RGB SPECTRUM

SuperView® 4100
User's Guide

August 2011

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DOCUMENT

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1

INTRODUCTION

1.1   Product Overview

The new SuperView® 4100 processor is a fully real-time multiviewer for projectors, cubes or flat panel displays. Unique among multiviewers, the SuperView 4100 processor is based on a custom-built, high performance architecture rather than a PC, offering faster updates, more display flexibility, robustness and security. Real-time display of inputs is guaranteed under all conditions, without dropped frames.

The SuperView processor can display up to 8 graphic or HD video sources on a single output. Images can be displayed anywhere, any size, in windows or full screen. Unlike other video/data multiviewers, the SuperView processor has essentially no limits on display alternatives.

The SuperView 4100 processor provides DVI, HDMI and RGB inputs for 8 windows. Graphic signals to 1920x1200 pixels and HD inputs to 2048x1080 pixels are supported.

Control is via RS-232 or Ethernet. A browser-based control system provides a graphical interface that incorporates a comprehensive set of controls for every aspect of the processor and display.

The processor offers 24/7 robustness. It comes packaged in a compact rack-mount enclosure with replaceable air filter. Most importantly, the SuperView processor is a dedicated system, not a PC, providing the security and reliability of an embedded operating system with no disk drives. The user interface includes drag-and-drop window positioning and scaling.

The SuperView processor features DVI single-link output. Output can be adjusted to the native resolution of any display, up to 1920x1200 pixels and HD to 2048x1080 pixels.

A full array of features includes dynamic window sizing and positioning, smooth zooming within images, custom borders, titling, programmable presets., clock and cursor control. Options include a redundant power supply and HDCP support.

1.2   System Features

The *SuperView* includes the following standard features and functions:

- **Inputs** — Inputs accept user selectable RGB, YP_bP_r component (HDTV), HDMI and DVI signals.

- **Window manipulation** — Windows can be positioned, scaled, and clipped to any size or aspect ratio. The system also supports zoom and pan within a window and input freezing.

- **User-defined presets** — The *SuperView* stores and recalls up to fifty user-defined display arrangement presets, each containing information about window size and position, image controls, and image position on the screen.

- **Remote control** — Complete system control is supported via the RS-232 serial port or the 100/1000 BASE-T Ethernet port. Most control parameters can be stored in non-volatile memory for later use.

- **Autosync** — The *SuperView* automatically detects and locks to computer input and output sync signals. Industry-standard and custom video timings are supported.

Following is a concise summary of *SuperView* features:

- System:
  - Displays up to eight windows simultaneously.
  - Full 24-bit color processing used throughout.
  - System control via serial RS-232 or 100/1000 BASE-T Ethernet.
  - Intuitive graphical user interface.
  - 2-RU package.
  - Removable air filter.
  - Hot-swappable power supplies (second supply option).

- Inputs:
  - Supports a wide range of graphics inputs with resolutions up to 1920 x 1200 and 2048 x 1080p at 60 Hz frame rate.
  - Supports analog graphic HDTV/YP_bP_r inputs with tri-level sync.
  - Cable equalization extends cable lengths up to 164 feet (50 meters).

- Outputs:
  - Two identical outputs.
  - DVI output up to 2048 x 1152 pixels.
  - 5V pin power at 500 mA for external devices.

- Special features:
  - High-quality filtering for window resizing.
  - Pan, zoom, border, label, and freeze each window.
  - Selectable color background.
  - Export/import system settings.
  - Mullion adjustments.
  - Overlap for edge blending support.
  - On-screen clock.
  - On-screen cursor

1.3   System Inputs

Each of the *SuperView*'s DVI-I input supports analog (RGB or YPbPr/HDTV component) input and a digital (DVI) input. HDMI input ports support a single high-definition signal. The window source can be dynamically switched between graphics and HDMI, but only one source per window may be displayed at a time.

1.4   System Outputs

All input signals to the *SuperView* are converted to the selected output resolution with horizontal scan rates ranging from 12 to 125 kHz. 5 V of pin power at 500 mA is available for external devices such as fiber optic transmitters.

1.5   System Control

System control for the *SuperView* is provided via the RS-232 serial port and the 100/1000 BASE-T Ethernet port.

- The **RS-232** serial port connects to an ASCII terminal, any computer with a serial port, or an external control system such as AMX. Commands are sent from the terminal or computer to the *SuperView*.

Note	USB-to-Serial converters are inexpensive and widely available. Use one to connect your USB-equipped computer to the *SuperView* serial port.

Refer to the *SuperView 4100 Technical Reference Guide* for a complete description of the command set.

- The **Ethernet** port (100/1000 BASE-T) allows a *SuperView* system to be connected to a local area network (LAN) or directly to a PC. Note that direct connection requires the use of an Ethernet hub or Ethernet cross-over cable. Control by graphical user interface (Web Control Panel) or command line entries is supported over the 100/1000 BASE-T port.

1.6   EDID Management

EDID, Extended Display Identification Data, is information which enables a graphics adapter source to output a graphics standard best suited for the connected display processor. This information includes the display resolution and frame rate. *EDID Manager* provides a choice of what EDID to supply to the source.

1.6.1 EDID Management

EDID Manager works through the Web Control Panel (WCP) or command line operation. Management functions include

- Loading EDID from the EDID list to a register.

- Saving display EDID to the EDID list.

- Naming an EDID list entry.

- Viewing an entry in the EDID list.

- Deleting an EDID list entry.

- Exporting and importing an EDID list entry.

1.6.2 EDID List

The EDID list is used to apply parameters to the fixed an EDID registers. User entries in the list are numbered 1 to 100 with an additional factory default of 1920x1200 at 59.95 Hz. Data contained in the list include:

- List index number

- Name

- Display device manufacturer's ID

- Resolution and frame rate

Advanced users may view and modify additional timing parameters with third-party software such as Phoenix EDID Designer freeware available at **http//www.tucows.com/preview/329441**.

<table>
<tr><td>CHAPTER
2</td><td># INSTALLATION AND SETUP</td></tr>
</table>

This chapter provides installation and setup information of the *SuperView* with a variety of wall configurations. The following topics are discussed:

- ■ **Rack Mounting**
- ■ **Front Panel Features**
- ■ **Rear Panel System Connections**
- ■ **Selecting a Control Method**
- ■ **Web Control Panel (WCP) Connection**
- ■ **System Setup**

2.1 Rack Mounting

When the *SuperView* is to be used in a rack, it should be mounted before making any connections. To order the optional rack slide rails, request item 920 10241 for 22" racks or 920 10242 for 24" rack.

2.2 Front Panel Features

Front panel features are illustrated in **Figure 2-1**.
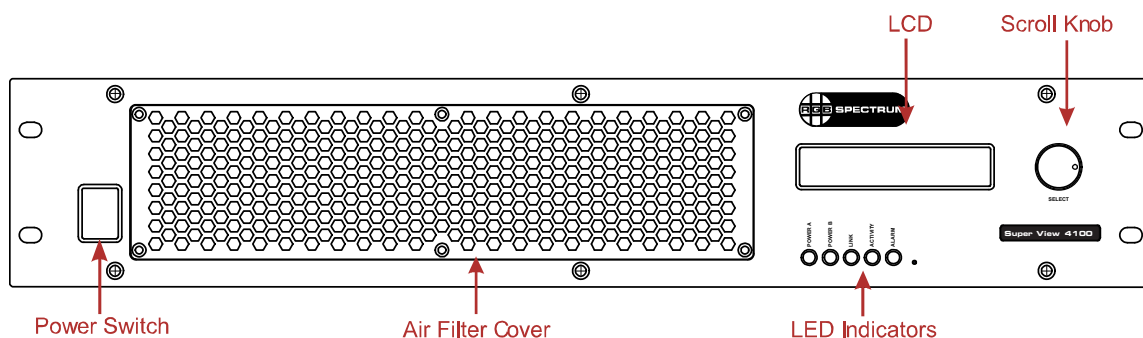
Figure 2-1 **SuperView 41000 Front Panel**

2.2.1 Power Switch

Use the front panel switch to turn the power on and off.

2.2.2 Air Filter

The front panel filter must be checked on a regular basis to prevent overheating the *SuperView*. Once a month would be an appropriate interval in a clean environment. If the *SuperView* is used where dust and dirt are a problem, it is recommended that the filter be inspected weekly.

If the *SuperView* overheats, the alarm indicator will light. When this occurs, turn the system power off and replace or clean the filter.

To clean a filter:

1. Remove the filter cover from the front panel.
2. Wash the filter in mild dish detergent.
3. Rinse in clear water.
4. Press it between paper towels to remove excess moisture.
5. Allow to air dry.
6. Replace the filter and cover.

2.2.3 Indicators

The five LED indicators on the front panel are described below.
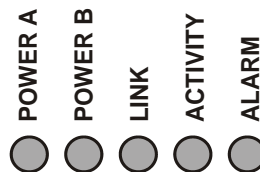
Figure 2-2 Indicators

POWER A AND POWER B

Lights to indicate that power supplies A and B are working.

LINK

Lights when a valid connection is present on the Ethernet port.

ACTIVITY

Lights to indicate network activity through the 100/1000 BASE-T Ethernet port.

ALARM

This LED will light when the *SuperView* exceeds the operating temperature limit. If this occurs:

1. Verify that the system fan is operating.

2. Power off the system.

3. Check that air intake and outlets are not obstructed.

4. Check the filter. Replace or clean if necessary.

The alarm indicator will also light if one of the dual power supplies has failed.

2.2.4 LCD and Scroll Knob

The LCD panel displays *SuperView* parameter information needed to establish Web Control Panel (WCP) or Telnet connection to the unit. The system temperature can also be displayed. When an alarm condition is encountered, this information will be available.

```
RGB Spectrum
SuperView 4100
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Figure 2-3 LCD and Scroll Knob

Use the scroll knob to view the current values of:

- System IP Address
- System Host Name
- System Gateway IP
- System Subnet Mask
- Serial Baud Rate
- Serial Port Echo
- Supply Temperature
- Firmware Version
- Alarm, if applicable

2.3 Rear Panel System Connections

All connections to the *SuperView* are located on the rear of the unit. See the *SuperView Technical Reference Guide* for detailed connector information.

Note	Before proceeding with installation make sure that the front panel power switch is in the OFF position.

Figure 2-4 illustrates the rear of the *SuperView 4100.*
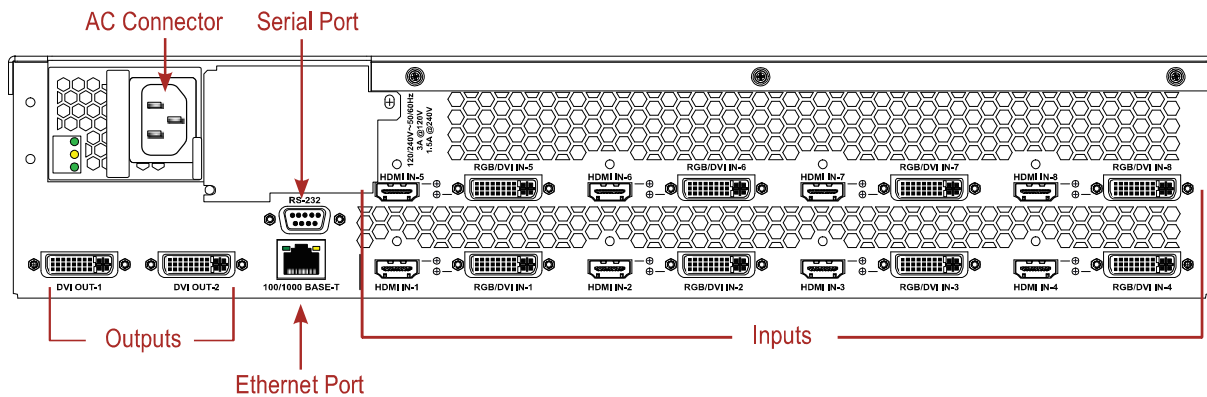
Figure 2-4 SuperView 4100 Rear View
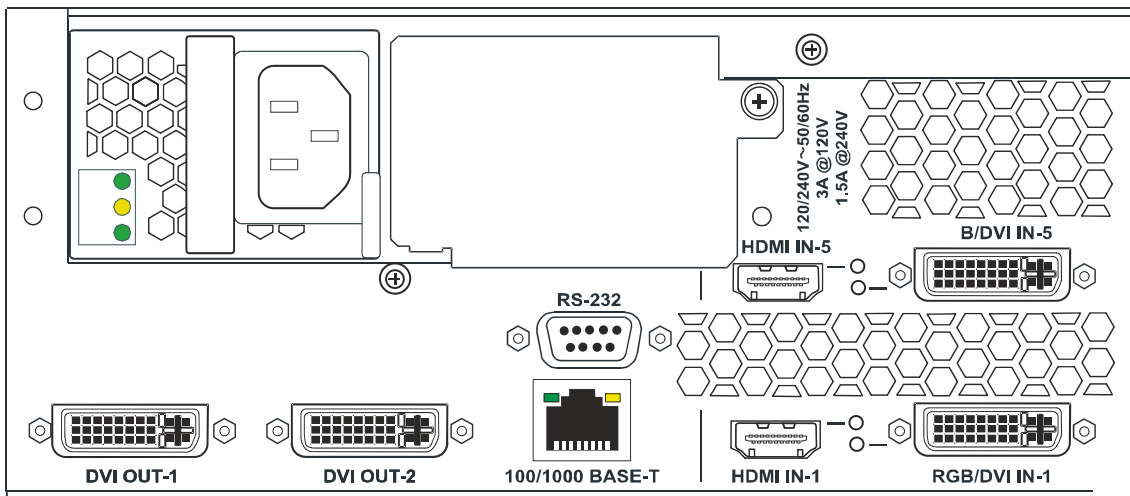
Figure 2-5 Rear View Detail

■ Inputs are numbered from left to right, bottom to top.

■ Outputs are numbered from left to right. **DVI OUT 1** and **DVI OUT 2** both output the same signal.

2.3.1 Control Connections

The *SuperView* can be controlled from either a serial RS-232 port or the 100/1000 Base-T Ethernet port:

■ RS-232 serial port - Female 9-pin sub miniature D connector. See **Serial Port Settings** for setting the communication parameters on the computer or other control device.

■ Ethernet 100/1000 BASE-T - RJ-45 modular connector. To connect *SuperView* to a network, use a standard Ethernet cable. To connect *SuperView* directly to a computer use an Ethernet crossover cable or a hub.

2.3.2 Power Connections

Connect the power cord(s) to a reliable source with a voltage between 100 and 240 VAC. Note that cord (NEMA5-15P/IEC-C19, 15A, 6FT) uses an inlet plug that is larger than typical.

The power supplies are redundant (second supply optional) which allows the unit to remain on when replacing a supply. Follow these steps to replace a power supply:

1. Remove the power cord from the supply to be replaced.

2. Push the green lever towards the power connector and pull the supply out of the unit.

3. Slide the new supply into the unit until it snaps in position.

4. Replace the power cord.

2.4 Selecting a Control Method

After connecting the communications cables and applying power, you are ready to control the unit. To operate the *SuperView* you have the choice of using a command line interface or a graphical user interface. The graphical user interface is accessed only from the Ethernet port.The command line interface may be accessed from either the RS-232 serial port or by a Telnet session from the 100/1000 BASE-T Ethernet port. Additionally, a terminal emulation window may be opened from the **Administrator** tab of the **Set Up** window within the Web Control Panel.

Please refer to the *SuperView 4100 Technical Reference Guide* for more information on establishing RS-232 and Telnet Control.

2.5 Web Control Panel (WCP) Connection

The *SuperView*'s Web Control Panel (WCP) interface provides a graphical alternative to the command-line setup and control used with serial or Telnet control. The WCP uses the *SuperView*'s internal web server, allowing set-up and operation of the system from a standard browser.

Note	To minimize compatibility issues between browsers, it is recommended that you use the Microsoft Internet Explorer® web browser running under Windows XP or Windows 7. Changes to the *SuperView* default IP address should be made before putting your *SuperView* on a network.

2.5.1   IP Address

The *SuperView* is configured at the factory to have the default IP address **192.168.1.200**. Before connecting the unit to the network you must make sure that this IP address is valid for use on your network. Consult your network manager for details. The IP address can be changed by using the **IPADDR**ess command from either the serial port or from a Telnet session (please see the *SuperView Technical Reference Guide*).

Computers that are set up to communicate on the network are typically configured to have a dynamic IP address. In this configuration the computer is provided with a suitable IP address by a DHCP server connected to the network.

If you connect directly to the *SuperView* a server will not be available and you will have to set the IP address on your computer manually. This is known as a static IP address. Refer to the network settings help section of your computer operating system (OS) for assistance with setting a static IP address on your computer.

An IP address is composed of two parts known as the network ID and the host ID. The default network ID for *SuperView* is 192.168.1 and the default host ID is 200 (192.168.1.200). The control computer should be assigned an IP address with the same network ID as the *SuperView*, but a different host ID (for example 192.168.1.201).

2.5.2   Connecting to the Web Control Panel

The *SuperView* contains an internal web server that provides the Web Control Panel (WCP) user interface. The current IP address may be displayed on the front panel LCD (see **Figure 2-1**).

You can connect to the *SuperView* WCP in the following ways:

- **Direct connection** — connect the Ethernet port on a computer equipped with a standard web browser to the *SuperView*'s 100/1000 BASE-T Ethernet port. You will need to use a hub or an Ethernet crossover cable for this connection method.

- When using a direct connection, you must manually set the control computer's IP address, subnet mask and gateway. Use the *SuperView*'s front panel scroll knob you to display these parameters. Make sure that different IP addresses are assigned to the control computer and the *SuperView*.

■ **LAN connection** — connect the *SuperView* 100/1000 BASE-T Ethernet port to a local area network (LAN). From a computer on the network, access the WCP using a standard web browser. You can use a standard Ethernet cable for this connection method.

When the physical connections have been made and network settings updated, launch your internet web browser and connect to the WCP by entering the *SuperView*'s IP address into the browser URL address line.

Example	If the *SuperView*'s IP address is 192.168.1.178, the browser entry would be http://192.168.1.178 as illustrated below.
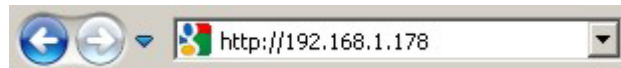
Figure 2-6 Sample Browser IP Address Entry

If the network connection is working properly and the correct IP address has been entered, the *SuperView* responds by displaying the WCP Startup Screen shown in the following figure.
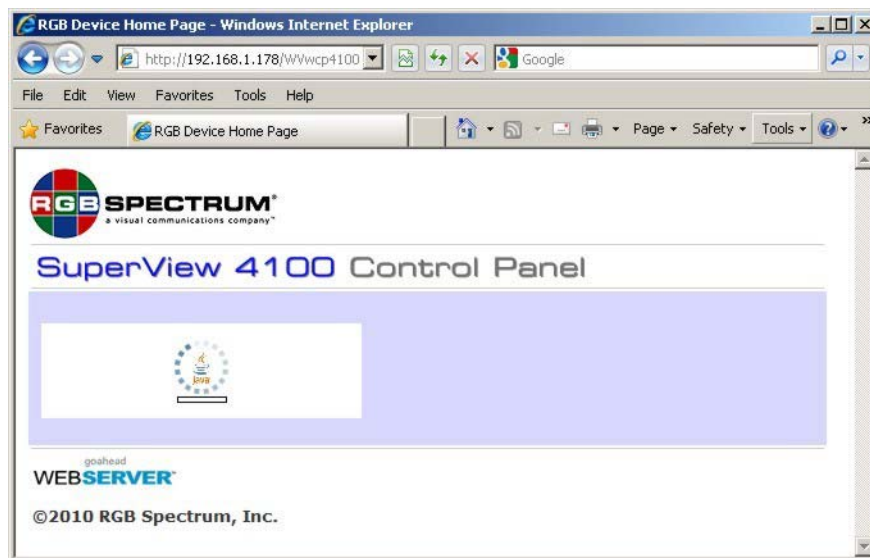
Figure 2-7 WCP Startup Screen

Depending on the browser used and the PC configuration, a window may open and ask if you would like to run the WCP application. Allow the application to open.
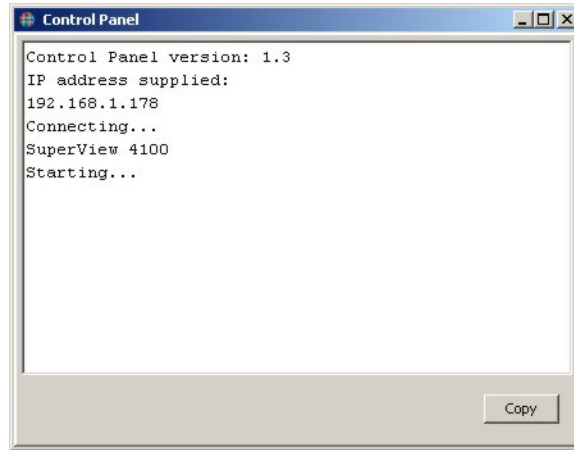
Figure 2-8 SuperView Control Panel Console

When password control is enabled (default is disabled), another window will open asking for a login password to launch the WCP. Type **RGB** (case sensitive) and click on **OK**.

Note	If the default password (RGB) has been changed, you will need to enter the new password. For information on changing the password, refer to the *SuperView 4100 Technical Reference Guide*.

Figure 2-9 SuperView WCP Login Window

The WCP **Virtual Screen** launches displaying the current wall configuration (see **Figure 2-10**). This window provides access to other floating windows for control of *SuperView* functions.

Figure 2-10 WCP Virtual Screen

Note	You must follow the procedures outlined in the next section, **System Setup**, to ensure proper configuration and operation of the *SuperView*.

2.6 System Setup

2.6.1 Configuration

Select the virtual screen aspect ratio as 4:3 or 16:9.
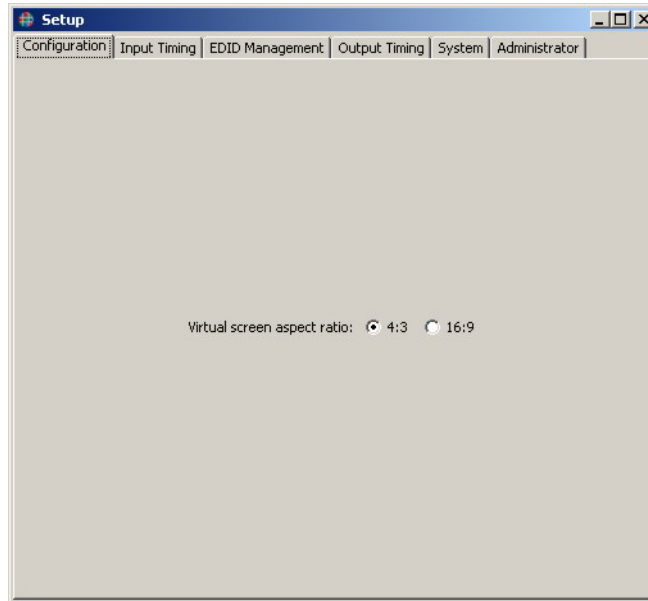
Figure 2-11 Setup Configuration Tab

2.6.2   Output Setup

After making the system connections and communicating with the *SuperView*, the next step is to set the output format. The output format should be selected to match the requirements of the displays you will be using in the wall. This may be accomplished using the **Output Timing** tab of the **Setup** window. See on page 43.

2.6.3   Input Setup

There are many different types of graphics inputs that the *SuperView* supports. When a graphics signal is applied to an input, the *SuperView* will measure the characteristics of the signal and search for a match to the timing. In most situations an exact match will be found automatically (Autosync) and no further adjustment is required.

To accommodate less popular and custom signals, the *SuperView* accepts user defined timing parameters for storage in the timing list. For more information **Input Timing**.

CHAPTER

3

OPERATION

This chapter describes how to use the Web Control Panel (WCP) graphical user interface to control the *SuperView*. The WCP works with a standard web browsers such as Microsoft Internet Explorer or Mozilla Firefox.

Topics discussed in this chapter include:

- **Web Control Panel Overview**
- **Window State and Priority Control**
- **Window Properties**
- **Controls**
- **Clock**
- **On-Screen Cursor**
- **Window Presets**

Note	Before you begin using the WCP, you must follow the information contained in **Web Control Panel (WCP) Connection** (**page 9**) and **System Setup** (**page 13**).

3.1 Web Control Panel Overview

3.1.1 WCP Features

The WCP allows you to do the following:

- View the current wall layout.
- Interactively move and size individual windows.
- Save and recall window arrangement presets.
- Adjust brightness, contrast and other parameters.
- Add borders and labels to individual windows.
- Zoom, pan, and freeze individual inputs within a window.
- Access configuration and setup windows.

3.1.2   WCP Virtual Screen

The *SuperView 4100* WCP Virtual Screen is shown in the **Figure 3-1**.

Figure 3-1   Web Control Panel Virtual Screen

3.1.3   Window Description

Each enabled window is displayed on the virtual screen. The currently selected window is yellow while the others are shown in blue. Window data shown includes: window number, size, position, priority, and source.
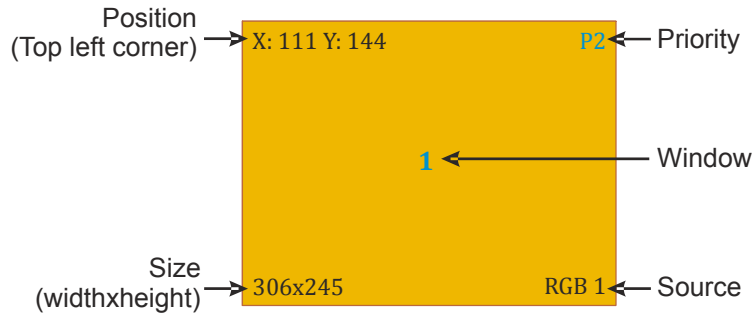
Figure 3-2 Window Data

3.1.4   WCP Menus

The WCP provides access to several other floating windows that control the *SuperView*. These windows are accessed from the menus in the upper left portion of the WCP as identified in the next figure.
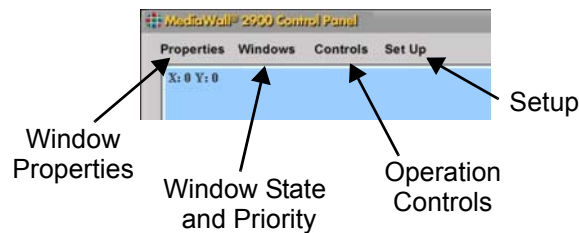
Figure 3-3 WCP Menus

3.1.5   WCP Menu Structure

The WCP menu structure shown in **Table 3-1** is discussed in this chapter.

Table 3-1 Menus

Menu	Controls
Properties	Size and Position Zoom and Pan Labels and Borders Picture Adjustment
Windows	State and Priority
Controls	Background

For information on the *SuperView* WCP **Setup** menu, please see **Chapter 4**, **Advanced Setup**.

3.1.6   Window Selection

A window may be selected by clicking on in from the virtual screen. If a menu is opened before the correct window has been selected, click the **Selected Window** icon and choose the desired window from the resulting pop-up menu.
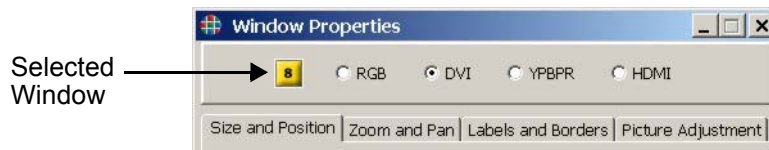
Selected
Window

Figure 3-4 Selected Window Example 1
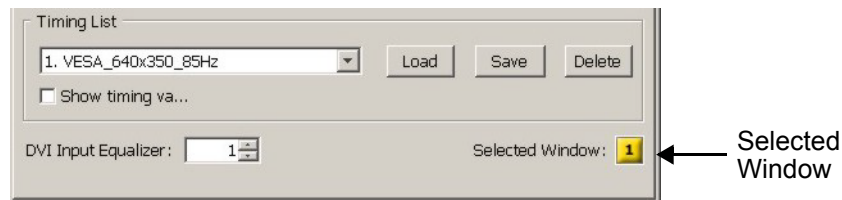
Selected
Window

Figure 3-5 Selected Window Example 2

Figure 3-6 Window Selection Pop-Up

This pop-up menu will stay open until you close the original menu or choose another menu.

3.2   Window State and Priority Control

3.2.1   Window Visibility

Up to eight windows can be displayed at a time. Individual windows can be turned on or off using the **Window Enable** buttons in the WCP **Window State and Priority** control. Select **Windows** from the menu at the top of the virtual screen to open the window shown in **Figure 3-7**. An enabled window is indicated by the green button color; a disabled window will be gray. Click on the desired window button to turn its display on or off.

Figure 3-7 Window State and Priority Control Window

3.2.2   Window Priorities

Windows may be positioned anywhere over the wall and can be placed to overlap other windows. When windows overlap they are layered in order of a user-defined priority. The window that appears on the top of all other windows has the highest priority (level 1). The blue buttons at the bottom of the **State and Priority** window indicate priority. To set the priority level of a window, use the following procedure:

1. Click **Windows** on the **Control Panel**.

2. Position the cursor over the **Priority** button (P1-P8) that you want to assign to the window. Click and drag the button over the top of the **Priority** button below the **Window Enable** button that you are prioritizing.

3. Release the mouse button to drop the **Priority** button on top of the button for the appropriate window to complete the setting.

Note that when you change the priority of a window, the priority of other windows may be affected. For example, if window 8 currently has the priority level 8, then promoting the window to have a priority level of 1 will demote the priority of all the windows from 1 to 7.

3.3   Window Properties

3.3.1   Selecting a Window Input

The input type is set at the top of the **Window Properties** page.

Figure 3-8 **Window Properties – Graphics Inputs**

To select the input source for a window use the following procedure:

1. On the **Control Panel**, click **Properties**.

2. If the selected window is not correct, click on the **Selected Window** icon and click the desired window number in the resulting pop-up (see **Window Selection**, **page 18** for information).

3. Choose the required input type by clicking on the associated radio button.

For information on the **Input Timing** and **Picture Adjustment** please see **Chapter 4**.

3.3.2   Setting Window Size and Position

Setting the size and position of any window on the wall can be a simple click and drag operation on the virtual screen. To size a window, click and grab the edge of the window and drag to stretch or shrink it. Grab a vertical edge to change the width of the picture, or grab the horizontal edge to change the height of the window.

To change the size without affecting the aspect ratio, grab a corner of the window and move the corner diagonally to resize. Check **Maintain window aspect ratio** at the bottom of the window as required.

In addition to changing size and position using the WCP virtual screen, windows can be modified using the **Window Properties**, **Size and Position** tab as shown in **Figure 3-9**.
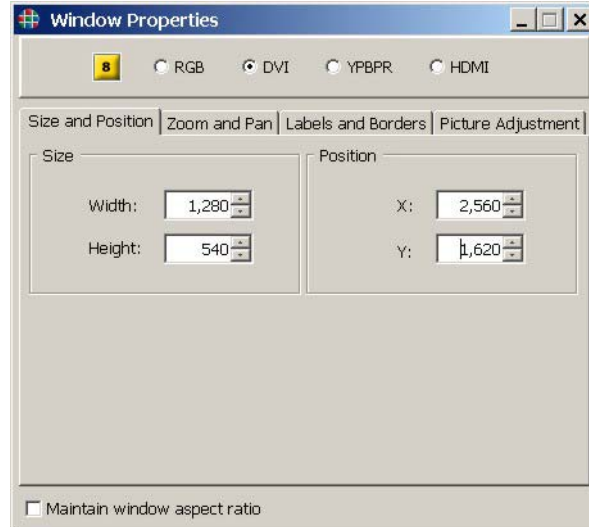
Figure 3-9 Size and Position Tab

To set the size and position of a window use the following procedure:

1. On the **Windows Properties** page, click the **Size and Position** tab.

2. If the selected window is not correct, click on the **Selected Window** icon and click the desired window number in the resulting pop-up.

3. Use the **Width** and **Height** spin boxes to set the size of the window as required.

4. Note that you can enter the numeric values directly into the spin box or use the up and down arrows. Complete the entry by pressing the keyboard **ENTER** key.

5. Use the **Position X** and **Y** spin boxes as required. The position coordinates indicate the location of the upper left corner of the window.

RESETTING WINDOW SIZE

The WCP provides a convenient means to restore a window to its unscaled (native) size. If an input signal has a resolution of 1024 x 768, you can set the window to that size by selecting the **Snap to original resolution** option from the **Control Panel** virtual screen.

Using the mouse, right-click on the window that you wish to size to its native resolution. The pop-up window in **Figure 3-10** opens.

Full Screen ▶
Freeze
Lock in place
Identify
Bring to front
Snap to original resolution
Turn off

Align next left
Align next right
Align next up
Align next down

Undo

Figure 3-10 Right-Click Menu

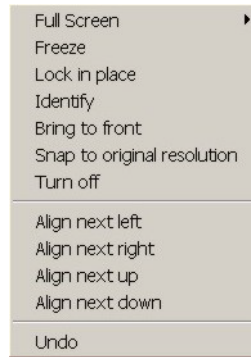Highlight the option **Snap to original resolution** and click to select it. The window size will then be reset to correspond to the native size of the input.

MAKING A WINDOW FULL SIZE

Any window can be set to automatically fill the complete wall, or any single display element in the wall.

To set a specific window to fill the wall use the following procedure:

1. Right-click on the desired window.

2. Using the click **Full Screen**.

FREEZING A WINDOW

The WCP provides a means to freeze the contents of any window displayed on the wall. To freeze a specific window use the following procedure:

1. Right-click on the desired window on the virtual screen.

2. Using the mouse, highlight the **Freeze** option.

3. Click the left mouse button to complete the operation.

Follow the same procedure above to unfreeze a window.

IDENTIFYING A WINDOW

The WCP may be used to identify a window on the wall by causing it to blink it on and off for two seconds.

To identify a specific window use the following procedure:

1. Right-click on the desired window on the virtual screen.

2. Using the mouse highlight the **Identify** option.

3. Click the left mouse button to complete the operation.

3.3.3   Zooming and Pan within a Window

The image can be zoomed and panned within a window. Zoom and pan are applied to each window independently.
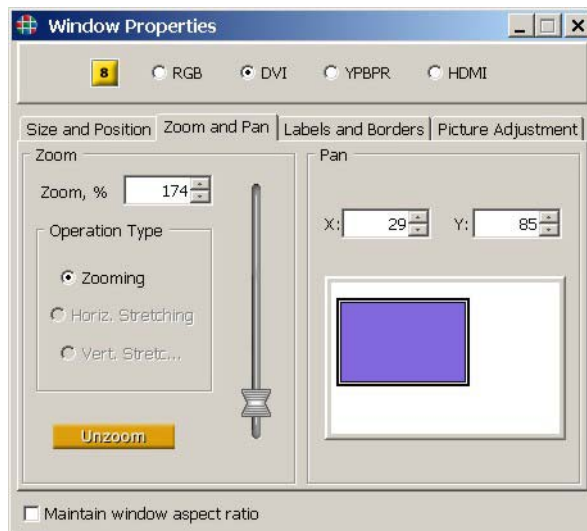
Figure 3-11 Pan and Zoom Tab

SETTING THE ZOOM LEVEL

Zoom may be applied to the image without affecting the aspect ratio of the image, or can be applied independently to stretch the image in either the vertical or horizontal dimensions. Both interactive adjustment and numeric entry methods are supported.

To zoom interactively, use the following procedure:

1. On **Window Properties** page, click on the **Zoom and Pan** tab.

2. Click on the **Selected Window** icon and click the desired window number in the resulting pop-up as required.

3. Choose the **Operation Type** (**Zoom**, **Horiz. Stretching**, or **Vert. Stretching**) by clicking on the button next to the desired function.

4. Click and drag the vertical slider to interactively control the operation you chose above.

    OR

    Enter the required zoom percentage into the zoom entry box and press **ENTER**.

If you wish to reset the window to its original image size, click on the **Unzoom** button at the bottom of the Zoom pane.

PANNING WITHIN A WINDOW

You may pan around a zoomed window. This may be accomplished interactively or numerically by entering X and Y positions into the pan numeric entry boxes.

To pan interactively, use the following procedure:

1. On the **Windows Properties** page, click on the **Zoom and Pan** tab.

2. If necessary to change the window number, click on the **Selected Window** icon and click the desired window in the resulting pop-up.

3. Position the cursor into the **Pan** pane.

4. Click and drag the colored box inside the **Pan** pane to select another region of the source image.

   OR

   Enter the required X and Y numbers into the pan entry boxes.

3.3.4 Window Borders

A colored border may be applied around each window independently by using the **Labels and Borders** tab of the **Window Properties** page.
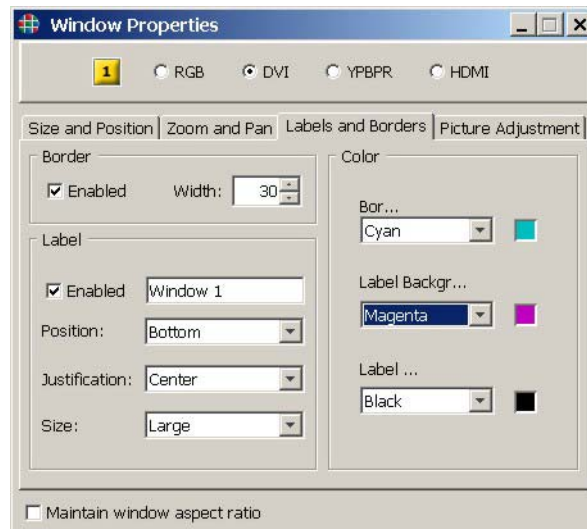

Figure 3-12 Labels and Borders Tab

To setup a border around a window use the following procedure:

1. On the **Window Properties** page, select the **Labels and Borders** tab.

2. Click on the **Selected Window** icon and select the desired window number in the resulting pop-up as required.

3. Set the border width as required using the **Width** spin box control. The maximum bor-der width is 100.

4. Click the **Border Enabled** check box to turn on the border

To change the window border color use the following procedure:

1. On the **Window Properties** page, select the **Labels and Borders** tab.

2. If the selected window is not correct, click on the **Selected Window** icon and click the desired window number in the resulting pop-up.

3. Select a pre-defined color from the **Border Color** drop down selector.

 OR

4. Click on the colored swatch to the right of the **Border Color** drop-down selector to access the color chooser window.

5. Select the required color.

6. Click the **OK** button or cancel if you do not want to change the color.

3.3.5 Window Labels

A label may be applied to each window independently by using the **Labels and Borders** tab of the **Windows** menu.

1. On the **Windows Properties** page, select the **Labels and Borders** tab (**Figure 3-12**).

2. If the current window is not correct, click on the **Selected Window** icon and click the desired window number in the resulting pop-up (see **Window Selection**, **page 18** for information).

3. Enter the label text in the **Label Entry** box. The label may be up to 23 characters in length and may consist of any readable ASCII characters.

4. Click the **Label Enabled** check box.

The label may be positioned at the top or bottom of the window. You may also choose to position in the center or justified to the left or right edge of the window. To change the position use the following procedure:

1. On the **Windows Properties** page, select the **Labels and Borders** tab (**Figure 3-12**).

2. Click on the **Selected Window** icon to select the desired window number in the result-ing pop-up.

3. Choose the desired position from the **Position** drop down selector.

3.3.6 Picture Adjustment

Each window on the *SuperView* can have unique adjustments made to the displayed image from the **Picture Adjustment** tab of the **Window Properties** page.
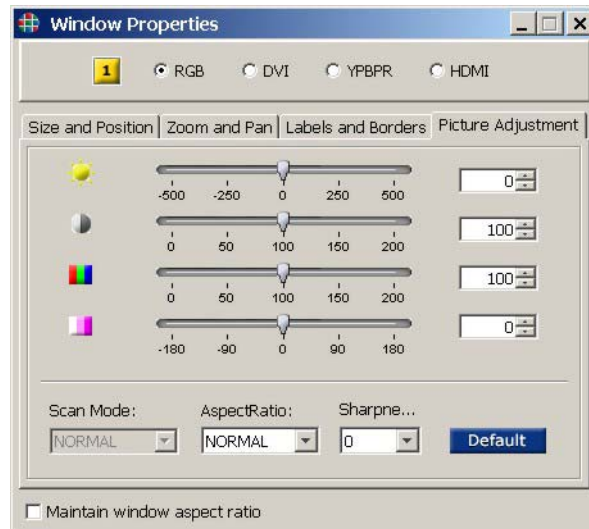

Figure 3-13 Picture Adjustment Tab

The following parameters can be adjusted for all types of inputs:

- Brightness
- Contrast
- Saturation
- Hue
- Sharpness

To change the **Brightness**, **Contrast**, **Saturation** and/or **Hue** for a selected window use the following procedure:

1. On the **Windows Properties** page, select the **Picture Adjustment** tab (**Figure 3-13**).
2. Click the **Selected Window** icon as necessary to choose the desired window.
3. Click and move the parameter slider to adjust. Release the slider when you are satisfied with the result.

   OR

   Click on the value entry box (to the right of each parameter) and enter a value directly by using your computer keyboard.

   OR

Click on the up or down selector button (to the right of each parameter) to increase or decrease the adjustment.

To change the **Aspect Ratio** and/or **Sharpness** for a selected window use the following procedure:

1. On the **Windows Properties** page, select the **Picture Adjustment** tab (**Figure 3-13**).

2. If the selected window is not correct, click on the **Selected Window** icon and click the desired window number in the resulting pop-up.

3. Click the drop down selector for the desired parameter to access the available choices.

4. Make the required selections.

3.4   Controls

3.4.1   Background

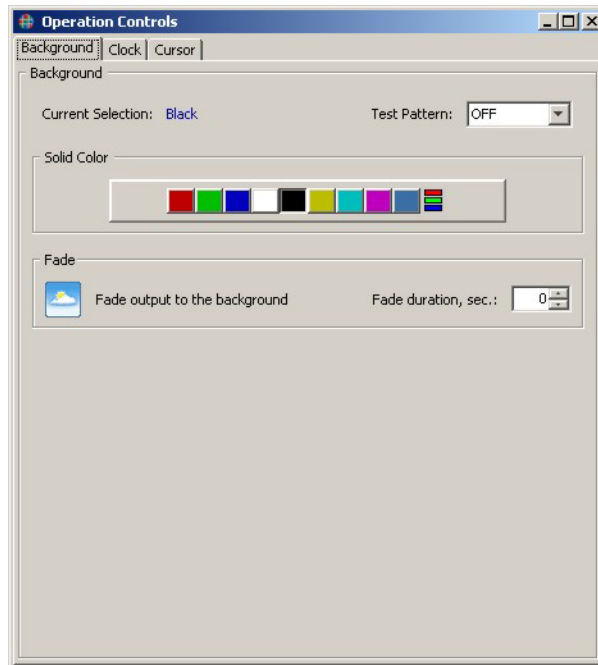Use the following procedure to select a background color.

Figure 3-14 **Background Tab**

1. On the **WCP** virtual screen window, click **Controls**.

2. Click on the desired colored button to choose a solid standard background.

   OR

   Choose a custom color:

   ■ Click on the multi-colored button at the right end of the row of colored buttons (■).

   ■ Using the pop-up color entry dialog box that appears set the background color.
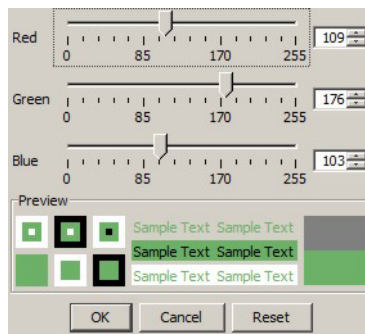

Figure 3-15 Custom Color Selection

   ■ Click **OK** to accept the new color or **Cancel** to continue with the current setting.

3.4.2 Test Patterns

To assist in setting up and debugging an installation, the *SuperView* provides a number of internally generated test patterns. These may be selected without having an input signal connected.

Test patterns are helpful to confirm proper output display connections, adjust image characteristics, and assist in alignment. The following test patterns are available:

Table 3-2 Internal Test Patterns

Pattern	Description
RRAMP	Linear red ramp signal
GRAMP	Linear green ramp signal
BRAMP	Linear blue ramp signal
WRAMP	Linear white ramp signal
HRRAMP	Horizontal red ramp signal
HGRAMP	Horizontal green ramp signal

Table 3-2   Internal Test Patterns (Continued)

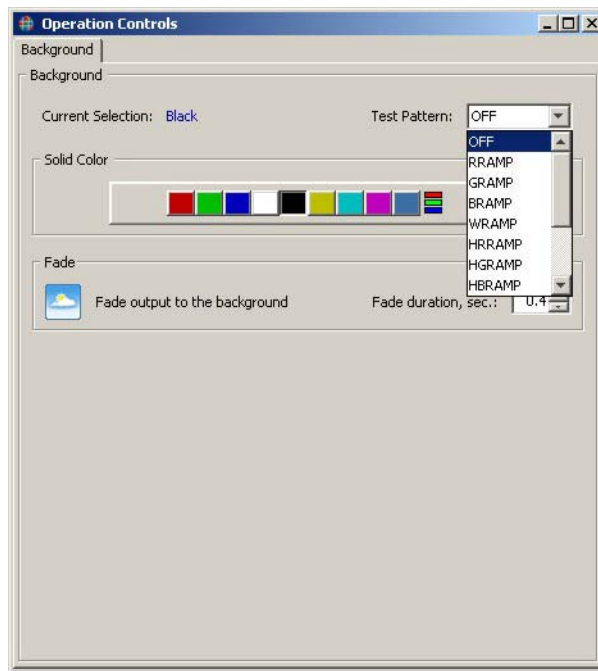| Pattern	Description
HBRAMP	Horizontal blue ramp signal
HWRAMP	Horizontal white ramp signal
BARS	100% saturated vertical color bars
HBARS	100% saturated horizontal color bars
ALIGN	Alignment box
RAMPS	Linear grey ramp signal

Figure 3-16 Test Pattern Selection

To select a Test Pattern, use the following procedure:

1. Click **Controls**.

2. Select the desired pattern from the **Test Pattern** drop-down list.

To disable the test pattern, use the **Test Pattern** drop down box and select **OFF**.

3.5 Clock

A clock can be used as a foreground object on the *SuperView*. If you wish to use the clock foreground object, follow the steps below:

■ On **Operation Controls** page, select the **Clock** tab

.
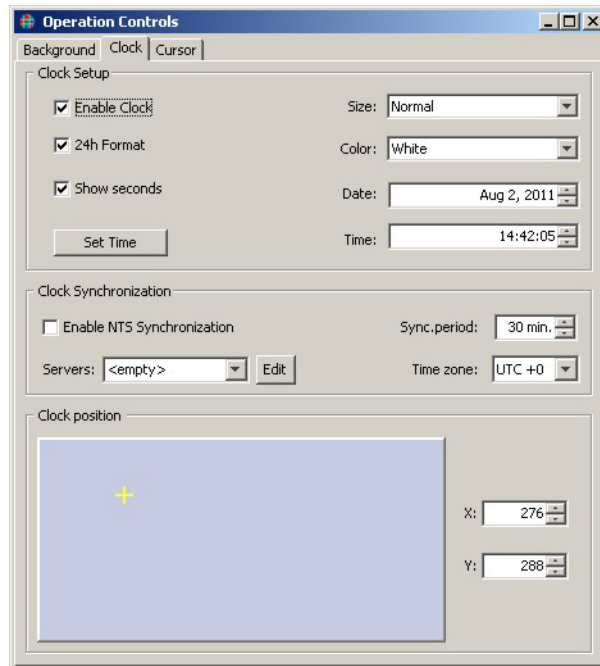
Figure 3-17 Clock Tab

■ Enable the clock by selecting the **Size**: Small, Medium, or Large. Select **Off** to disable the clock.

■ Select the clock color from the drop-down list. See **Figure 3-15** for custom color selection.

■ Check **Show seconds** as required.

■ Check **24h Format** as required. Unchecked, a 12-hour clock will be displayed.

■ Change the system **Date** and **Time** as required.

■ Click **Set Time**.

■ Drag the icon on the **Clock position** window or used the spin boxes to set the position of the clock.

Note	The clock cannot be positioned across multiple outputs.

3.6 On-Screen Cursor

You can choose a cursor as a foreground object. This mode allows you to illustrate relevant material as well as resize and move individual windows all right on the wall output.
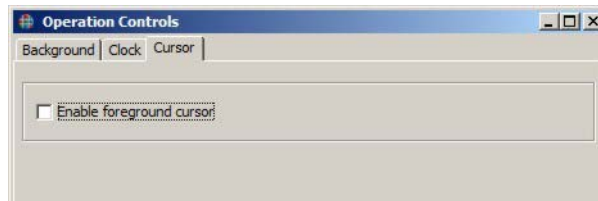
Use the following procedure to use the on-screen cursor:

- On the **Operation Controls** page, select the **Foreground** tab.
- Click the **Cursor** radio button.
- A full screen Cursor Pad window will open on your PC in front of any other WCP windows.
- Using your mouse, move the on-screen cursor wherever you would like.

  Notice that as the cursor passes over window boundaries, the cursor changes from a standard mouse arrow (➤) to a resize cursor (↔ or ↗). You can left-click the mouse on any window boundary and resize it as desired.

When you are finished with the cursor mode, close the Cursor Pad window by pressing Ctrl-Ctrl-Shift on the keyboard.

3.7 Window Presets

The current window settings including position, size, borders and labels can be saved in any of 50 preset registers. Presets are stored in non-volatile memory so they can be recalled at any time without fear of losing them due to loss of power.

Figure 3-18 Windows Presets

The window preset register buttons are located at the bottom of the WCP virtual screen (see **Figure 3-18** above). To save the window settings to a preset register use the following procedure:

1. Make all the window settings that you require using the procedures detailed in previous sections.

2. Click the **Save** button at the bottom right of the WCP window.

3. Click the preset button that you wish to use to save your current settings.

4. A preset name dialog box will appear inviting you to name the preset. Enter a name and click **OK**.
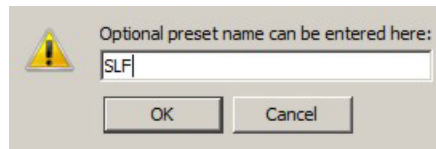

Figure 3-19 Preset Name Dialog Box

To recall the window settings from a preset register, click the desired preset button. If the preset contains window settings it will be recalled immediately. There will be no action if the preset is empty.

CHAPTER

4

ADVANCED SETUP

This chapter describes how to use the Web Control Panel (WCP) for Advanced Setup of the *SuperView*. Note that all of these setup functions can also be accomplished by using the command line interface (refer to the *SuperView 4100 Technical Reference Guide* for details).

Click **Set Up** at the top of the virtual screen to access the advanced topics discussed in this chapter:

- ■ **Configuration**
- ■ **Input Timing**
- ■ **EDID Management**
- ■ **Output Timing**
- ■ **System Settings**
- ■ **Administrator Options**

4.1 Configuration

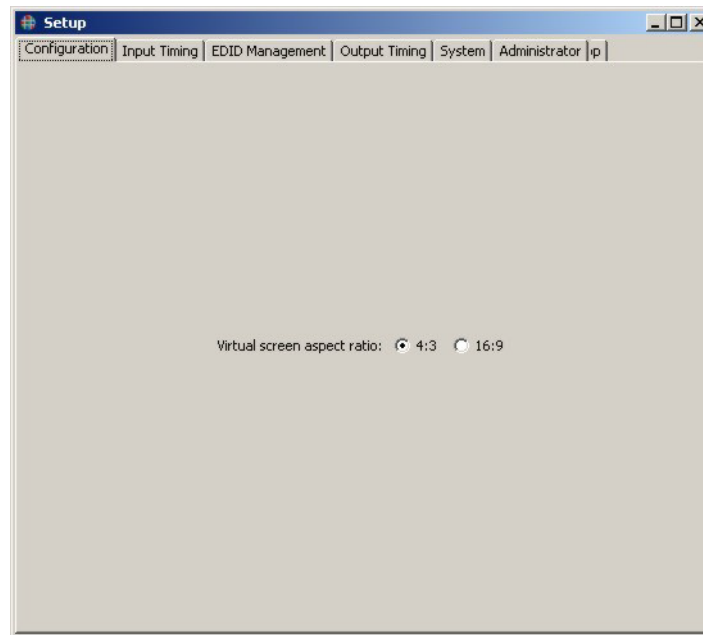Select the desired aspect ratio for the virtual screen: 4:3 or 16:9..

Figure 4-1 Setup Configuration Tab

To set the aspect ratio, use the following procedure:

1. Click **Set Up**.
2. Select the **Configuration** tab (**Figure 4-1**).
3. Set the virtual screen aspect ration to **4:3** or **16:9** as required.

4.2 Input Timing

There are a wide variety of graphics signals that can be used with a *SuperView*, many of which are supported directly by a pre-defined timing list. When a signal is connected to a graphics input, the *SuperView* automatically searches the list and will load the timing values to exactly match the input signal (autosync). If a match is not found, then it is possible to specify the parameters of the signal and to add them to the timing list.
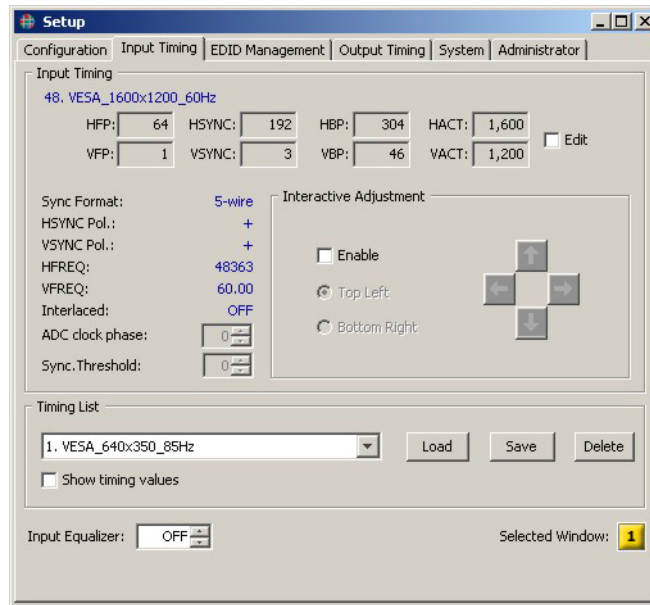
Figure 4-2 Setup Input Timing Tab

4.2.1 Viewing Current Timing Settings

The timing parameters displayed in the upper section of the page relate to the selection in the drop down box which may not be the same as those in use. To view the current settings click in the check box **Show Timing Values**; the values will be displayed in red in the associated parameter boxes.

4.2.2 Loading from the Timing List

Use the following procedure to load a new input timing set.

1. Make note of the timing parameters required for the desired input signal.

2. Click **Setup**.

3. Click on the **Input Timing** tab (**Figure 4-2**).

4. If the current window is not correct, click on the **Selected Window** icon and click the desired window number in the resulting pop-up (see **Window Selection**, **page 18** for information).

5. Click on the scroll button in the **Timing List** section and scroll through the list to the timing entry that matches the input signal's parameters. (See **Factory Timing List** in the *SuperView 4100 Technical Reference Guide.*)

6. Click the **LOAD** button to accept the selected entry in the list

4.2.3 Creating a New Timing Entry

If there is no entry in the timing list that matches your specific signal you can create a new entry in the list containing the exact parameters of your input signal. You may find an entry in the list that is very close, load the entry, modify it, and then save the new values to the user-defined timing list. There are 61 available user entries.

Use the following procedure to create a new (user defined) entry in the timing list:

1. Click the **Edit** button in the **Input Timing** section of the **Input Timing** tab.

2. Enter new timing values into of the timing parameter boxes as required.

3. Scroll to an empty timing list slot, 100 to 160, in the **Timing List** entry box.

4. Click the **SAVE** button.

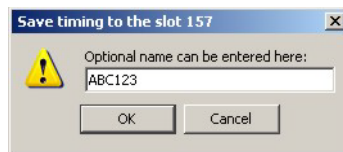   A dialog box will open allowing you to name the new entry.

Figure 4-3 Timing List Name Dialog Box

5. Enter a name for the new timing entry and click **OK**.

The name can be up to 23 characters in length and can contain uppercase, lowercase, and numeric characters. Avoid the use of a space or the / or \ characters.

4.2.4 Interactive Timing

If you do not know the exact timing parameters for an analog input signal, you can adjust the timing parameters interactively while viewing the display. To set the timing parameters interactively use the following procedure:

1. Allow the *SuperView* to automatically lock to the input signal.

    Disconnect and then reconnect the input signal to trigger the *SuperView* to begin the autosync search again.

2. Click the **Enable** button in the **Interactive Adjustment** section of the **Input Properties**.

3. Click the radio button labeled **Top Left**.

4. Use the **Up/Down**, **Left/Right** adjustment buttons in the Interactive Adjustment section to position the top left corner of the input image in the desired location at the top left of the display.

5. Click the radio button labeled **Bottom Right**.

6. Use the **Up/Down**, **Left/Right** adjustment buttons in the Interactive Adjustment section to position the lower right corner of the input image in the desired location at the lower right corner of the display.

7. Recheck the **Top Left** corner of the image and readjust as needed to position the image in the top left corner of the display.

8. Recheck the **Bottom Right** corner of the image and readjust as needed to position the image in the bottom right corner of the display.

9. Repeat the previous two steps as necessary until both corners of the image are correctly positioned.

10. From the timing list, select an entry to save the new timing parameters. User defined timings can be saved to entries 100 through 160.

11. Click the **SAVE** button.

    A dialog box will open allowing you to name the new entry.

12. Enter a name for the new timing entry and click **OK**.

    The name can be up to 23 characters in length and can contain uppercase, lowercase, and numeric characters. Avoid the use of a space or the / or \ characters.

4.2.5   Input Converter Clock Phase

For optimum image quality of analog RGB or YPbPr inputs, it is important that the sample clock in the Analog/Digital Converter (ADC) has the same phase as the original input signal. If the phase is not correctly set, the image may appear to have noisy or indistinct edges.

Use the following procedure to set the ADC phase:

1. Be sure that the input signal has a lot of high frequency detail.

2. In the **Input Timing** section of the **Input Properties**, click on the **UP** button next to the **ADC clock phase** spin box and view the output image. If the image quality deteriorates, click on the **DOWN** button and continue clicking on the button until the image quality stops improving.

3. The optimum point has been reached when you can click on either the **UP** or the **DOWN** button and the image quality can be seen to deteriorate.

This parameter is saved along with others in this window when saved as a new timing entry. See **Creating a New Timing Entry**, **page 36** for details.

4.2.6   DVI Input Equalizer

Input equalization is used to compensate for the losses caused by the electrical and physical characteristics of a copper DVI cable. The longer the cable, the greater the need for equalization.

A non-equalized input may result in one of the following on the displayed output:

■ Noise

■ Lines

■ "Sparkles"

■ Drop-out

■ No signal

Through the WCP, input equalization may be set to **Auto**, **Off**, or a value between 1 and 50. Generally, no equalization should be needed for cables under 5 meters (15 feet) in length and never for fiber optic cables. Each cable is unique relative to the amount of equalization it may require. For longer or narrower gauge cables, a higher setting may be required.

4.3   EDID Management

The *SuperView* supports of list of up to 60 sets of EDID values. List entries 1 through 10 are reserved for the factory-configured EDID representing command display devices. Entries 11 through 60 may be used to capture additional EDID information from other monitors.
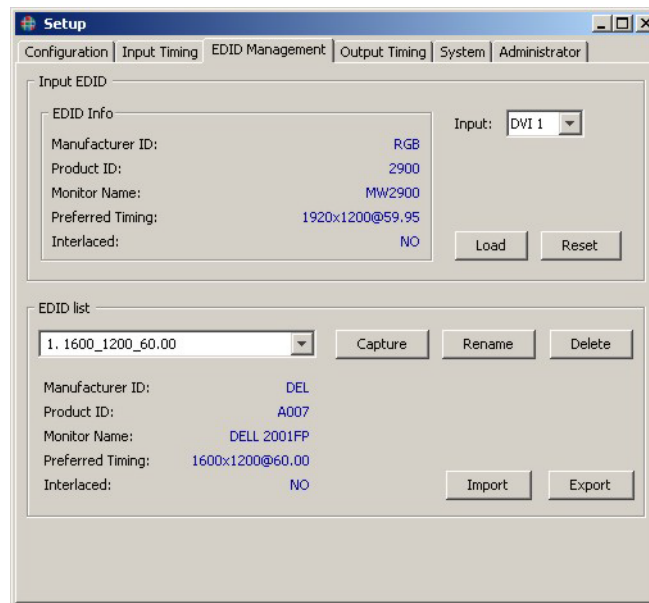

Figure 4-4 EDID Management

4.3.1 Loading EDID from the List

1. Select the input port.

2. Select the desired EDID List entry.

3. Click **Load**.

4.3.2 Reset

To set an input EDID back to the default 1900x1200 @59.95, select the desired input and click **Reset**. After a few moments, the default EDID will be displayed for the input.

4.3.3 Capturing EDID to the List

1. Select the input port with the EDID to be captured.

2. Select an **EDID List** number. Captured EDID may be saved to list numbers 11 through 60.
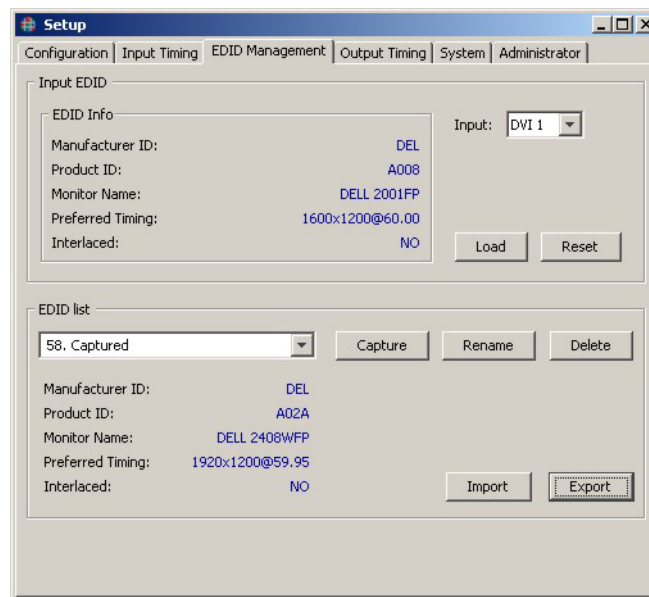
3. Click **Capture**.

Figure 4-5 **Captured EDID**

When complete, the list entry will display **Captured**. **Rename** the entry as required.

4.3.4 Rename EDID

User entries in the EDID list, numbers 11 through 60, may be renamed.

1. Select the list entry to be renamed.

2. Click **Rename**.

Figure 4-6 Rename EDID

3. Enter the new name and click **OK**.

4.3.5 Exporting EDID

User entries to the EDID list may be exported from the **SuperView** to the controlling PC through the WCP in one step.

1. Select an EDID list entry, 11 through 60, that is to be exported.
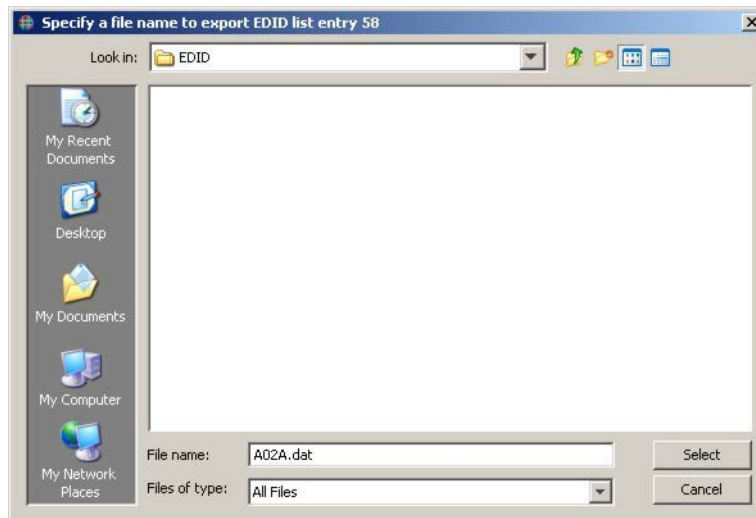
2. Click **Export**.

Figure 4-7 Save EDID Location

3. Navigate to the desired location on the PC, enter a name for the EDID file, and click **Select**.

Note	When EDID is captured through the WCP, it is first written to a directory on the *SuperView* and then downloaded to the PC. The capture EDID file will remain in the *SuperView*; power cycle the unit to clear the directory.

4.3.6 Importing EDID

EDID may be imported from a previously saved file or from a user-defined file.

1. Navigate to a user entry on the EDID list (11 through 60). EDID may be imported to an empty entry or overwritten on an existing entry.
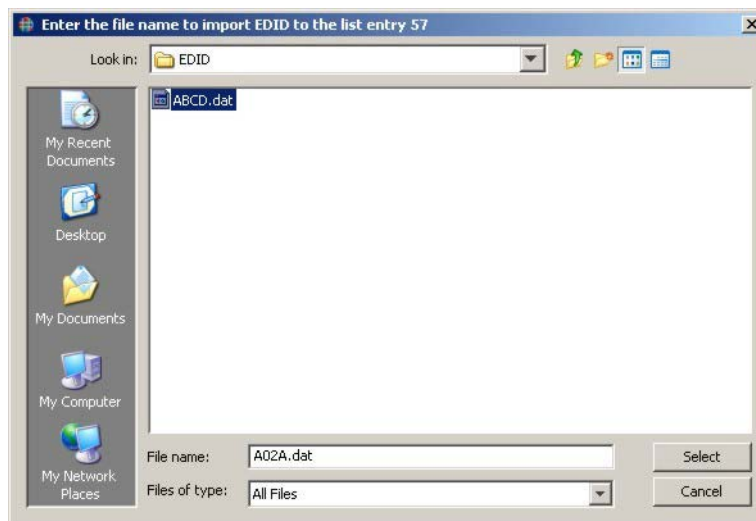
2. Click **Import**.

Figure 4-8 Import EDID Location

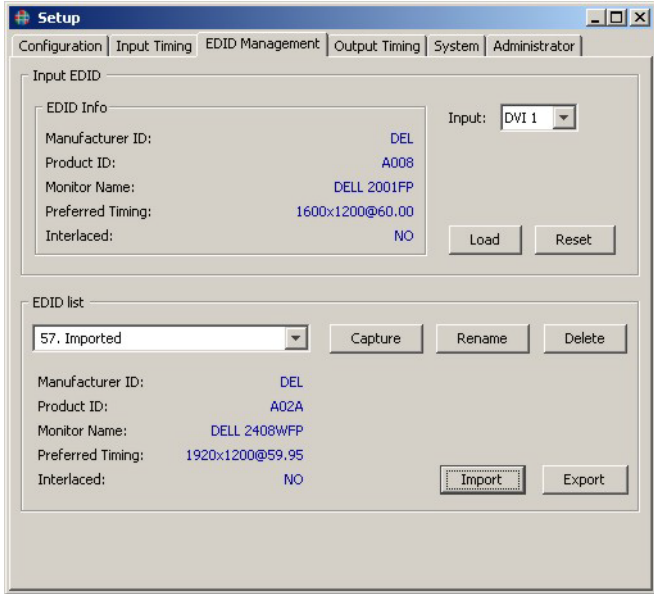3. Navigate to the desired EDID file and click **Select**.

Figure 4-9 Imported EDID

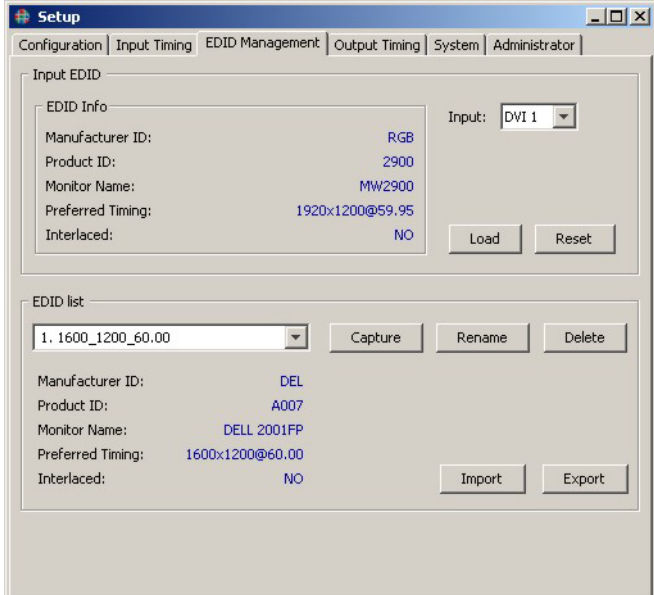When complete, the list entry will display **Imported**. **Rename** the entry as required.

Figure 4-10 EDID Management

4.4 Output Timing

The *SuperView* supports a wide range of pre-defined output formats including the majority of standard VESA signals.
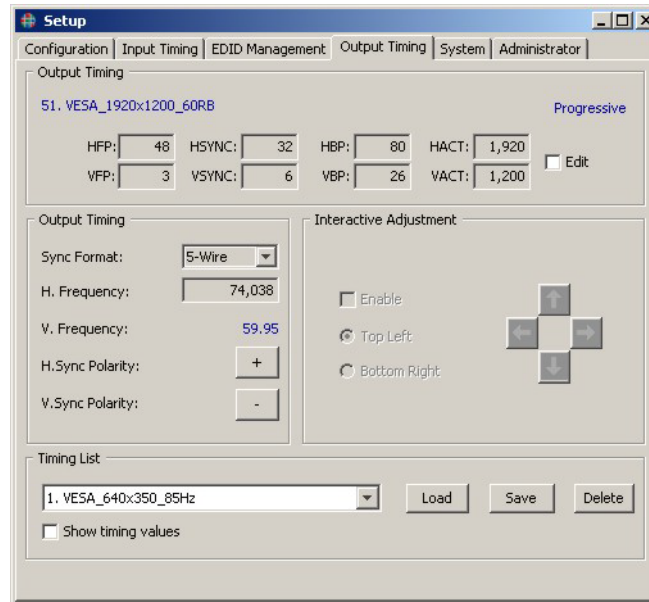
Figure 4-11 Setup Output Timing

4.4.1 Viewing Current Timing Settings

The timing parameters displayed in the upper section of the window relate to the selection in the drop down box which may not be the same as those currently used. To view the current settings click in the check box **Show Timing Values** and the current values will be displayed in red in the associated parameter boxes.

4.4.2 Loading from the Timing List

If you know the timing parameters of the output signal for the display device, you can manually load the timing from either the factory timing list or the user defined timing list.

Use the following procedure to load a new output timing set.

1. Click **Setup**.

2. Click on the **Output Timing** tab (**Figure 4-11**).

3. Click on the scroll button in the **Timing List** section and scroll through the list to the required timing entry.

For a list of pre-defined timing parameters please see the **Factory Timing List** in the *SuperView 4100 Technical Reference Guide.*

4. Click the **LOAD** button to accept the selected entry in the list.

4.4.3 Creating a New Timing Entry

If there is no entry in the timing list that matches the specific signal for your display device, you can create a new entry in the containing the exact parameters of your output signal. You may find an entry in the list that is very close to your parameters, and in this case you can load the entry, modify it, and then save the new entry to the user defined timing list. Use the following procedure to create a new (user defined) entry in the timing list:

1. Click the **EDIT** button in the **Output Timing** section of the Output Timing.

2. Enter new timing parameters into each of the timing parameter boxes.

3. Scroll to an empty timing list slot, 100 to 160, in the **Timing List** entry box.

4. Click the **SAVE** button.

5. A dialog box will open allowing you to name the new entry.

6. Enter a name for the new timing entry in the dialog box and click **OK**.

    The name can be up to 23 characters in length and can contain upper and lower and numeric characters. Avoid the use of a space or the / or \ characters.

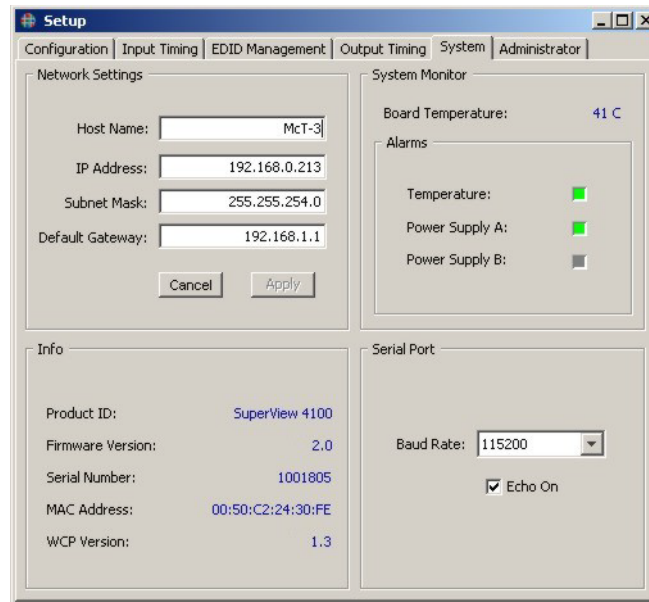## 4.5 System Settings

The **System** tab is shown in **Figure 4-12**.

Figure 4-12 Setup System Tab

4.5.1 Network Settings

There are a number of network settings that are used to set up the IP parameters for the *SuperView*. These include the following:

- Host Name
- IP Address
- Subnet Mask
- Default Gateway

To change the parameters listed above use the following procedure:

1. Click **Setup**.

2. Select the **System** tab (**Figure 4-12**).

3. Select the desired parameter field in the **Network Settings** area of the window.

4. Type in the desired information.

5. Click **Apply** to save the changes and apply them to the *SuperView*.

OR

Click **Cancel** to revert back to the previous settings.

If the IP address is changed, it will be necessary to restart the WCP using the new address.

4.5.2 System Monitor

The board temperature and operation of the power supplies are displayed in the **System Monitor** portion of the tab. Green indicates that all are operating within range; red indicates a failure or excess temperature.

4.5.3 System Info

System information displayed includes:

- Product ID
- Firmware Version
- Serial Number
- MAC Address
- WCP Version

4.5.4 Serial Port Settings

The *SuperView* provides a choice of baud rates ranging from 9600 baud to 115,200 baud. To set up a computer or other control device communication through the RS-232 port, use the following settings:

- Baud 115200
- 8-bit
- Parity none
- 1 stop bit
- Handshake software

The default baud rate is 115,200 baud. To change the baud rate use the following procedure:

1. Click **Setup**.

2. Select the **System** tab (**Figure 4-12**).

3. Use the drop-down list to select the desired rate.

If you are using the *SuperView* with a terminal emulator you will probably want to have the serial port echo turned on, the default setting. In some control applications you may want to disable echo. To turn the serial port echo OFF, use the following procedure:

1. Click **Setup**.

2. Select the **System** (**Figure 4-12**).

3. Click on the **Echo On** check box to deselect (or select) serial port Echo.

4.6   Administrator Options

The *SuperView* allows you to change the password that is required when launching the WCP and when initiating a Telnet session. The password is the same for both operations.

Click on the **Terminal** button to open a window for command line entry.

4.6.1   Restricted Access Option

Under standard access, only one user is defined, the Administrator. Under restricted access, separate passwords may be entered for the Administrator and User.

To change the password, follow the steps below:

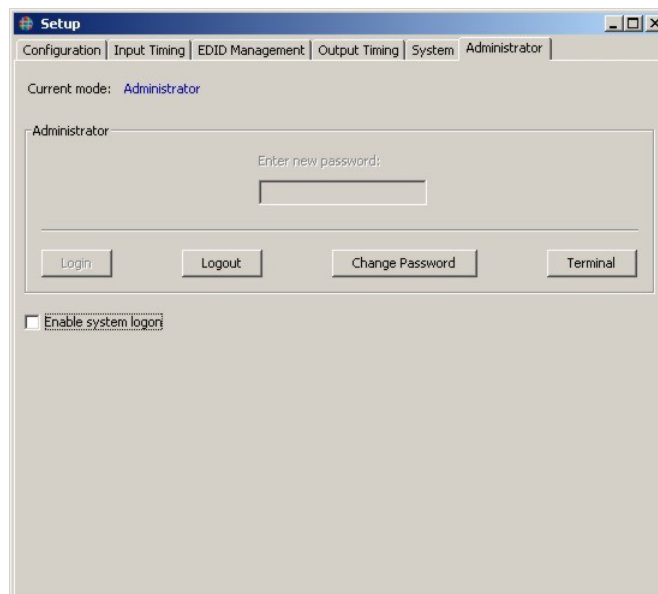1. Click **Setup**.

2. Select the **Administrator** tab.

Figure 4-13 Administrator Tab

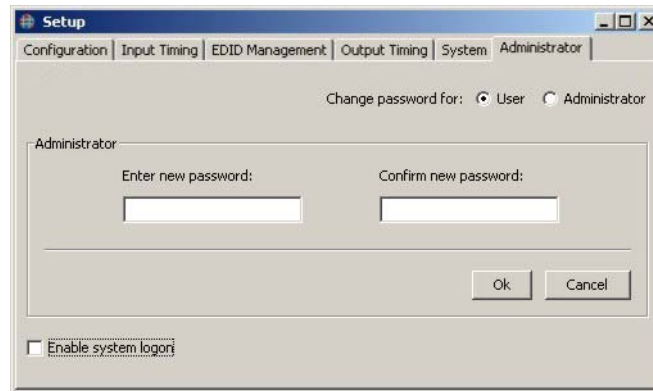3. Click the **Change Password** button. The window changes to reveal two text entry boxes as shown in **Figure 4-14**.

Figure 4-14 **Change Password**

4. Select **User** or **Administrator.**

5. Enter the new password in the left box and again in the right box to confirm it.

6. Click **OK** to save the new password or **Cancel** to leave the original password unchanged.

Changing the password for the **Admin**, changes the password for Telnet access as well. To require a password be entered at logon, select **Enable system logon.**

With the restricted access option, the **Logout** button will log out the current user and allow a new log in.

CHAPTER
5
CONTACT INFORMATION

RGB Spectrum can be reached via phone, fax, mail and e-mail as listed below:

- **RGB Spectrum**
  950 Marina Village Parkway
  Alameda, CA 94501

- Phone: (510) 814-7000

- Fax: (510) 814-7026

- Technical support: **tech@rgb.com**

- Sales and product information: **sales@rgb.com**

- Website: **http://www.rgb.com**