Finish.
6. Select the new icon from the Windows Start menu to launch the newly created control panel.
Creating Control Panels for Multiple Remote Sites

To create control panels for multiple remote sites, follow these steps:

1. Using RouterMapper, create a separate database with the appropriate phone number for each remote site.
2. Copy the .PAN files for each remote site.
3. Edit the Path= and FileName= lines in each .PAN file.
4. Create a new Program Item for each remote site:
   a. Right-click on the Windows Taskbar.
   b. Select Properties.
   c. From the Start Menu Programs tab, click Add.
   d. In the Command Line box, enter the complete path of the RTR_CTRL.EXE file, immediately followed by the complete path of the new control panel’s .PAN file.
   e. Click Next.
   f. Select the folder where the new shortcut should be placed.
   g. Click Next.
   h. Type a description of the remote site.
   i. Click Finish.
5. Select the new icon from the Windows Start menu to launch the newly created control panel.
Index

**A**
- Adding options 100, 102–104
- Advanced options, panel wizard
  - category/index settings tab 107–108
  - common settings tab 101
  - matrix settings tab 105–106
  - options tab 102–104
  - signal presence settings tab 104
- Alarms 69, 103
- Align with destination control 108
- Allow editing salvos 102
- Allow firing salvos 102
- Allow lock override 102
- Allow resizing 102
- Audio-follow-video (AFV) switching 32–35
- Auto AFV 102

**B**
- Bidirectional take
  - activating 118–121
  - editing .PAN file 80
  - router configuration 78
  - using 81–85
- Breakaway switching 35–38
- Button
  - control height 106
  - control section width 106
  - control width 106

**C**
- Category/index settings tab 107–108
- Changing
  - addresses 99
  - databases 98
  - destinations 99–100
  - levels 99
  - options 100
  - panel names 99
  - sources 99
- Circle ratio 106
- Circle size
  - maximum 106
  - minimum 106
- Common settings tab 101
- Connecting sources 31–32
- Control
  - align with destination 108
  - width 108
- Customer service (contacting Leitch) 19
- Customizing panels
  - creating for individual users 122
  - creating for multiple remote sites 123
  - modifying on-screen display 109–123
  - panel initialization (.PAN) file 109–123
  - panel wizard 88–108

**D**
- Databases
  - editing 27
- Demo mode 18–19
Index

Demonstration mode 103
Destination list 107
Destinations
  locking 47–53
  protecting 47, 57–62
  selecting 29–31
  unlocking 53–56
  unprotecting 62–66

E
Enable extra menu items 103
Enable source disconnects 103

F
Features
  matrix panel 13–16
  multi-bus panel 11–12
  single-bus panel 9–10
Firmware requirements 4

G
Group height
  preset 106
  zoom 106

I
Installation
  controlling a router 27
  editing databases 27
  installing RouterWorks software 21–27
  launching applications 28
Introduction
  contacting Leitch 19
  demo mode 18–19
  features 8–19
  firmware requirements 4
  panel wizard 16
  related products 19
  remote dial-up 18
  RouterMapper 17–18
  system limitations 3
  system requirements 2
  TCP/IP 18
  using RouterWorks on-line Help system 6
  using this manual 5

what’s new 2

L
Launching RouterWorks applications 28
Level list 107
Limitations, system 3
Locking destinations 47–53

M
Matrix panel
  alarms 69
  audio-follow-video (AFV) switching 34–35
  bidirectional take 78–85
  breakaway switching 37–38
  destinations
    locking multiple 52–53
    locking single 51
    protecting multiple 61–62
    protecting single 60–61
    selecting 31
    unprotecting multiple 65–66
    unprotecting single 65
  multiple take, performing 38–40
  overrides, allowing 66–68
  salvos
    active salvos control 77–78
    adding 71
    deleting 76–77
    editing 71, 76
    executing 71, 76
    no-take configuration 71–72, 76
    preset/take configuration 71, 76
  setting attributes 113
Sources
  connecting 32
  disconnecting 41–43
  logical 115–116
  replacing 41, 44–45
Matrix settings tab 105–106
Multi-bus panel
  audio-follow-video (AFV) switching 32–33
  breakaway switching 35–36
  destinations
    locking multiple 50–51
    locking single 49
    protecting multiple 59–60
    protecting single 58–59
Index

selecting 30
unprotecting multiple 64–65
unprotecting single 64
overrides, allowing 66–68
salvos
  active salvos control 77–78
  adding 70
  deleting 76–77
  editing 70, 76
  executing 70, 76
setting attributes 112
sources
  connecting 31–32
  logical 115
Multiple take 38–40

O

Opening RouterWorks (launching applications) 28
Operation
  Audio-follow-video (AFV) switching 32–35
  bidirectional take 78–85
  breakaway switching 35–38
  connecting sources 31–32
  locking destinations 47–53
  protecting destinations 47, 57–62
  selecting destinations 29–31
  unlocking destinations 53–56
  unprotecting destinations 62–66
Options tab 102–104
 Overrides, allowing 66–68

P

.PAN file
  See panel initialization file
Panel
  creating for individual users 122
  creating for multiple remote sites 123
  customizing 87–123
  matrix 13–16
  multi-bus 11–12
  panel wizard 16
  single-bus 9–10
Panel initialization file
  activating
    active salvos control 117
    bidirectional take 118–121
    levels 116
  signal presence indicators 118
  adding
    destinations 116
    sources...
      matrix panel 115–116
      multi-bus panel 115
      single-bus panel 114
creating
  panels for individual users 122
  panels for multiple remote sites 123
deleting
  destinations 116
  sources...
    matrix panel 115–116
    multi-bus panel 115
    single-bus panel 114
designating databases 109
determining location 109
setting attributes
  matrix bus panel 113
  multi-bus panel 112
  single-bus panel 111
setting preferences
  control panels 110
  locks 109
  protects 109
Panel wizard
  advanced options 100–108
  category/index settings tab 107–108
  common settings tab 101
  matrix settings tab 105–106
  options tab 102–104
  signal presence settings tab 104
existing panel editing 98–100
  adding options 100
  changing databases 98
  changing destinations 99–100
  changing levels displayed 99
  changing options 100
  changing panel addresses 99
  changing panel names 99
  changing sources 99
  making destinations visible 99–100
  making sources visible 99
new panel setup 88–97
Preset width 108
Product information (contacting Leitch) 19
Products, related 19
Protecting destinations 47, 57–62

R

Remember last destination 103
Remote dial-up 18
Requirements
  firmware 4
  system 2
RouterMapper 17–18

S

Salvos
  active salvos control 77–78
  adding 70
  deleting 76–77
  editing 70, 76
  executing 70, 76
Save window on exit 103
Selecting destinations 29–31
Settings
  category/index 107–108
  common 101
  matrix 105–106
  options 102–104
  signal presence 104
Show
  alarms 103
  all salvos 103
  EDH 103
  status 103
Signal presence settings tab 104
Single-bus panel
  audio-follow-video (AFV) switching 32–33
  breakaway switching 35–36
  destinations
    locking multiple 48–49
    locking single 47–48
    protecting multiple 57–58
    protecting single 57
    selecting 29–30
    unprotecting multiple 63–64
    unprotecting single 62
    overrides, allowing 66–68
    salvos
  active salvos control 77–78
  adding 70
  deleting 76–77
  editing 70, 76
  executing 70, 76
  setting attributes 111
  sources
    connecting 31
    logical 114
Software installation 21–27
Source list 107
Sources
  connecting 31–32
  multiple disconnect 43–44
  undoing a take 46
Switching
  audio-follow-video (AFV) 32–35
  breakaway 35–38
System
  limitations 3
  requirements 2

T

Take, undoing 46
TCP/IP 18
Technical support (contacting Leitch) 19

U

Unlocking destinations 53–56
unprotecting destinations 62–66
Use lock bitmap 103
Use protect bitmap 103
Use take 104
Using
  manual 5
  on-line Help system 6

W

Width
  control 108
  preset 108
Trademarks and Copyright

AgileVision, BO/S, Broadcast Operating System, CCS, Command Control System, CCS CoPilot, CCS Navigator, CCS Pilot, DigiBus, DigiPeek, Digital Glue, DigiWorks, DPS, DTV Glue, EventWORKS, EZ HD, Genesis, HDTV Glue, Innovision, ISIS, JUNO, LeFont, Leitch, LogoMotion, MediaFile, MediaPort, MIX BOX, Monarch, NEO, the NEO design, Opus, PanelMapper, Portal, PROM-Slide, RouterMapper, RouterWorks, StillFile, Still Net, SuiteView, Tekniche, Unilock, VIA, ViewGuard, Whiplash2, Xplus, and Leitch XPRESS are trademarks of Leitch Technology Corporation which may be registered in the United States, Canada, and/or other countries.

All other trademarks are the property of their respective owners.

Copyright 1999-2005 Leitch Technology International Inc. All rights reserved.

This publication supersedes all previous releases. Printed in Canada.

Warranty

Leitch Technology International Inc. warrants its products against defects in materials and workmanship for a period of two years from date of shipment. Leitch, at its option, will repair or replace products that prove defective during the warranty period, provided they are returned, freight prepaid, to Leitch. Other products Leitch sells that are produced by a third party will carry the original manufacturer’s warranty. Leitch will continue to support these items with parts and service after the expiration of that warranty.

This warranty shall not apply to any defect, failure or damage caused by abuse, misuse, improper use, negligence, accident, modification, alteration, or improper or inadequate maintenance and care.

Leitch makes no other warranties, express or implied, of merchantability, fitness for a particular purpose, or otherwise. Leitch’s liability for any cause, including breach of contract, breach of warranty, or negligence, with respect to products sold by it, is limited to repair or replacement by Leitch, at its sole discretion. This remedy is exclusive.

In no event shall Leitch be liable for any direct, indirect, special, incidental or consequential damages, including loss of profits, irrespective of whether Leitch has advance notice of the possibility of such damages.
Leitch Technology is a 32-year global leader in the design and distribution of high-performance video systems for the professional television industry. Leitch offers the most extensible products and interoperable systems, enabling operations of any size to achieve a truly Integrated Content Environment. Leitch is the most trusted name for increasing performance and productivity through solutions that streamline workflow of content production, processing, transmission and management. With a sole focus on and commitment to the television industry, Leitch provides unparalleled customer support.

Leitch Americas
Support Headquarters
Phone: +1 (800) 387 0233
Toll Free: +1 (888) LEITCH6 (534 8246)
Fax: +1 (416) 445 9020
Email: service@leitch.com
Post Products: service.post@leitch.com

Server & AgileVision Products
Phone: +1 (818) 843 7004
Toll Free: +1 (888) 843 7004
Fax: +1 (818) 450 2199
Server Products: service.servers@leitch.com
AgileVision Products: service.agilevision@leitch.com

Leitch Europe
Europe & Africa - All Product Support
Phone: +44 1344 446099
Fax: +44 1344 446090
Email: service.europe@leitch.com
Post Products: service.post.eu@leitch.com

Leitch Asia
Asia/Pacific Rim - All Product Support
Phone: +852 2776 0628
Fax: +852 2776 0227
Email: service.asia@leitch.com
Post Products: service.post.asia@leitch.com

Please visit www.leitch.com/support/service for more information.