



SOFTWARE VERSION 3.1

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# PRG SERIES 400<sup>®</sup> TOOLS UTILITY

## USER MANUAL

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PRG Series 400® Tools Utility User Manual

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## INTRODUCTION

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### About This Manual

This manual provides installation and operation instructions for the PRG Series 400® Tools Utility application. These instructions apply to S400Tools software version 3.1.

Familiarizing yourself with this information will help you get the most out of your PRG product.

### Additional Documentation

For information on PRG Series 400® equipment, refer to the following PRG manuals:

- + PRG Series 400® Power and Data Distribution System User Manual (02.9680.0001)
- + PRG Series 400® 400 Amp Disconnect User Manual (02.9680.0200)
- + PRG Series 400® Ethernet Switch User Manual (02.9801.0001)
- + Virtuoso® Node Plus User Manual (02.9801.0301)
- + Virtuoso® Node User Manual (02.9669.0001)
- + PRG Lighting Systems Networking Guide (02.3004.1000.0)

For more information regarding DMX512 systems, refer to the DMX512/1990 & AMX 192 Standards publication available from United States Institute for Theatre Technology, Inc. (USITT).

USITT  
6443 Ridings Road  
Syracuse, NY 13206-1111 USA  
1-800-93USITT  
[www.usitt.org](http://www.usitt.org)

For more information regarding Art-Net protocol, refer to the specification for Art-Net II Ethernet Communication Standard available from Artistic Licence Ltd.

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For additional documentation, please visit our support tech center at: [www.prg.com/support](http://www.prg.com/support)



## Customer Service

For technical assistance, contact the PRG International Service Center or contact your nearest PRG office. Contact information for all PRG office locations can be found on our website at: [www.prg.com/about-us/locations/](http://www.prg.com/about-us/locations/)

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For additional resources and documentation, please visit our website at: [www.prg.com](http://www.prg.com)



## OVERVIEW

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### About the S400Tools Utility

The S400Tools Utility is an application that can be run on any Macintosh® or Java-enabled Windows® computer. It is used for remote control, configuration, and monitoring of Series 400 systems. Features are as follows:

- + View and change active Source.
- + View live DMX512 data across universes and systems.
- + View modules currently online.
- + View, edit, and reset module configurations.
- + Load system software updates.
- + View network status.

#### Requirements:

- + Macintosh® or Java-enabled Windows® computer (Java version 1.5 or later)
- + CAT5e Ethernet Cable

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**Note:** Refer to the Series 400 System User Manual (02.9680.0001) for complete Series 400 installation and operation instructions.

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## INSTALLATION

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### Installing the S400Tools Utility

The S400Tools Utility application can be run on any Macintosh® or Java-enabled Windows® computer. Note that some Windows computers may not have Java installed, so it may be necessary to install Java run time before using with a PC. Java run-times are available at: <http://java.com/getjava/>. (Macintosh computers should already be Java-enabled.)



S400Tools

#### To install S400 Tools Utility:

- Step 1. Download or copy S400Tools application file to computer.
- Step 2. Connect CAT5e Ethernet Cable from computer to Series 400 system.
- Step 3. Configure network connection. The application looks for a port with an IP address in the pre-defined Series 400 subnet (10.66.x.x). Configure the IP address of the port to be used to an address in that range, such as 10.66.200.1, and the subnet mask to 255.255.0.0.
- Step 4. At computer, locate S400Tools application icon. Double-click icon to launch program.

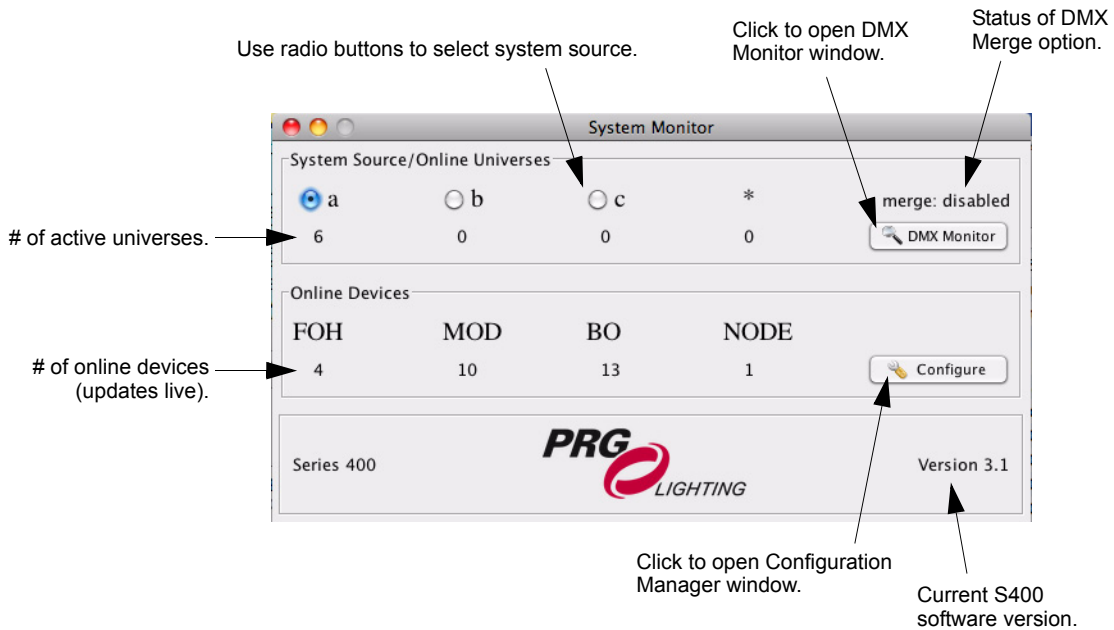
# OPERATION

## System Monitor Window

The System Monitor provides an overview of system source/online universes and online devices. The window also allows for selection of the system source universe: either a, b, or c. (\* is always active).

Online devices are abbreviated as follows:

- + FOH = Front of House
- + MOD = Breaker Module
- + BO = Breakout Box
- + Node = Virtuoso® Node or Node Plus



Note that if a system source change is made, a confirmation will be required:



## DMX Monitor Window

The DMX Monitor provides live data for each online universe.

When a universe is selected, the window will display 512 bytes of universe data along with information about the source. The universe ID format may be set to either Alpha or Numeric, and the Display may be set to Raw or Percentage. Values that are changing will be highlighted in blue.

The screenshot shows the DMX Monitor window with the following components:

- Universes List:** A list of universes with IDs like 000 b, 001 b, etc. An arrow points to this list with the text: "Active universes. (Select to display universe data.)"
- Data Table:** A table of 512 bytes of data for the selected universe. An arrow points to this table with the text: "Channel data for the selected universe. (If the text is blue, the value is currently changing.)"
- Info Panel:** Shows details for the selected universe: "Universe: 000 b", "Source: TOP, port 0", "Channels: 512". An arrow points to this panel with the text: "Information about the selected universe."
- Format Panel:** Radio buttons for "Alpha" and "Numeric". "Numeric" is selected. An arrow points to this panel with the text: "Use radio buttons to select data format and display types."
- Display Panel:** Radio buttons for "Raw" and "Percent". "Raw" is selected. An arrow points to this panel with the text: "Use radio buttons to select data format and display types."
- Source Selection Menu:** A dropdown menu labeled "All Sources" is shown below the universes list. An arrow points to it with the text: "Source selection menu (see below)."

Information about the selected universe. Use radio buttons to select data format and display types.

This close-up shows the source selection menu with the following options:

- ✓ All Sources
- Source a
- Source b
- Source c
- Universal
- Source
- Channels

The "All Sources" option is currently selected. Below the menu, the info panel shows "F b", "TOP, port 5", and "512".

Use the source selection menu to select sources for display.



## Configuration Manager

The Configuration Manager allows editing of device names, input and outputs, setting up and saving device configurations, initiating software updates, and configuring various system settings such as universe format and DMX Merge options. The device list updates automatically every few seconds, and can be refreshed explicitly with the button at the lower left.

### Devices Column

Active FOH, module, and Node devices are displayed at the left side of the window. Select a device for editing by clicking on its name. Color coding is as follows:

- + Green: online
- + Red: offline
- + Blue: not saved
- + Gray: not assigned
- + Yellow: needs software update

The screenshot shows the S400 Configuration Manager interface. On the left, there are three panels: 'Front of House' (with a table of Name and DMX values), 'Modules' (with a table of Name, DMX, and Trunk values), and 'Nodes'. The main area is divided into 'Device Configuration' (with Name, Inputs, and Output fields), 'Devices in Configuration' (with a table of FOH, MOD, and NODE values), and 'System Settings' (with Universe Format and DMX Merge options). A 'Refresh' button is at the bottom left. Various buttons like 'Info', 'Default', 'Revert', 'Update', 'Save Configuration', 'Assign Configuration', and 'Load Configuration' are present.

Annotations and instructions:

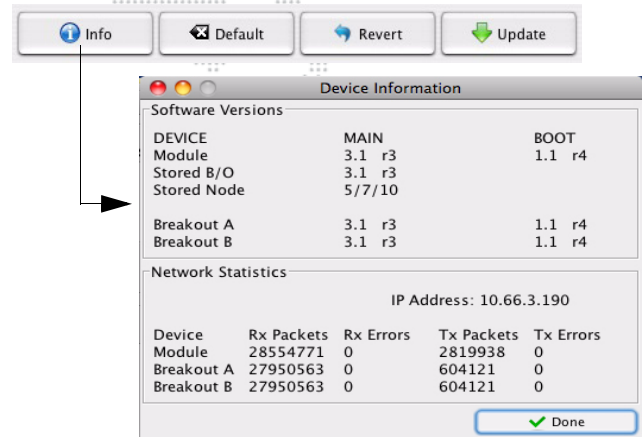
- Active DMX Inputs
- Name
- Active Trunk Breakouts
- Edit Name Field
- Universes for front panel DMX/Ethernet Inputs.
- Universes for Trunk Outputs
- Click Default to restore factory settings for selected device.
- Click Update to save changes.
- Click Revert to return to original settings.
- Save, Assign, and Load Configurations.
- Click Default All to restore default system settings.
- Click Refresh to refresh data.
- Sets system display format.
- DMX Merge options menu.
- Click to launch S400 Loader window.
- Click Info button to display network status for selected device.
- Click + to create "virtual" module. Click - to delete module.
- Click + to create "virtual" module. Select to display info in window.

## Device Configuration

This section displays the current configuration status for a device, and allows editing of the name, inputs, and outputs.

Button functions are as follows:

- + **Update** - sends changes to the device.
- + **Revert** - returns the device to its original settings.
- + **Default** - resets the device to its factory default settings.
- + **Info** - brings up the Device Information window.



## Devices In Configuration

This section displays the number of devices stored in the configuration file. By storing a configuration file, it is possible to create a configuration before having an actual physical system. The configuration can then be assigned to real devices once a physical system is hooked up.

Button functions are as follows:

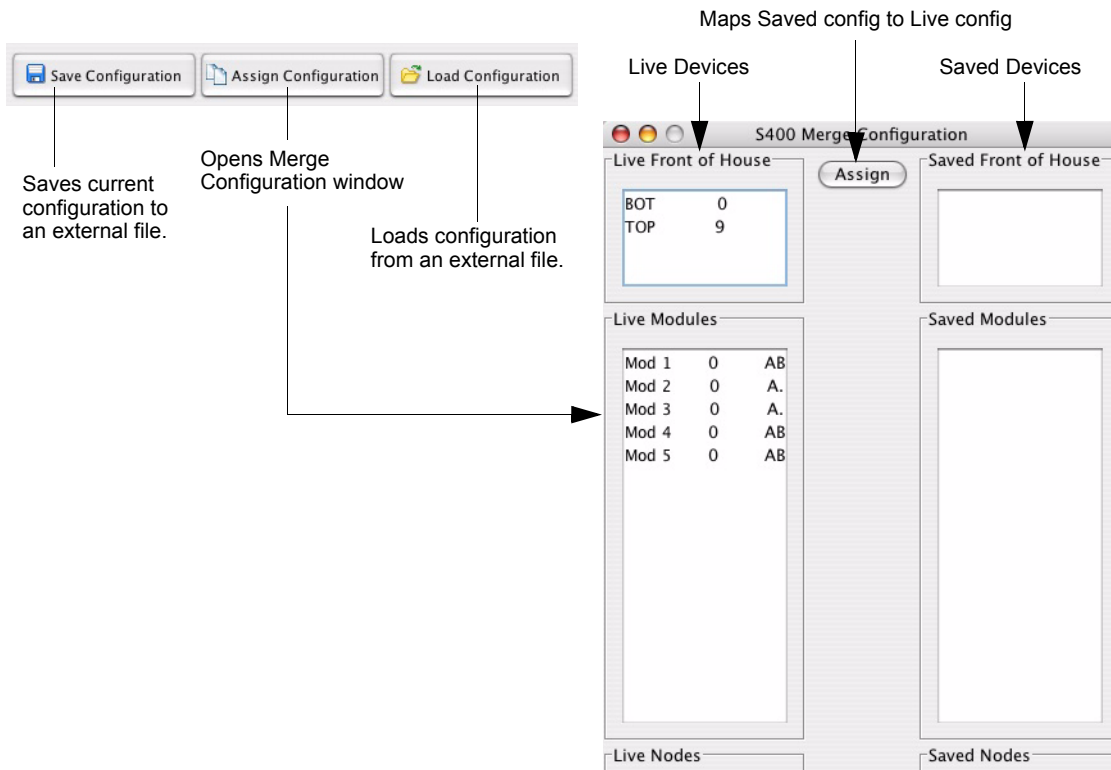


Click the Add (+) button to create a "virtual" module and then set its inputs and outputs.

Click Delete (-) button to delete a virtual module.

Configurations may be saved to external files using the **Save Configuration** button and imported using the **Load Configuration** button.

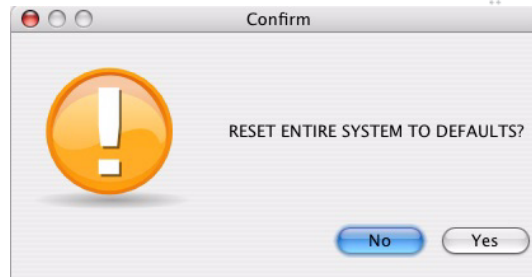
Pressing the **Assign Configuration** button will open the Merge Configuration window. In this window, the Live devices are shown on the left, while the Saved devices are shown on the right. Select one from each list and click the **Assign** button to map the Saved configuration to the Live configuration.



## System Settings

This section allows setting of the DMX universe format (alpha or numeric), selection of DMX Merge options, resetting all system defaults, and for initiating a software update.

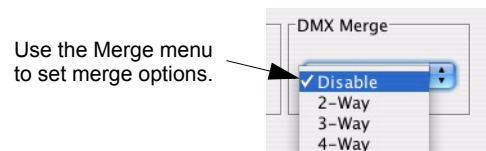
The **Default All** button will reset all system devices to their factory settings. *This action will require a confirmation, and should only be done for shop prep or initial start-up!*



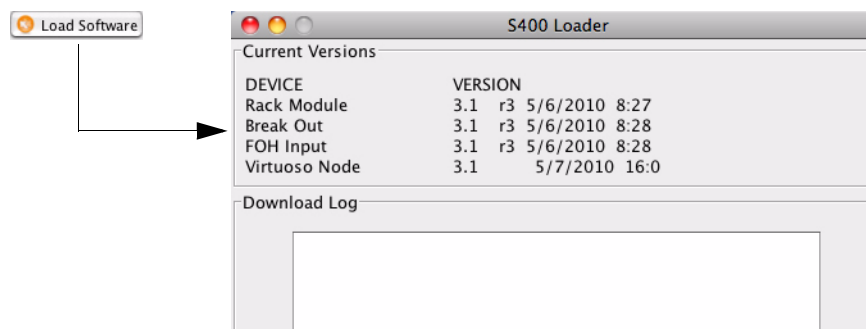
**DMX Merge** allows merging of DMX512 data for multiple universes assigned to the same number. For example, if two inputs are set to 001a and 2-way merge is enabled, then the resulting output for outputs set to universe 001 would be the highest value for each channel between the two inputs (HTP). If three inputs are active at 001, the outputs would be disabled.

Options are as follows:

- + Disable: no DMX universe merging.
- + 2-Way: allows up to 2 DMX universe inputs per universe.
- + 3-Way: allows up to 3 DMX universe inputs per universe.
- + 4-Way: allows up to 4 DMX universe inputs per universe.



The **S400 Loader** can be opened by clicking the **Load Software** button. This window can be used to view current software versions for all online devices and to initiate a system-wide software update. By clicking the **Start Download** button, all device software versions will be updated sequentially. Devices that already have the current version will not be affected. Progress of the update will be shown via the text display and the progress bar. Click **Done** when complete.



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**Note:** Unlike older versions of S400 software, v3.0 and greater allow software update for all devices in a single step (instead of updating devices one-by-one).

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## Notes



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