Imagine COMMUNICATIONS™

Installation, Configuration, and Operation Manual

# Platinum™ SX Pro

## HView IP

**Edition A**

**175-100270-00**

## Publication Information



This publication is designed to assist in the use of the product as it exists on the date of publication of this manual, and may not reflect the product at the current time or an unknown time in the future. This publication does not in any way warrant description accuracy or guarantee the use for the product to which it refers.

Imagine Communications reserves the right, without notice to make such changes in equipment, design, specifications, components, or documentation as progress may warrant to improve the performance of the product.

## Trademarks



## Contact Information

Imagine Communications has office locations around the world. For locations and contact information see: **http://www.imaginecommunications.com/contact us/**

## Support Contact Information

For support contact information see:

- Support Contacts: http://www.imaginecommunications.com/services/technical support/
- eCustomer Portal: http://support.imaginecommunications.com

# Contents

# About the Documentation

## Purpose

Both the *User Guide* and *Online Help* describe in non-technical language how software administrators, station engineers, and operators can install and operate the HView IP.

## Revision History

**Table P-1** Revision History

| Edition | Date | Revision History |
|---|---|---|
| Edition A | April 2011 | Initial release |

## Obtaining User Guides

The documentation for your product is included on the Installation CD as an Adobe Acrobat PDF file. The *Layout Designer Online Help* is an electronic document integrated into the software.

Product support documents can be viewed or downloaded from our website. Alternatively, contact your Customer Service representative to request a document. While working in the application, you can open the *Online Help* and print out individual topics.

# Writing Conventions

This documentation adheres to the following writing conventions:

**Table P-2** Conventions

| Term or Convention | Description |
|---|---|
| **Bold** | Indicates dialog box, property sheet, field, button, check box, list box, combo box, menu, submenu, window, list, and selection names |
| *Italics* | Indicates email addresses, names of books and publications, and first instances of new terms and specialized words that need emphasis |
| CAPS | Indicates a specific key on the keyboard, such as ENTER, TAB, CTRL, ALT, DELETE |
| `Code` | Indicates variables or command-line entries, such as a DOS entry or something you type into a field |
| > | Indicates the direction of navigation through a hierarchy of menus and windows |
| hyperlink | Indicates a jump to another location in the document or elsewhere |
| Internet address | Indicates a jump to a Web site or URL |
|  | Indicates important information that helps to avoid or troubleshoot problems |
| [VersionNo.] | Placeholder for a software version number |

# Safety Guidelines

## Safety Symbols On Product

The following symbols may appear on the product.

DANGER—Indicates a hazard for high voltage, fire, or personal injury immediately accessible as one reads the marking.

WARNING—Indicates a personal injury hazard that is not immediately accessible as one reads the marking.

CAUTION—Indicates a hazard to property including the product or the need to take attention and refer to the manual.

FUSE—Replace with the same type and rating of fuse.

Observe precautions for handling electrostatic-sensitive devices.

Protective ground (earth) terminal.

## Safety Symbols In Manuals

The following symbols are used in manuals and other documentation.

CAUTION TEXT—Indicates important information that if not followed could cause system problems.

WARNING TEXT—Indicates information that if not followed could prevent system operation or cause it damage.

# Electrical Safety Guidelines

Adhere to the following Electrical Safety Guidelines to avoid possible damages to the system or injury to yourself.

- Be aware of the locations of the power switches on the chassis and in the room, so you can disconnect the power supply if an accident occurs.
- Take extra precautionary measures when working with high voltage .. components. It is not recommended to work alone.
- Before removing or installing main system components, be sure to disconnect the power first. Turn off the system before you disconnect the power supply.
- Use only one hand when working with powered-on electrical equipment to avoid possible electrical shock.
- Use rubber mats specifically designed as electrical insulators when working with computer systems.

### Check the Power Cables

To avoid electrical shock, check the power cables properly.

- Use the exact type of power cables as required.
- Be sure to use power cable(s) that came with safety certifications.
- The power cable(s) must be compliant with the AC voltage requirements in your region.
- The power cable plug cap must have an electrical current rating that is at least 125% of the electrical current rating of this product.
- The power cable plug cap that plugs into the AC receptacle on the power supply must be an IEC 320, sheet C13, type female connector.
- Be sure to disconnect the power supply before accessing the chassis or its components.
- Plug the power cable(s) into a socket that is properly grounded before turning on the power.

### Electrostatic Discharge Guidelines

The following measures are generally sufficient to protect against Electrostratic Discharge (ESD). ESD can damage components in the product.

- Use a grounded wrist strap designed to prevent static discharge.
- Keep all components and printed circuit boards (PCBs) in their anti-static bags until ready for use.
- Touch a grounded metal object before removing the board from the anti-static bag.

### Preventing Electrostatic Discharge

To prevent ESD, observe these precautions when directed:

- Use a ground strap. Wear a grounded wrist strap to discharge the static voltage from your body while installing or removing sensitive components.
- Use a safe work area. Do not use any devices capable of generating or holding a static charge in the work area where you install or remove sensitive components. Avoid handling sensitive components in areas that have a floor or benchtop surface capable of generating a static charge.
- Handle components carefully. Do not slide sensitive components over any surface. Do not touch exposed connector pins. Handle sensitive components as little as possible.
- Transport and store carefully. Transport and store sensitive components in a static-protected bag or container.

## Product Damage Precautions

The following are general precautions to prevent product damage.

- Do not use this apparatus near water.
- Clean only with a dry cloth.
- Do not block any ventilation openings.
- Do not block any of the ventilation openings. Install in accordance with the manufacturer's instructions.
- To completely disconnect this equipment from the AC Mains, disconnect the power supply cable plug from the AC receptacle.

- This unit can have more than one power supply cable. To de-energize the internal circuitry, disconnect all power cables before servicing.

## Keep Product Away from Heat Sources

Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

## Protect the Power Cable

Protect the power cable from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

Only use attachments/accessories specified by the manufacturer.

Use with Proper Equipment

Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

## Unplug During Storms and When Inactive

Unplug this apparatus during lightning storms or when unused for long periods of time.

## Do Not Operate With Suspected Failures

Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as if the power-supply cable or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, or the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

## Use Proper Power Source

Do not operate this product from a power source that supplies more than the specified voltage.

## Install Near Socket Outlet

The equipment shall be installed near the socket outlet, and a disconnect device shall be easily accessible.

Observe precautions for handling electrostatic-sensitive devices.

## Fuse Replacement

For continued protection against the risk of fire, replace only with the same type of fuse.

### Battery Replacement and Disposal

Danger of explosion is the battery is incorrectly replaced. Replace only with the same or equivalent battery type recommended by the manufacturer. Dispose of batteries according to the manufacturer's instructions.

Lithium, Lithium Ion, Nickel Metal Hydride, and Zinc Air Batteries—These batteries may be safely disposed of in normal household waste. Contact your local government for disposal or recycling practices in your area.

Other Disposal Tips:

- Never dispose of batteries in fire as they could explode.
- Remove worn-out betteries from equipment immediately and dispose of promptly.
- Do not attempt to recharge a battery unless the battery is specifically marked recharcheable. Dispose of immediately.

## Injury Precautions

Adhere to the following warnings to avoid possible injury to yourself.

- To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
- Potentially lethal voltages are present within this product's frame during normal operation. The AC power cable must be disconnected from the frame before the top panel is removed. (In frames with multiple power supplies, remove ALL power cables.) Power should not be applied to the frame while the top is open, unless properly trained personnel are servicing the unit.
- To avoid fire hazard, use only the power cable specified for this product.
- Do not defeat the safety purpose of the polarized and grounding-type plugs. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. When the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- To avoid electrical shock or fire hazard, do not operate this product with covers or panels removed.
- **CLASS 1 LASER PRODUCT**—To avoid damage from laser radiation, do not remove or displace any connections or protective panels.
- To avoid injury or fire hazard, do not operate this product in an explosive atmosphere.
- To avoid injury, remove jewelry such as rings, watches, and other metallic objects. Do not touch exposed connections and components when power is present.
- IT power system shall be isolated from earth, except that one point may be connected to earth through an impedance or a voltage limiter. The parts of the equipment required to be earthed shall be connected to earth electrodes at the user's premises. Protective earthing shall be provided either directly to the equipment or into the main supply building installation.
- Pluggable equipment type B relies on protective devices in the building installation for protection. The building installation circuit breakers or fuses shall have a rating of AT LEAST 10A or greater for short-circuit or overcurrent protection or, where necessary, for both. The equipment mains fuse is slow blow type fuse rated 3.15A for 250V and marked T 3.15 H 250V.

- Do not expose this equipment to dripping or splashing and ensure that no objects filled with liquids, such as vases, are placed on the equipment.

## Technical Support

Technial support is available 24 hours a day, 7 days a week. You can contact technical support by phone or e-mail.

Phone: 1-888-534-8246 (1-888-LEITCH6)

E-mail: LTIService@harris.com

## Compliance and Certifications

Most Harris products have been tested and found to comply with the following standards:

- IEC
- FCC
- UL
- ICES
- CSA

### EMC Standards

**Table P-3** EMC Standards

| EMC STANDARD | DESCRIPTION |
|---|---|
| EN55014 | Limits and methods of measurement of radio disturbance characteristics of electric motor-operated and thermal appliances for household and similar purposes, electric tools and similar electric apparatus. |
| EN55022 | Limits and methods of measurement of radio disturbance characteristics of information technology equipment, Class A. |
| EN55103-1 | Electromagnetic compatibility—Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use, Part 1: Immunity, Environment E4. |
| EN55103-2 | Electromagnetic compatibility—Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use, Part 2: Emission, Environment E4. |
| EN61000-3-2 | Limits for harmonic current emissions (equipment input current less than or equal to 16 A per phase). |
| EN61000-3-3 | Limitations of voltage fluctuations and flicker in low voltage supply systems for equipment with rated current less than 16 A. |
| EN61000-4-2 | Electrostatic discharge requirements “ESD” 2 kV CD, 4 kV AD. |
| EN61000-4-3 | Radiated radio-frequency electromagnetic field immunity test 1V/m {1 kHz 80% AM, 80-1000 MHz}. |

**Table P-3** EMC Standards *(Continued)*

| EMC STANDARD | DESCRIPTION |
|---|---|
| EN61000-4-4 | Electrical Fast transient requirements "Burst", 0.5 kV Sig. & Ctrl. Lines 0.5 kV a.c. & d.c. Power line, 0.5 kV functional earth. |
| EN61000-4-5 | Surge Immunity test 0.5 kV a.c. Power line. |
| EN61000-4-6 | Immunity to conducted disturbances induced by radio frequency fields 1 V rms 0.15-80 MHz Sig. & Ctrl. Lines, 3 V rms 0.15-80 MHz d.c. Power line, 1V rms 0.15-80 MHz a.c. Power line, 1V rms 0.15-80 MHz functional earth. |
| EN61000-4-11 | Voltage dips, short interruptions and voltage variations-immunity tests. |

Per the provision of the Electromagnetic Compatibility Directive 89/336/EEC of 3 May 1989, as amended by 92/31EEC of 28 April 1992 and 93/68/EEC, Article 5 of 22 July 1993, these devices are for professional use only and comply with Part 15 of FCC rules. Operation is subject to the following two conditions:

- These devices may cause interference to radio and TV receivers in residential areas.
- These devices will accept any interference received, including interference that may cause undesired operations.

Changes or modifications not expressly approved by Harris Corporation, the party responsible for compliance to the FCC Part 15 Rule, could void the user's authority to operate this equipment legally in the United States.

These devices do not exceed the class A limits for radio noise emissions from digital apparatus as set out in the interference standard entitled "Digital apparatus", ICES-003 of the Canadian Department of Communications.

## Additional EMC Information

This device is for professional use in a controlled EMC environment, such as purpose-built broadcast studios.

EMC regulations require that the radiation emitted from this unit does not exceed certain limits. These limits are only met when the front panel is closed and the two thumb screws are secured.

Compliance to the EMC regulations is also dependent on the use of suitably shielded (screened) cables. Coax cables should be of the double-shielded (screened) variety. Unused BNCs should be fitted with 75Ω terminations.

All audio cables should be screened with the shield (screen) making good contact with the metallic parts of the cable connectors.

D-type connectors used with this unit should always have metallic shells with the shield (screen) of the cable mechanically bonded to the metal shell. It is further recommended that the D-type cable connectors be of the "dimple" variety. These connectors make a better contact and consequently improve EMC performance.

# Safety Standards

**Table P-4** Safety Standards

| STANDARD | DESCRIPTION |
|---|---|
| EN60950:2000 | IEC 60950:2000, 3rd Edition, Safety of Information Technology Equipment. |
| EN 60825-1:1998 | Safety of Laser Products - Part 1: Equipment Classification, Requirements and User's Guide. |
| UL 60950:2000 | Safety of Information Technology Equipment. |
| CSA c22.2 No. 60950:2000 | Safety of Information Technology Equipment. |

# Restriction on Hazardous Substances (RoHS) Directive

Directive 2002/95/EC—commonly known as the European Union (EU) Restriction on Hazardous Substances (RoHS)—sets limits on the use of certain substances found in electrical and electronic equipment. The intent of this legislation is to reduce the amount of hazardous chemicals that may leach out of landfill sites or otherwise contaminate the environment during end-of-life recycling. The Directive takes effect on July 1, 2006, and it refers to the following hazardous substances:

- Lead (Pb)
- Mercury (Hg)
- Cadmium (Cd)
- Hexavalent Chromium (Cr-V1)
- Polybrominated Biphenyls (PBB)
- Polybrominated Diphenyl Ethers (PBDE)

In accordance with this EU Directive, all Harris Corporation products sold in the European Union will be fully RoHS-compliant and "lead-free." (See the Harris Web site, www.harris.com, for more information on dates and deadlines for compliance.) Spare parts supplied for the repair and upgrade of equipment sold before July 1, 2006 are exempt from the legislation.

Leitch equipment that complies with the EU directive will be marked with a RoHS-compliant symbol, as shown in **Figure P-1**.


**Figure P-1** RoHS Compliance Symbol

# Waste from Electrical and Electronic Equipment (WEEE) Directive

The European Union (EU) Directive 2002/96/EC on Waste from Electrical and Electronic Equipment (WEEE) deals with the collection, treatment, recovery, and recycling of electrical and electronic waste products. The objective of the WEEE Directive is to assign the responsibility for the disposal of associated hazardous waste to either the producers or users of these products. Effective August 13, 2005, producers or users will be required to recycle electrical and electronic equipment at end of its useful life, and must not dispose of the equipment in landfills or by using other unapproved methods. (Some EU member states may have different deadlines.)

In accordance with this EU Directive, Harris Corporation and other companies selling electric or electronic devices in the EU will affix labels indicating that such products must properly recycled. (See the Harris Web site, www.harris.com, for more information on dates and deadlines for compliance.) Contact your local Harris sales representative for information on returning these products for recycling. Harris equipment that complies with the EU directive will be marked with a WEEE-compliant symbol, as shown in **Figure P-2**.

**Figure P-2** WEEE Compliance Symbol WEEE Compliance Symbol

# 1 Getting Started

## Product Description

The Harris HView IP multiviewer IP-based video network display and monitoring solution is designed to meet the needs of multichannel broadcasters and head ends. It functions in a networked environment where the feeds being monitored are primarily compressed video or audio. The HView IP supports multiple compression formats and resolutions, from MPEG-4 (H.264) to MPEG-2 for sources with a range of resolutions. It features support for virtual network (VNC) control, allowing you to view and control PC-based devices; RSS display, which enables interaction with a broad range of network data providers; and multiformat IP stream decoding with built-in visual alarming.

## Layout Designer Features

Layout Designer software has two primary functions: to create and edit layouts for HView IP, and to configure HView IP hardware. Using Layout Designer, you can configure your multiviewer system settings, and add and configure on-screen input audio and video alarms and on-screen digital clocks.

**Figure 1-1** provides a simple illustration of how Layout Designer works with your HView IP multiviewer system.

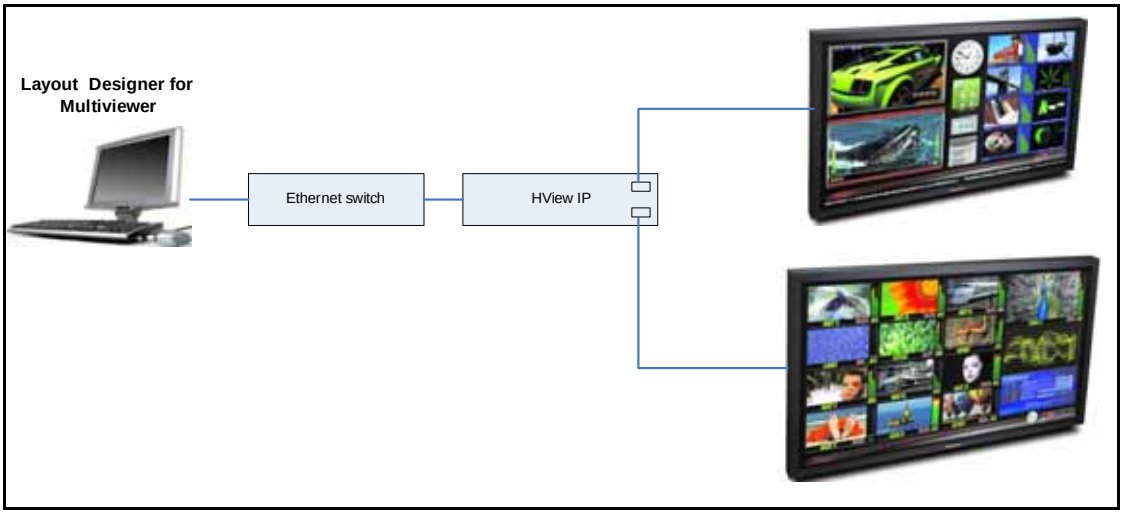



**Figure 1-1** Layout Designer and HView IP Hardware

When it is installed on a PC, Layout Designer communicates directly with your multiviewer system over Ethernet. Layout Designer is supported with Online Help.

Layouts created with Layout Designer can be recalled on the multiviewer hardware using CCS Navigator, NUCLEUS, or on-screen control. For more information, see your NUCLEUS or Navigator documentation, or ***On-Screen Controls*** on page 189.

## Multiviewer System Configuration and Monitoring

Use Layout Designer's system configuration, control, and monitoring features to:

- Configure multiviewer hardware and calibrate output display devices
- Set up three different output display modes:
  - Redundant mode
  - Independent mode
  - Spanning mode
- Set up layouts
- Configure title markers, V-Chip rating, closed captioning, AFD, WSS, aspect ratio markers, teletext data, and VITC, closed captioning, and teletext
- Configure and display input audio and video signal alarms, including audio under and over level alarms, and black and frozen video alarms
- Configure system processing rules that respond to specific hardware and alarm conditions and events
- Configure audio meters by setting the audio service in the IP source configuration database (HView IP)
- Assign inputs to layouts, Picture-in-Pictures (PiPs), and audio meters
- Monitor input audio and video signals with user-defined alarm conditions
- Configure processing rules for specific system events and conditions

## Layout Creation and Design

Use Layout Designer's layout creation and design features to

- Create layouts from a blank layout or a preset layout template
- Select from a variety of layout output resolutions and layout background colors
- Add layout objects, such as PiPs, borders, layout windows, labels, tally indicators, audio meters, and alarms to a layout using basic Windows skills
- Resize and position PiPs and other layout objects with pixel accuracy using direct-entry window coordinates
- Create scrolling labels and scrolling regions
- Group layout objects into layout windows
- Create customized layout objects including PiPs, border styles, digital clocks, tally indicators, and audio meters
- Store custom layout objects in the Layout Designer object library
- Open and edit layouts/files that are stored on connected multiviewer systems

You can create custom layouts for the multiviewer, or you can edit existing layouts by modifying individual PiP layout settings to create custom display layouts. Once a layout is generated, you can use Layout Designer to upload (publish) it to your multiviewer, or save it to a local or network PC drive.

## Multiviewer Onscreen Controls

Your Multiviewer hardware can be equipped with a keyboard and mouse. When these are hooked up to the hardware, you can control the PiPs and audio content without republishing a layout using Layout Designer.

For instructions on using the Multiviewer onscreen application, see ***On-Screen Menus*** on page 189.

## Multiviewer Control Panel

If you exit the multiviewer, the Multiviewer Control Panel loads. This panel provides access to various hardware settings and alarm logs.

For instructions on using the Multiviewer control panel, see ***Using the Multiviewer Control Panel*** on page 193.

# 2 HView IP Hardware

## Hardware Overview

Your box contains the following items:

- HView IP (a 1RU rack-mountable PC)
- Single Display Port -> DVI adapter
- Rack mounts
- Power cords (2)
- Windows/ Motherboard CDs
- Harris Infrastructure and Networking Documentation DVD

### Required Tools and Equipment

The HView IP is ready to operate out of the box. For some specialized functions, you will need the following (user-supplied) equipment:

- USB or PS/2 Keyboard (see **Figure 2-3** for location of connectors)
- USB or PS/2 mouse (see **Figure 2-3** for location of connectors)
- Network cables
- Monitors and cables

## Rack Mounting

The mounting rails provided with your HView IP fit a 19" rack between 26" and 33.5" deep. The following are installation requirements/recommendations:

- **Equipment**—Mount the frame on an appropriate rack using the provided rack mounting and support equipment.
- **Power Source**—Connect the power inlet to an adequate power source. Using a UPS is strongly recommended. Connect each of the two redundant power supply connections to a separate electrical circuit for added protection.
- **Adequate airflow**—The HView IP requires adequate airflow around the chassis to provide sufficient cooling. All components draw air through the front and exhaust through the rear of the frame. The surfaces must be clear of obstructions to provide proper air circulation and cooling.
- **External device connections**—Video monitors and all connections to external devices should be available and in working order.

- **Cable clearance**—Provide at least two inches of clearance in the rear of the rack for cabling.

**Insure that the rack is anchored to the floor so that it cannot tip over when the HView IP is extended out of the rack.**

*Refer to the* HView IP *Safety and Compliance Information in the preface for detailed safety and compliance information. Also refer to the installation instructions that came with your rack unit.*

## To rack mount the HView IP

The HView IP package includes two rack rail assemblies in the rack mounting kit. Each assembly consists of an inner fixed chassis rail that is pre-attached to the HView IP and an outer fixed rack rail that secures directly to the rack itself.

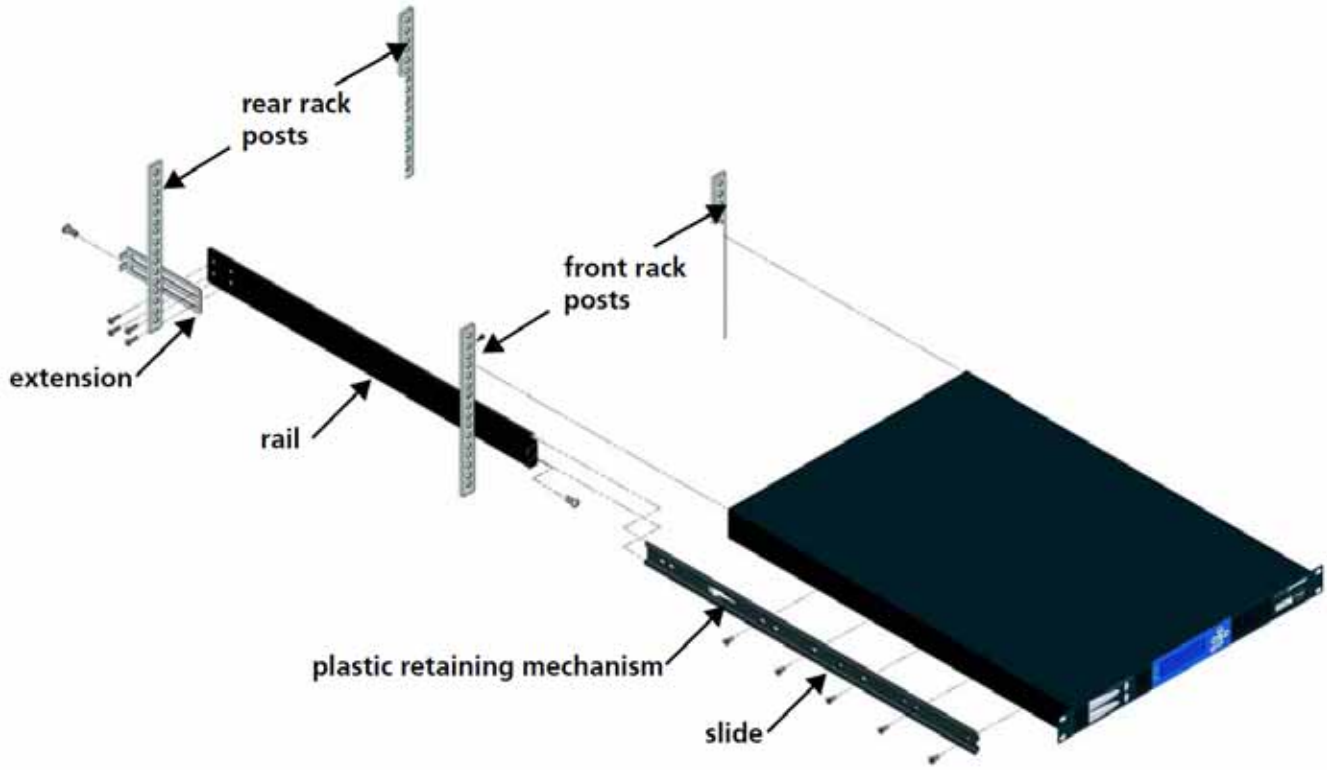



**Figure 2-1** Rack Mounting

1. Place the inner rack extensions on the side of the chassis, aligning the hooks of the chassis with the rail extension holes.

   Make sure the extension faces outward just like the pre-attached inner rail.

2. Slide the extension toward the front of the chassis, and then secure the chassis with two screws.
3. Repeat steps 1-2 for the other inner rail extension.Attach the short bracket to the outside of the long bracket.

   You must align the pins with the slides. Both bracket ends must face the same direction.

4. Adjust both the short and long brackets to the proper distance so that the rail fits snugly into the rack.

5 Secure the long bracket to the front side of the outer rail with two M5 screws and the short bracket to the rear side of the outer rail with three M5 screws.

6 Repeat steps 4-6 for the other outer rail.

7 Line chassis rails with the front of the rack rails.

8 Slide the chassis rails into the rack rails, keeping the pressure even on both sides.

You may have to depress the locking tabs when inserting. When the server has been pushed completely into the rack, you should hear the locking tabs click into position.

9 (Optional) Insert and tighten the thumbscrews that hold the front of the server to the rack.

### To Remove the HView IP From the Rack

1 Stand in front of the HView IP add pull it out as far as it will go.

2 On the left side, press down on the plastic retaining mechanism.

3 On the right side, pull up on the plastic retaining mechanism.

## Front Panel

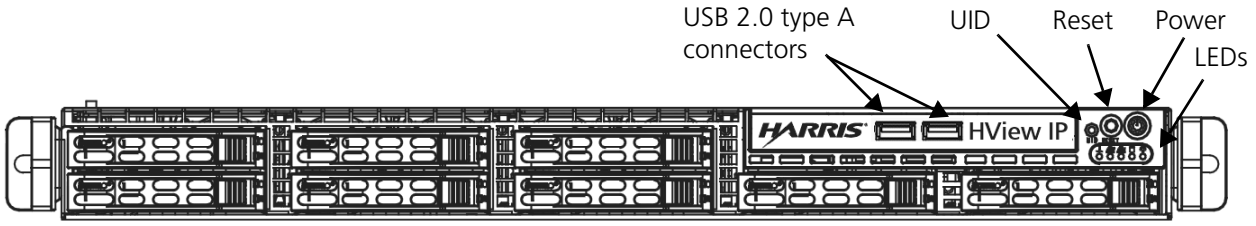



**Figure 2-2** HView IP Front Panel

The HView IP front panel features are described in **Table 2-1**:

**Table 2-1** HView IP Front Panel Features

| Connector | Function |
|---|---|
| USB connectors | Two USB 2.0 type A connectors allow you to transfer data to and from the HView IP. |
| UID | (Unit Identifier) Not used. |

**Table 2-1** HView IP Front Panel Features *(Continued)*

| Connector | Function |
|---|---|
| Reset | Reboots the HView IP. |
| Power | Applies or removes power from the HView IP power supply, while leaving standby power supplied to the system.<br>Note: you must unplug HView IP before servicing. |
| LEDs | There are five LEDs in this area. From left to right, they indicate:<br>■ **Universal Information LED**: Not used.<br>■ **NIC2**: Flashes to indicate network activity on GLAN2.<br>■ **NIC1**: Flashes to indicate network activity on GLAN1.<br>■ **HDD**: Flashes to indicate SAS/SATA drive, SCSI drive, and/or DVDROM drive activity.<br>■ **Power**: Lights to indicate that power is being supplied to the system's power supply units. |

# Making Connections

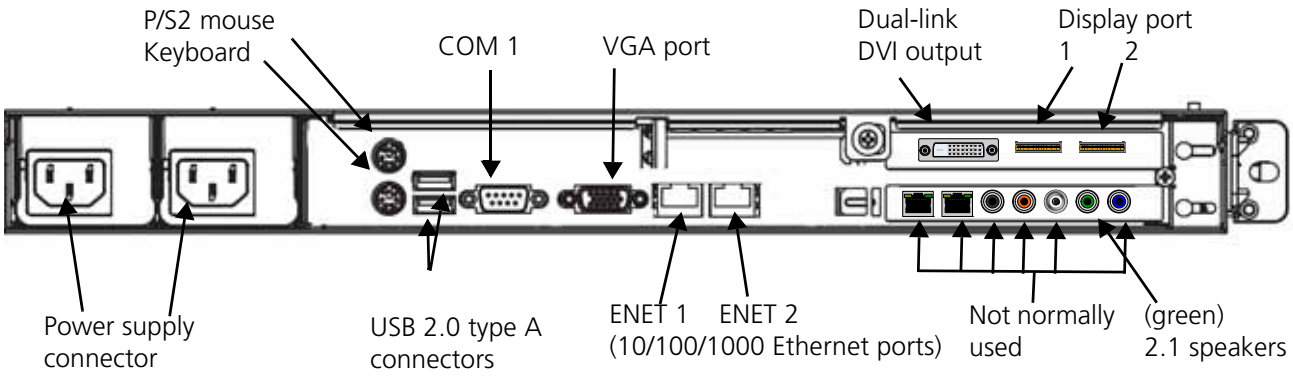



**Figure 2-3** HView IP Back Panel Connections

**Table 2-2** HView IP Back Panel Connections

| Connector | Function |
|---|---|
| Power Supply (2) | HView IP has dual-redundant power supplies. Both power supplies must be plugged in and functioning or an alarm will sound. |
| P/S2 mouse | Connect a mouse for on-screen control of the HView IP |
| Keyboard | Connect a keyboard for on-screen control of the HView IP |
| USB 2.0 type A connectors (2) | Connect keyboard and mouse, data storage, or a serial-to-USB adapter to input data from an external protocol (i.e., tally or UMD) |

**Table 2-2** HView IP Back Panel Connections *(Continued)*

| Connector | Function |
|---|---|
| COM 1 | Use this if you will be receiving data from an external protocol (i.e., tally or UMD) |
| VGA Port | Normally only used for diagnostic purposes |
| 10/100/1000 Ethernet ports (2) | ■ **ENET 1**, when looking at the rear of the HView IP, is the port on the left, and is the Streaming port; see ***Adding an IP Source*** on page 72 and ***Setting Default IP Source Properties*** on page 52<br>■ **ENET 2** (on the right) is generally used for Layout Designer and networking; see ***Configuring IP Addresses for your Network*** on page 13 |
| Dual-link DVI input | You can connect to two of the three video connections at a time |
| Display port 1/2 | |
| Line out 1 (green) | Connector for 2 standard monitoring speakers for stereo |

## Redundant Power Supplies

The HView IP comes with two redundant hot-swappable power supplies located on the back panel. Under normal operation both power supplies work in tandem spreading the load between them. In the event of a failure, the functional power supply provides all power needed by the HView IP. if a power supply fails or if only one power supply is connected, an alarm sounds.

Possible reasons for alarm:

- The power source (strip) has failed.
- The power cord is unconnected.
- The power supply module has failed.

### Identifying and Replacing a Failed Power Supply

1 Look at the LEDs located on the front panel and the power supply modules on the back of the HView IP.
   - An amber LED indicates that the power supply module is off and plugged in.
   - A green LED indicates that the power supply module is powered on.

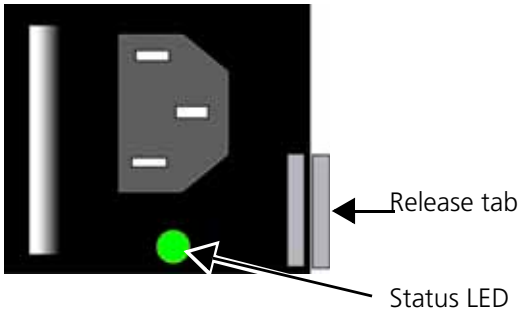



**Figure 2-4** Power Supply Modules

2 Ensure that both power cables are firmly inserted into the AC outlets in the rear of the HView IP. If seating the power supply cables turns off the alarm and the LED turns green on the module that was offline, the problem has been corrected.

3 If the problem has not been corrected, push the release tab on the power supply to the left.

4 While holding the release tab to the left, grasp the power supply handle and pull the power supply out of the frame.

5 Slide the replacement power supply into the empty slot.

6 Press firmly so that it clicks in place. if the power supply cord is in place, the module's status LED will illuminate.

7 If the problem has not been corrected, contact Harris Customer Support for further assistance.

### Output Display Modes

You can operate the multiviewer in either Redundant, Independent, or Spanning mode. You can select the display mode for your output module using Layout Designer. See the Multiviewers Configuration chapter in your *Layout Designer Software Application User Guide*.

- **Redundant mode** - Displays the same layout on each output. By default, your output module is set to Redundant mode.
- **Independent mode** - Displays a different layout on each output. When using this mode, each output can be configured for different format, aspect ratio, and orientation.
- **Spanning Mode** - Displays (or spans) one layout across outputs. When using this mode, each output must be configured for the same format, aspect ratio, and orientation.

### Connecting DVI Display Devices to the Multiviewer

Depending on your output display device and the type of DVI output you are using, use the following DVI cabling guides:

- **Standard DVI-I digital/analog cable** - Use this cable when outputting to a PC digital (DVI) and analog (VGA) video monitor. This cable has a 29-pin DVI/VGA combined receptacle connector.
- **Standard DVI-D digital-only cable** - Use this cable when outputting digital (DVI) video signals only. This cable has a 19-pin DVI-D digital-only receptacle connector (no key slot on left side of connector)
- **VGA cable with VGA-DVI adaptor, or DVI-A cable with DVI-VGA adaptor** - Use this cable when outputting analog (VGA) video signals only. This cable has a 17-pin connector that requires an appropriate adaptor and corresponding cable.

## Optional GPI/Trigger Hardware

To use GPI triggers, you will need a JLCooper eBOX. The JLCooper eBOX provides access to up to 24 GPI inputs and outputs. When HView IP is attached to the same TCP/IP network using its own Ethernet connector, it can access the JLCooper eBOX.

The multiviewer communicates with eBOX through one of the HView IP's Ethernet connections. To connect the eBOX to an HView IP, both the multiviewer and JLCooper eBOX must be on the same network and able to communicate with each other. See ***Configuring Multiviewers in a Local Area Network*** on page 28 for more information.

Extra serial ports available:

- 4x 9-Pin D Sub Serial Connectors
- 2x 25 Pin D Sub GPI Connectors

The GPI In connector has 24 TTL/CMOS compatible inputs with internal pull-ups to +5 volts. The GPI Out connector has 24 TTL/CMOS compatible outputs. On both connectors, pin 1 is the ground reference and pins 2-25 are GPI signals 1-24. The eBOX also has an RJ-45 Ethernet Connector for LAN, WAN or Internet Control.

The eBOX must be set as a server only. The master/slave function allows UMD-tally data to go through the HView IP hardware without external wiring.

### To configure the eBOX

1. Set SW8 to the ON position, and then re-power to access the Configuration Web Server for the eBOX.
2. Set SW1, SW2, and SW3 to the DOWN position, and then re-power.
3. Using an external PC (on the same sub-network), launch a Web Browser and type the IP Address of the eBOX.

**Do not use Internet Explorer 7 or Firefox web browser to change the network settings on the eBOX. Internet Explorer 6 is the only authorized application for getting into the built-in Web Server to change the network settings.**

The eBOX's default IP address is 192.168.254.102.

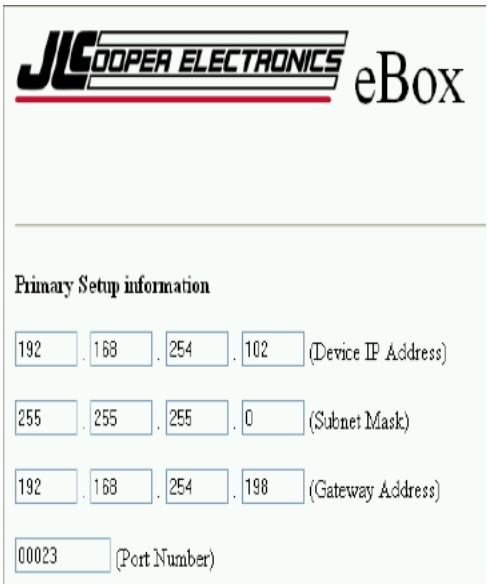



**Figure 2-5** eBOX Web Interface

4. Make the necessary Network changes and set up Port # 23.
5. Remove any Password, and then press the SUBMIT button.
6. Set SW1, SW2, SW3, and SW6 to the ON position, and set SW7 and SW8 to the OFF position.

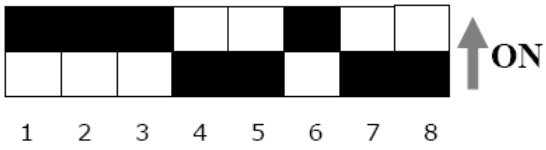



**Figure 2-6** eBOX Dip Switch Settings for Operation

7 Re-power the unit.

8 Ping to confirm the new Network setting.

For information about configuring your e-BOX, see your JLCooper eBOX documentation.

# Starting HView IP

After connecting the hardware, monitor, etc., you are ready to start the HView IP.

1 Press the power button on the right front of the HView IP chassis.

As the PC operating system loads, a Log in dialog box opens.

The default ID is Administrator. By default there is no password.

2 Click **Log In**.

The Multiviewer onscreen application loads. If it is the first time you have used your device, some configuration is required.

Otherwise, HView IP loads the layout that was used last time it was closed.

HView IP can be controlled using a connected mouse and keyboard. For information, see ***On-Screen Menus*** on page 189.

You can also control the onscreen application from a PC on the same network that is running Layout Designer. See ***Remote Mouse Control*** on page 192.

## Exiting HView IP

When the Multiviewer onscreen application is running, follow these steps to shut down the HView IP:

1 With the mouse, right-click on the desktop and select **Exit Multiviewer,** and then click **Yes** to confirm.

The current layout closes, and the **Multiviewer Control Panel** opens, with most of the buttons disabled.

2 Click **Enable**.

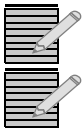
The rest of the buttons on the Multiviewer Control Panel become available.

3 Click **Shutdown System**, and then click **OK** to confirm.

# Configuring IP Addresses for your Network

The default IP addresses for your HView IP are 192.168.100.250 (ENET 1, normally used for video streaming) and 192.168.100.251 (ENET 2, normally used for Layout Designer configuration and optional network control). Before your HView IP is ready to connect to these networks, you must change these IP addresses to suit your network requirements.

1. On the HView IP, if the multiviewer application is running, right click and select **Exit Multiviewer** from the menu that appears.
2. From the Start menu, choose **Control Panel** > **Network Connections** > **ENET 1** > **Properties** > **TCP/IP** > **Properties**, and enter an IP address, Subnet Mask, and Gateway suitable for receiving streaming data on your network.
3. Click **OK** twice to save your changes and return to the **Network Connections** dialog box.
4. Select **ENET 2** > **Properties** > **TCP/IP** > **Properties**, and enter an IP address, Subnet Mask, and Gateway suitable for controlling a device on your network.
5. Click **OK** twice to save your changes, and then close the **Network Connections** dialog box.
6. Restart the HView IP for your changes to take effect.



*Each multiviewer on the network must have an unique IP address.*

*You can also use CCS Navigator to change the HView IP Ethernet 1 IP address. For more information, see* ***Discovering HView IP Using Navigator*** *on page 17.*

## Initial Configuration for HView IP Multiviewers

To connect your Layout Designer PC to your new HView IP, follow these steps:

1. Start Layout Designer.
2. From the application menu, select **Edit** > **Multiviewer Configuration**.
3. In the **Device Manager** dialog box that opens, click **Add Device**.

   A new device appears in the Device list.

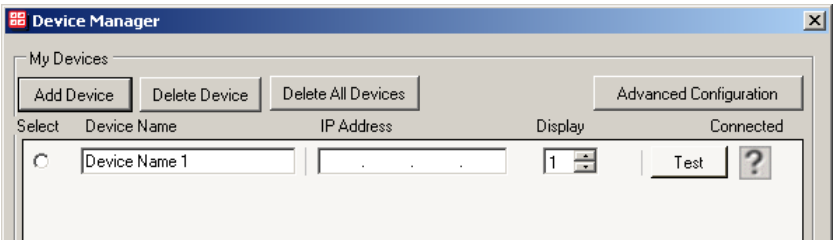



**Figure 2-7** Entering the Multiviewer's Default IP Address

4. Under **Device Name**, you can enter a new name for the HView IP.
5. Under **IP Address**, type 192.168.100.250, which is the default IP address of the ENET 1 connection.
6. Under **Display**, enter the display number onto which your layouts will be published.
7. In most configurations, the Display value should be set to 1. It can be set to 1 or 2 for Dual DVI.
8. To connect the HView IP to Layout Designer, click the **Test** button.

   - If the connection is valid, the  icon is displayed under **Connected**.

- If the connection is invalid, the  icon is displayed under **Connected**.

*If your connection is reported as invalid, check the default IP address you entered, the IP address of your PC, and your Ethernet connections, and then click **Test** to test the connection again.*

9 After you establish a valid connection, click **Save** to save the list and connection information.

## Adding New Devices

After you have assigned your HView IP a unique IP address, you can use Layout Designer's Discovery tool to add the HView IPs to the device list. Be aware that when you use the Discovery tool, Layout Designer scans the network and reports all devices with an IP address. The amount of time required for discovery depends on the number of devices you have on your network. Layout Designer may discover devices that you do not want to add to the devices list.

### To discover an HView IP device

1 On the Device Manager dialog box, under Device Discovery, click Discover Devices.

2 When the discovery is complete, do either of the following:

- To add specific devices, select the devices that you want, and then click **Add to My Devices**.
- To add all of the discovered devices, click **Add All to My Devices**.

The selected devices are now in the Devices list.

3 When you finish discovering and adding devices to the Devices list, click **Save**.

You can now configure your multiviewer's outputs. See ***Configuring Display Mode*** on page 63 for more information.

# Controlling the Multiviewer Through SNMP

If you configure HView IP as an SNMP agent, it can send SNMP traps to an SNMP manager. The SNMP manager can walk the device and control and monitor parametric controls to change layouts, alarm settings, PiP properties, etc.

## Configuring a Harris Multiviewer as an SNMP Agent

You configure your multiviewer as an SNMP agent from **Control Panel** > **Administrative Tools** > **Services (Local)**.

1 Right-click on the display and select **Exit** Multiviewer to close the Multiviewer application.

1 On the Multiviewer Control Panel window, click **Command Prompt**.

2 Type the following:

```
services.msc
```

The computer management **Services** dialog box opens.

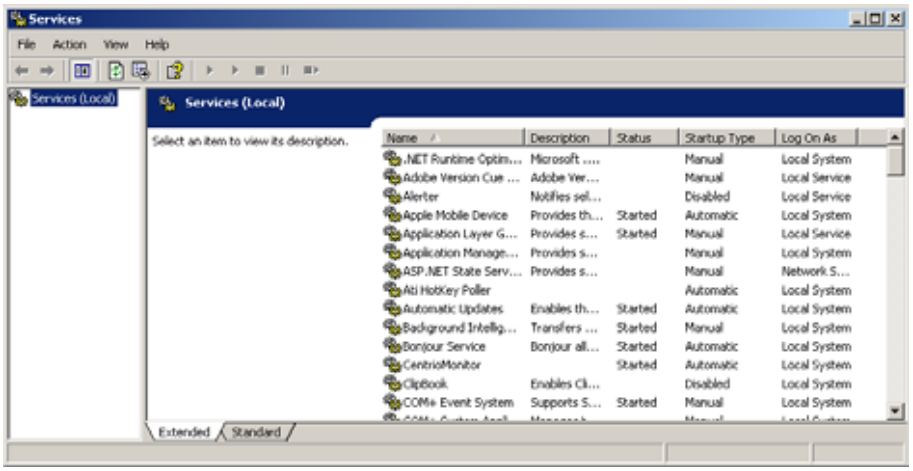



**Figure 2-8** Services Dialog Box

3 Under **Services**, right-click on the **SNMP Service** and select **Properties**.

4 On the **Traps** tab, type a community name (usually **Public**).

5 Click **Add to List**.

6 Click **Add**, and then type the IP address of the SNMP Manager unit in the **Traps Destination** field.

7 Click **Add**, and then click **Apply**.

8 Click **OK**.

In the **Computer Management Services** window, the **Status** field should display **SNMP Service Started**.

9 Click **Start** Multiviewer to restart the Multiviewer application.

10 Click **Launch** Multiviewer.

## Configuring Third-Party SNMP Software Control

To set up your multiviewer with optional SNMP to communicate with SNMP MIB browsing software, follow these steps:

1 Make the required network connections between the HView IP and your PC with installed SNMP browser/control software.

2 Ensure that HView IP is configured to send traps to the computer that contains your MIB browsing software.

3 For information on configuring SNMP on the HView IP, see ***Configuring a Harris Multiviewer as an SNMP Agent*** on page 14.

4 Load the Leitch mibs (downloadable from our website) into your SNMP browser/control software:

- leitch.mib

  This MIB sets up the basic structure for product specific MIBs. It can be found under the **Private** > **Enterprise** branch in your MIB browsing software, and sets up the **leitchProducts** and **leitchCommon** sub-branches.

  The **leitchCommon** branch is initially empty. The **leitchProducts** branch contains three initially empty sub-folders: **LeitchX75**, **NEO** and **fam6800plus**.

- ccsAlarm.mib

  This MIB adds a **ccsAlarms** sub-branch to the **leitchCommon** folder. When it is installed, you will be able to determine what specific module or frame has triggered an alarm (trap).

These general MIB files set up a structure to help define parameters (as SNMP objects, and alarms as SNMP traps.

5 Load the Multiviewer MIBs (downloadable from our website) into your SNMP browser/ control software:

- IPMULTIVIEWERSYSTEM.mib

  Loads the parameters and alarms listed in ***Multiviewer Display Parameters and Alarms*** on page 19.
- IPMULTIVIEWERMODULE.mib

  Loads the parameters and alarms listed in ***Module Parameters and Alarms*** on page 23.
- IPPIP.mib

  Loads the parameters and alarms listed in ***PiP Parameters and Alarms*** on page 20.

The Multiviewer MIBs will appear in the MULTIVIEWER folder under the **LeitchProject** folder.

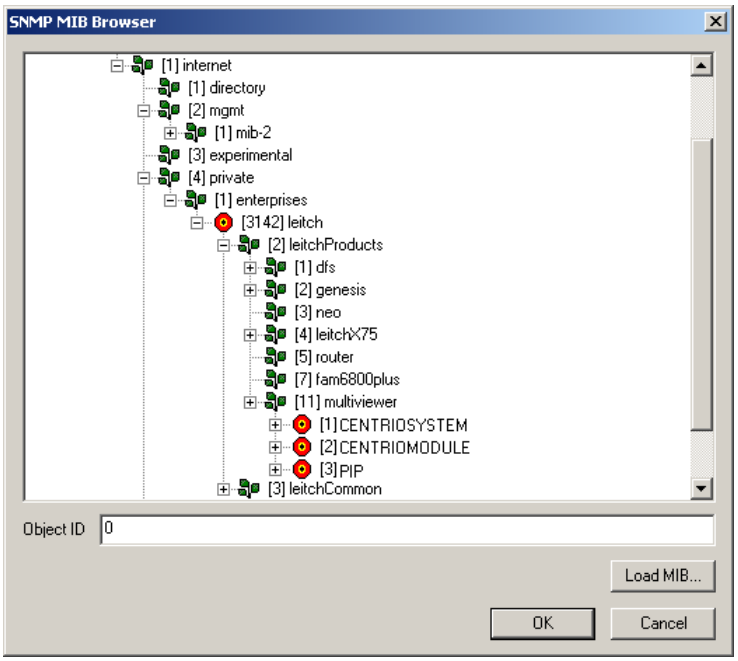



**Figure 2-9** Multiviewer MIBs Loaded into NUDesign MIB Browser

6 Configure your MIB browser to connect to the HView IP by entering the IP address, Port (if you have changed the Port from its default in the configuration), and other standard configuration settings.

7 Your browser should now connect to the SNMP agent running on the HView IP.

8 To receive traps, start up the trap receiver in your MIB browser software.

To verify that your configuration is correct, browse to **Private** > **Enterprises** > **Leitch** on the MIB tree, and then right click on the **Leitch** heading and choose **Walk**.

You will see all the parameters and alarms for the device.

To facilitate monitoring more than one multiviewer, MIBs index devices by IP address. These settings will be available in your SNMP manager. See your SNMP manager's documentation for details of how to customize its configuration.

# Remote Controlling and Monitoring HView IP Using CCS

HView IP is fully compatible with CCS network control systems such as CCS Navigator and NUCLEUS Network Control Panel. With an optional license key upgrade, you can control and monitor the multiviewer using third-party SNMP software. You can remotely perform the following operations:

- Select and change layouts for display
- Select and change PiP input sources
- Select audio channels for monitoring on the Hview IP audio monitor output
- Monitor the multiviewer as well as audio and video signal alarms
- Set audio and video alarm threshold values
- Change the HView IP's IP Address and Subnet Mask

For detailed information about using NUCLEUS to control and monitor your multiviewer, see your *NUCLEUS Multiviewer Control Option Configuration and Operation Manual*. For information on controlling the multiviewer using SNMP software, see ***Controlling the Multiviewer Through SNMP*** on page 14.

You can use CCS Navigator and the NUCLEUS Network Control Panel to set CCS controllable parameters on your HView IP. CCS parameters allow you to select layouts, modify some layout attributes, and monitor feedback from multiviewers. Using CCS Navigator, you can also monitor various hardware alarms and the integrity of audio and video input signals.

Each PiP has its own set of parameters and alarms. Before you can access these parameters and alarms, you must discover the HView IP using CCS Navigator.

## Discovering HView IP Using Navigator

You can use CCS Navigator in Build mode to discover HView IP devices connected to a CCS network. The Multiviewer must be running (layout loaded, etc.) in order to discover the device.

Follow these steps:

1. Make sure Navigator is in Build mode by selecting **File** > **Operational Mode** > **Build**.
2. If the **Discovery Window** is not open, click **Tools** > **Discovery** in the main menu.
   The **Discovery Window** appears, most likely in the bottom left corner of the screen.
3. Click **Options**, and then click **Add**.
4. Enter the IP address of the HView IP.

*You must know the IP address of the HView IP to discover it. Navigator cannot discover HView IP devices using a MAC address.*

5. Click **OK** to close the **Add Host** dialog box, and then **OK** again to close the **Discovery Options** dialog box.

6 Click **Start**.

Navigator runs a discovery.

7 When your discovery is complete, **Discovery Completed** is displayed in the **Discovery Window**.

8 Click **Save**.

The contents of your discovery populate the **Discovery** folder of the **Navigation Window**.

You can now switch to Control mode by selecting **File** > **Operational Mode** > **Control** from the main menu. Depending on which parameter set or alarm group you want to view, double-click on the appropriate icon in the **Navigation Window** to display the system or PiP controls.

## Parameters and Alarms

Use CCS Navigator in Control mode or NUCLEUS network control panel to access CCS controllable parameters and alarms. You must discover the HView IP before you can access CCS parameters and alarms (see ***Discovering HView IP Using Navigator*** on page 17).

HView IP alarms function like other CCS device Smart Alarms. For information about how CCS Alarms work, see your CCS Navigator documentation. Additional audio and video alarms can be viewed on display layouts and with Layout Designer software. See your *Layout Designer User Guide* for more information about configuring and viewing on-screen audio and video alarms.

HView IP parameters and alarms are divided into the following Navigator Control Window tabs.

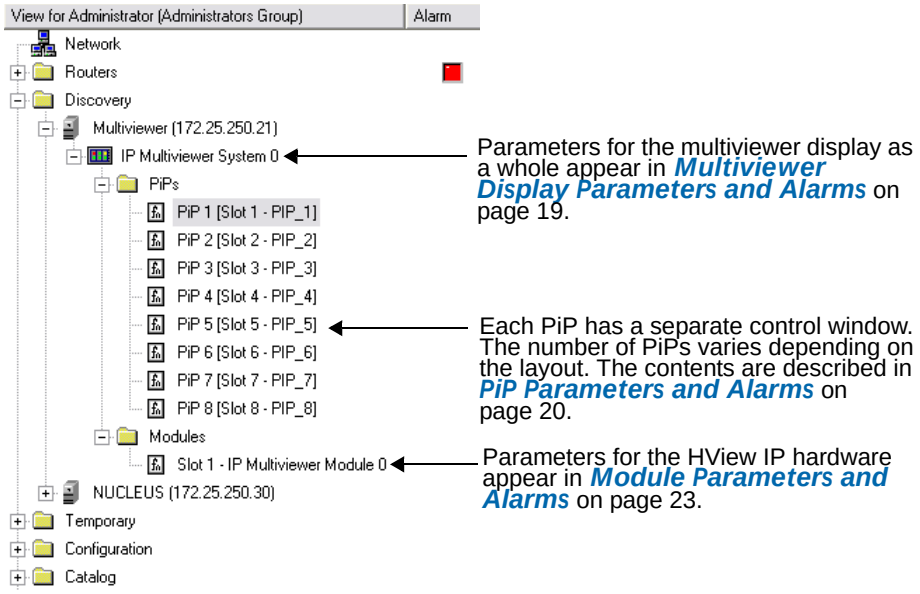



**Figure 2-10** Multiviewer Devices That Launch Control Windows

## Parameter Table Notes

The parameters are listed in the order that they appear in CCS Navigator.

When viewing the control parameter tables, observe the following:

- Shaded table rows indicate read-only (feedback) parameters. Some Read-only parameters can be modified using Layout Designer.

- Bold parameter options indicate the default settings for the parameter.

## Multiviewer Display Parameters and Alarms

If your multiviewer has been configured for Independent or Spanning mode using Layout Designer, two system icons appear in the Discovery folder. Each system has its own set of parameters alarms. To access the system parameters and alarms, in the Network view, click the multiviewer's system icon, and select either the **Parameters** or **Alarms** tab.

*See the Multiviewers Configuration chapter in your Layout Designer Software Application User Guide for information on configuring for Independent mode.*

**Table 2-3** lists the system parameters, and **Table 2-4** on page 20 lists system alarms.

**Table 2-3** Multiviewer System Parameters

| Parameter Name | Function | Options |
|---|---|---|
| **Parameters** | | |
| System Name | Displays the name assigned to the HView IP in Layout Designer | <string> |
| Active Layout Name | Drop-down lists all the layouts on the HView IP. Choose one to display a different layout on the hardware. | <string> |
| Number Displays | Indicates how many layouts | |
| Initial Counter Time | Determines the start time of any counters | 00.00.00.00 |
| Lock Display | Disables on-screen controls | ■ Enable<br>■ **Disable** |
| Vertical Sync time (ms) | Rendering diagnostic parameter | |
| **Parameters > Virtual GPI** | | |
| Virtual GPI (1 - 16) | Enables or disables the specified GPI. | ■ Enable<br>■ **Disable** |
| **Parameters > Event Control** | | |
| Global Event Name | Global events are created in Layout Designer, and are like salvos. Choose one from the drop-down menu. | <string> |
| Enable Event | Enables or disables the event selected by the Global Event Name parameter | ■ Enable<br>■ **Disable** |
| Enable All Events | Enables or disables all events | ■ Enable<br>■ **Disable** |

**Table 2-4** Multiviewer System Alarms

| Alarm Name | Description |
|---|---|
| Major Alarm Summary | Active if any alarm condition is reported (priority > 7) for the system |
| Minor Alarm Summary | Active if any alarm condition is reported (4 < priority < 7) for the system |
| System Communication Failure | Master module has lost connection to a slaved module |
| System LTC Failure | Not supported |
| System GPIO Failure | System lost connection to external GPIO device, if configured |

## PiP Parameters and Alarms

You can access PiP parameters and alarms for each PiP that is associated with a currently active layout.

To access the PiP parameters and alarms

1. In the Network view, double-click or expand the **PiP** folder.
   Each PiP associated with the layout is listed in the Network view. If you switch to a different layout, different PiPs, and a different number of PiPs, may display.
2. To access an individual PiP's parameters, click the PiP icon, and in Control mode, click the **Parameters** tab.
3. To view a consolidated list of PiP alarms, click the **Alarms** tab.
   **Table 2-5** lists the CCS parameters for each PiP.

**Table 2-5** PiP Parameters

| Parameter Name | Function | Options |
|---|---|---|
| **Parameters** | | |
| Name | Displays the PiP name | String (always shows PiP) |
| Static | Displays the label text on the selected PiP | String (displayed label text) |
| Display | Identifies which output display device is currently displaying the selected PiP | String (display name) |
| Dynamic | Displays the source ID for the UMD source | String (UMD source ID) |
| Source Name | Selects the input source name for the PiP | Drop-down list with all sources listed |
| Source Number | Displays the source number for the selected PiP | Slider (1 to maximum source number) |
| Full Screen Enable | Activates/deactivates full-screen view of the selected PiP | ■ Enable<br>■ Disable |
| Video Present Status | Displays the presence of a video input signal on the PiP's input source | (displays Absent or Present) |
| Video Standard Status | Displays the detected video standard of the PiP's input source | (displays input standard status) |

**Table 2-5** PiP Parameters *(Continued)*

| Parameter Name | Function | Options |
|---|---|---|
| Aspect Ratio | Displays the detected video aspect ratio of the PiP's input source | (displays aspect ratio) |
| **Parameters >Test and Measurement** | | |
| Color Source | Sets the default color display to **From Video** (color) or **Monochrome** (black and white) | ■ **From Video**<br>■ Monochrome |
| Display Scope | Determines what type of scope is displayed | ■ **None**<br>■ Waveform<br>■ Waveform Parade<br>■ Line<br>■ Line Parade<br>■ Vector<br>■ Quad Display |
| Video Line | Determines what type of scope is displayed | ■ **None**<br>■ Waveform<br>■ Waveform Parade<br>■ Line<br>■ Line Parade<br>■ Vector<br>■ Quad Display |
| Zoom Range X Min | Select which line of the active video to evaluate | (varies depending on input resolution) |
| Zoom Range X Max | Determines the start of the display, if you only want to view a portion of the video line | (varies depending on input resolution) |
| Field Select | Determines the end of the display, if you only want to view a portion of the video line | ■ (varies depending on input resolution) |
| **Parameters > Audio Monitoring** | | |
| AUD Output | Selects the audio output to configure for monitoring | ■ **AUD 1** |
| Channel 1 | Selects which audio you want to output for audio monitoring in channel 1 | 1 to **16** |
| Channel 2 | Selects which audio you want to output for audio monitoring in channel 2 | 1 to **16** |
| Stereo Pair | Selects which audio pair from the selected audio channel you want to output for audio monitoring (this control will set channel 1 and channel 2 appropriately) | ■ Channel 1 & 2<br>■ Channel 3 & 4<br>■ Channel 5 & 6<br>■ Channel 7 & 8<br>■ Channel 9 & 10<br>■ Channel 11 & 12<br>■ Channel 13 & 14<br>■ Channel 15 & 16 |

**Table 2-5** PiP Parameters *(Continued)*

| Parameter Name | Function | Options |
|---|---|---|
| Monitor | Enables or disables audio monitoring | ■ **Disable**<br>■ Enable |
| **Parameters > PiP Location** | | |
| X Offset | Displays the offset value of the PiP's horizontal (x) position in the layout | (offset value) |
| Y Offset | Displays the offset value of the PiP's vertical (Y) position in the layout. | (offset value) |
| X Size | Displays the value of the PiP's horizontal (X) position in the layout. | (value) |
| Y Size | Displays the value of the PiP's vertical (Y) position in the layout. | (value) |
| PiP State | Indicates if the PiP is active in the layout | ■ Disabled<br>■ Enabled |

**Table 2-6** PiP Alarms

| Alarm Name | Description |
|---|---|
| Global Video Summary | Active if any video alarm is reported |
| Global Audio Summary | Active if any audio alarm is reported |
| Global Tally Summary | Active if any tally alarm is reported |
| PiP Audio Ch (1-16) Missing | An audio signal is not present on the PiP audio channel indicated (Ch1–Ch16). |
| PiP Audio Ch (1-16) Peak | The audio level on the PiP audio channel indicated (Ch1–Ch16) is over the set peak threshold value. |
| PiP Audio Ch (1-16) Low | The audio level on the PiP audio channel indicated (Ch1–Ch16) is under the set low threshold value. |
| PiP Audio Ch (1-16) Silence | The audio level on the PiP audio channel indicated (Ch1–Ch16) is under the set silence threshold value. |
| Audio Group (1-4) Missing | Not used with HView IP |
| Format Change | |
| SD EDH Error | |
| HD CRC Error | |
| Loss of Video | Indicates that the multiviewer hardware can no longer detect a video signal from the video channel |
| CC Missing | Indicates that closed captioning (can be HD or SD) is not present in the incoming video stream |
| CC Not Updating | Indicates that closed captioning is not updating correctly in the incoming video stream |
| WSS Missing | Indicates that WSS is not present in the incoming video (should be present in SD625 only) |

**Table 2-6** PiP Alarms

| Alarm Name | Description |
|---|---|
| Video Freeze | Indicates that the input video image is frozen (static) according to user-defined frozen picture delay (duration), percent of frozen video in the frame, and amount difference between pixels percent tolerance |
| Video Black | Indicates that the input video image is considered a black picture according to user-defined percentage non-black picture, delay (duration), and black level threshold values |
| VChip Data Missing | Indicates that there is no V-chip data in the incoming video stream |
| VITC Missing | Indicates that there is no VITC in the incoming video stream |
| CC Not Valid | Indicates that the closed captioning data in the incoming video stream is not usable |
| Teletext Missing | Indicates that there is no teletext in the incoming video stream |
| Teletext Not Updating | Indicates that the teletext data in the incoming video stream is frozen |
| Teletext Not Valid | Indicates that the teletext data in the incoming video stream is not usable |
| AFD Missing | Indicates that AFD data is not present in the incoming video |
| AFD Format Change | Indicates that the AFD information has changed from its previous format |
| Audio Format Change | Not used with HView IP |
| Dolby E Program Change | |
| VChip Mismatch | Indicates that the V-chip data in the incoming video stream does not match the expected rating |
| WSS Format Change | Indicates that the WSS information has changed from its previous format |

## Module Parameters and Alarms

The Module folder provides access to the parameters and alarms relating to the HView IP hardware.

To access the Module parameters and alarms

1. In the Network view, double-click or expand the **Module** folder.
   HView IP devices have a single hardware device.
2. Click the module icon, and in Control mode, click the **Parameters** tab.
3. To view a consolidated list of module alarms, click the **Alarms** tab.

**Table 2-7** lists the CCS parameters for the HView IP hardware.

Table 2-7. Module Parameters

| Parameter Name | Function | Options |
|---|---|---|
| **Parameters** | | |
| Module Type | Displays the module type | (displayed Master) |
| System Name | Displays the name of the current HView IP | (displayed system name) |

Table 2-8. Module Alarms

| Alarm Name | Description |
|---|---|
| Major Alarm Summary | Active if any alarm condition is reported (priority > 7) for the module. |
| Minor Alarm Summary | Active if any alarm condition is reported (4 < priority < 7) for the module. |

# 3 Software Installation

## HView IP Software Upgrade

HView IP comes with all the software and firmware already installed. However, you may occasionally need to update some or all software or firmware components.

### Checking the Software Version

To check software versions to determine if updates are necessary, optional, or even available, or to ensure that updates were executed complete and correctly. Follow these steps:

1. In Layout Designer, with the HView IP connected, choose **Edit** > **Multiviewer Configuration** from the main menu, and then select **Advanced Configuration**.
2. Click the **Version** tab.
3. Review the **Multiviewer** and **Bios Version** data against what is available from Harris.

### Updating the Multiviewer Core Application

You must uninstall the Multiviewer Core Application before installing an updated version. If you cancel the uninstall process, you will not be able to install an updated version of the software.

1. Browse to the location of the Multiviewer Core Application *.exe file, and then double-click the file.

   An **Application Maintenance** dialog box opens.

2. Choose **Remove**, and then click **Next**.
3. On the Multiviewer **3.x Uninstall** dialog box, click **Next** to continue the uninstall process.

   A progress bar appears on the screen.

4. When the uninstall process is done, click **Finish**.
5. Return to the location of the Multiviewer Core Application *.msi file (if using Windows XP) or *.exe file (if using Windows Vista), and then double-click the file again.

   A **Welcome to the Harris** Multiviewer **3.0 Installation Wizard** dialog box appears.

6. Click **Next**, and then follow the instructions that appear on the screen to install the updated version of the Multiviewer Core Application.

### Creating a Backup Settings Folder

The purpose of a Backup Settings folder on a multiviewer is to store a copy of the three key XML files as a backup. If the Multiviewer application detects any corruption in an XML file, it will copy the backup file from the Backup Settings folder to replace the main file. If the file does not exist in the BackupS et ti ng folder, then the Multiviewer application will create a new file with the default settings.

The three XML files are in the C:\Program Files\Harris\Harris Multiviewer folder:

- Settings.xml
- Configuration.xml
- Persistence.xml

1. Create a Backup Settings folder in the Multiviewer folder. The path name will look like:
   `C:\Program Files\Harris\Harris Multiviewer\BackupSettings`
2. Once you have completed configuring your multiviewer completely, copy the three XML files to the Backup Settings folder.

## Operating System Recovery

In the rare situation where you must recover the operating system, follow these steps:

1. Insert the HV-IP-MV USB Flash Drive into available USB Port.
2. Turn on computer and press the F11 key multiple times until prompted with a "boot menu" This will allow you to select the USB: Flash Drive XXXX.
   If the USB drive does not show up, press CTRL+ALT+DEL to reboot and press DEL to enter BIOS. Navigate to Boot Menu, select Hard Disk Drives, Select USB drive as 1st drive. Press ESC and Press F10 to save configuration setting and exit setup.
3. System will boot to the HV-IP-MV USB drive and prompts you as follows:
   Press **1** and **ENTER** to Reimage the HV-IP-MV system
4. Press **1** and **ENTER** to recover the system.
   This removes all data from the hard drive and it restores factory software.
5. Press any key to reboot the system and then remove the HV-IP-MV USB drive.
   Once system restored the image, system will boot into Windows and ask for the OS to be activated prior to logging into the OS.
6. Click yes to activate now.
7. Select **Yes, I want to telephone a customer service representative to activate Windows** and click **Next**.
8. Using an outside telephone line, dial 1-888-571-2048.
   A voice asks:

   `Are you calling to Activate Windows XP?`
9. Say **Yes**.
   A voice asks:

```
Do you have the activation window open?
```

**10** Say **Yes**, and then say or Enter in the digits for each group using the keypad on the phone. A voice responds with a new ID.

**11** Enter in the ID provided in the boxes on the computer.

**12** Click **Next**, and verify that the system has activated.

- If the system has activated, hang up the phone.
- If the system has not activated, follow the phone prompts to repeat the process.

**13** Once the windows OS is activated, three normal deployment applications run.

- App1- copying the run once information to the OS.
- App2- applying the .net update to the OS.
- App3- run SIDchanger and reboot the system.

When deployment of these applications is complete, the system boots up and loads Windows.

A sysprep cleanup runs, and the PC reboots again, loading Windows. You are now ready to reconnect to the HView IP using Layout Designer, load layouts, etc.

# Layout Designer

You must use Layout Designer to create and modify layouts, and can remotely control a layout on the HView IP.

Layout Designer is installed on a separate PC that is on the same network as your HView IP hardware.

## Minimum System Requirements

The PC where Layout Designer is installed should meet the following requirements:

- Intel™ dual-core processor or higher
- 2.0 GB or more of physical memory (RAM)
- Microsoft™ Windows® XP, Windows Vista, or Windows 7 (32- or 64-bit)
- Monitor with SXGA (1280 x 1024) or higher resolution

For best results, set the display font size to Normal (Control Panel > Display > Appearance > Font Size).

## Installing Layout Designer

Install Layout Designer on a PC that meets the recommended system requirements. Your PC does not need to be connected to an HView IP multiviewer system to install Layout Designer.

*You will need Microsoft .NET Framework 3.5. If this application has not already been installed on your system, download it or install it from the supplied CD.*

If you have another version of Layout Designer installed on your system, remove it before installing the upgraded version. Do this by clicking **Explorer** on the Multiviewer Control Panel, and then using the Add/Remove Programs feature in the Windows Control Panel.

### To install the Layout Designer software

1. Close all other applications running on the PC, and then insert the Documentation and Product Resources DVD into the PC DVD-ROM drive.
2. Click **Software Applications** > **Layout Designer x.x** (where x.x is the release version of the software) > **Layout Designer-v.x.x setup.exe**.
3. Follow the on-screen instructions to install the software.


**Figure 3-1** Installing Layout Designer

*If the installation does not start automatically, double-click the Layout Designer-V*-Setup.exe file on the DVD (where "*" is the version number).*

# 4 Layout Designer Workspace

## Layout Designer Workspace

When you start Layout Designer, the workspace appears similar to **Figure 4-1**.

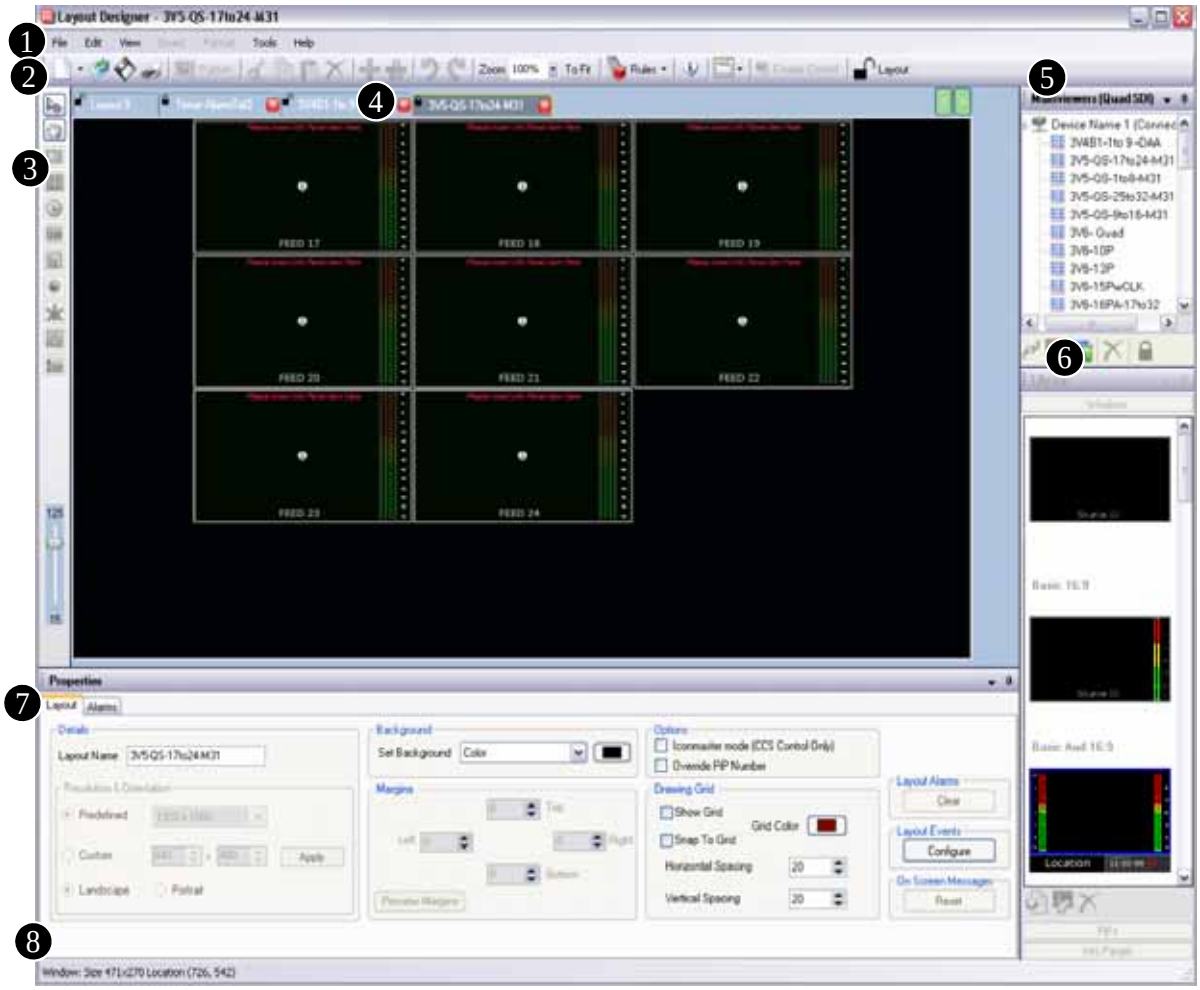



**Figure 4-1** Layout Designer Workspace

The Layout Designer workspace is the area from which you open, publish, create, and modify multiviewer display layouts. The workspace has quick-access menus and palettes to help you create and modify layouts and PiPs, as well as to configure audio meters, alarms, and metadata. You can customize the Layout Designer workspace to suit the tasks you are performing.

Each workspace element is described below:

1. **Application menu** - Provides access to Layout Designer's main commands and options. In addition, the menu provides access to the software preference settings. See ***Application Menus*** on page 30.
2. **Application toolbar** - Provides quick access to commonly-used commands and options. Some of these options also appear in the Application menu. See ***Application Menus*** on page 30 and ***Layout Designer Application Toolbar*** on page 36.
3. **Tools palette** - Provides tools for adding and editing layout objects such as PiPs, labels, clocks, tally indicators, info panels, counters, and audio meters to the layout canvas. See ***Tools Palette*** on page 38.
4. **Layout canvas** - Displays the layout that is being created or edited when a Layout Designer tab is open. More than one layout can be open at one time, but only one layout is visible in the layout canvas. Each layout can be viewed using the layout tab at the top of the canvas. See ***Layout Canvas on page 39***.
5. **Multiviewers panel** - Displays the multiviewer systems that are currently and previously connected to the Layout Designer. All systems that are displayed in the Multiviewers panel (connected and disconnected) have been configured by Layout Designer. For more information, see ***Multiviewers Panel*** on page 40.
6. **Library panel** - Provides access to stored layout objects (PiPs, windows, info panels). Where applicable, each library tab lists the specific name of the object and provides a preview of how the object will appear in a layout. For more information, see ***Using the Layout Designer Library Panel*** on page 60.
7. **Properties pane** - Provides access to user-configurable properties for the layout and layout objects currently displayed in the canvas. You can use the Properties pane to modify layout, window, and layout object properties. For information, see ***Layout Properties*** on page 96 and ***Layout Object Properties*** on page 103.
8. **Application status bar** - Displays the current status of the Layout Designer application and other operation information.

## Application Menus

In some cases, the application menus duplicate commands and options that are accessible from the application toolbar shortcuts (see ***Layout Designer Application Toolbar*** on page 36). Some advanced configuration options are only available using the menus.

Note the following menu information:

- Shortcut keystrokes are listed to the right of the menu item.
- Commands that are not relevant to the selected mode are unavailable.
- The Layout Designer context menu can be accessed by right-clicking items in the layout window.

The following tables describe each Layout Designer menu item and its options.

**Table 4-1** File Menu Items and Options

| Menu Item/Shortcut Key | Icon | Description |
|---|---|---|
| New |   | **Layout Using the Layout Creation Wizard** - Opens the **Layout Creation Wizard** dialog box, from which you can create a customized layout. See ***Creating a New Layout Using the Layout Creation Wizard*** on page 83.<br>**Blank Layout -** Opens a blank layout. See ***Creating a New Layout from a Blank Layout*** on page 89. |
| Open<br>Ctrl+O |  | Opens the **Open** dialog box, from which you can open a layout file that is stored on a local or network drive. See ***Viewing Layouts*** on page 92. |
| Close | | Closes the layout that is currently open. |
| Save<br>Ctrl+S |  | Saves the layout as a *.lay* file to a previously specified file name and location. See ***Saving Layouts*** on page 91. |
| Save As | | Opens the **Save As** dialog box, from which you can specify a file name (*.lay* file) and location for the layout file. See ***Saving Layouts*** on page 91. |
| Save All<br>Ctrl+Shift+S | | Saves all open layouts. See ***Saving Layouts*** on page 91. |
| Page Margin Setup | | Opens the **Page Margin Setup** dialog box where you specify the margin widths for the print out of the layout when you click **Print Layout** on the toolbar. |
| Print<br>Ctrl+P |  | Opens a Print dialog where you can choose a printer and print the selected layout. |
| Publish<br>F12 |   | Sends the currently displayed layout and any new changes to the selected multiviewer. See ***Displaying and Publishing Layouts*** on page 94. |
| Exit | | Closes the Layout Designer application. |

**Table 4-2** Edit Menu Items and Options

| Menu Item/Shortcut Key | Icon | Description |
|---|---|---|
| Undo<br>Ctrl+Z |  | Cancels the last operation performed on the current layout. Layout Designer supports multiple levels of the **Undo** command. |
| Redo<br>Ctrl+Y |  | Reinstates the last operation performed on the currently open layout when the **Undo** command has been used. |
| Delete |  | Deletes the selected layout object. |
| Copy<br>Ctrl+C |  | Copies the selected layout object and places it on the clipboard, from which the object can be pasted to another location. |

**Table 4-2** Edit Menu Items and Options *(Continued)*

| Menu Item/Shortcut Key | Icon | Description |
|---|---|---|
| Cut<br>Ctrl+X |  | Cuts the selected layout object from the current location and places it on the clipboard, from which the object can be pasted to another location. |
| Paste<br>Ctrl+V |  | Pastes the last layout object placed on the clipboard by either a **Cut** or **Copy** command. |
| Select All<br>Ctrl+A | | Selects all objects in the layout. |
| Deselect<br>Ctrl+D | | Cancels the selection of objects in the layout. |
| Break Window | | Breaks apart the objects contained in a window. |
| Create a Window | | Creates a window from two or more selected layout objects. |
| Lock Window | | Prevents accessing the properties of individual layout objects within a window. |
| Bring to Front | | Brings the selected window to the top of the layout; also available as a right click option on objects (**Order** > **Bring to Front**). |
| Send to Back | | Sends the selected window to the bottom of the layout; also available as a right click option (**Order** > **Send to Back**). |
| Multiviewer Configuration | | Opens the **Multiviewer Configuration** dialog box that you use to modify your multiviewer configuration. See **Chapter 5, *Configuring Display Mode*** on page 63. |
| IP Configuration Manager | | Opens a table that you use to define IP sources. See ***IP Configuration Manager*** on page 70. |
| Preferences | | Opens the **Layout Designer Preferences** dialog box, from which you can set your application preferences. See ***Setting Your Layout Designer Preferences*** on page 47. |

**Table 4-3** View Menu Items and Options

| Menu Item | Icon | Description |
|---|---|---|
| Properties |  | Shows the **Properties** pane. |
| Multiviewers |  | Shows the **Multiviewers** panel. |
| Library |  | Shows the Layout Designer **Library** panel. |
| Restore All Panel Default States | | Resets the **Properties**, **Multiviewers**, and **Library** panels to their default positions. You must restart Layout Designer for the change to take effect. |

**Table 4-3** View Menu Items and Options *(Continued)*

| Menu Item | Icon | Description |
|---|---|---|
| Zoom In<br>Ctrl+Up | | Magnifies the current display of the layout. Depending on the current view, each time you select **Zoom In**, the layout display is magnified by increments of 50% or 25%. |
| Zoom Out<br>Ctrl+Down | | Reduces the current display of the layout. Depending on the current view, each time you select **Zoom Out**, the layout display is reduced by increments of 50% or 25%. |
| Fit on Screen |  | Resizes the layout so that entire layout is displayed in the available screen space. The display size is limited by the size of the **Properties** pane. |

**Table 4-4** Insert Menu Items and Options

| Menu Item | Icon | Description |
|---|---|---|
| PiP |  | Inserts a PiP into the current layout. Inserted PiPs have default properties (width, height, and aspect ratio) that can be modified using the Properties pane. See ***About Picture-In-Pictures (PiPs)*** on page 123. |
| Label |  | Inserts a new label into the current layout. Inserted labels have default properties that can be modified using the Properties pane. See ***About Labels*** on page 144. |
| Analog Clock |  | Inserts an analog clock into the current layout. Inserted clocks have a default properties that can be modified using the Properties pane. See ***About Layout Clocks*** on page 148. |
| Digital Clock |  | Inserts a default digital clock into the current layout. Clocks have a default size and style that can be modified using the Properties pane. See ***About Layout Clocks*** on page 148. |
| Tally |  | Inserts a default tally indicator into the current layout. Inserted tally indicators have default properties that can be modified using the Properties pane. See ***Creating Tally Indicators*** on page 141. |
| Audio Meter |  | Inserts a default audio meter into the current layout. Inserted audio meters have default properties which can be modified using the Properties pane. See ***Creating Audio Meters*** on page 138. |
| 5.1 Audio Meter |  | Inserts a 5.1 stereo surround sound type audio meter into the current layout. Inserted audio meters have default properties which can be modified using the Properties pane. See ***Creating Audio Meters*** on page 138. |

**Table 4-4** Insert Menu Items and Options *(Continued)*

| Menu Item | Icon | Description |
|---|---|---|
| Info Panel |  | Inserts an overlay that provides data from a source or PiP on the display. See ***Creating Info Panels*** on page 177. |
| Up/Down Counter |  | Inserts a counter that can be the target or trigger for alarms, and can count up or down. See ***About Up/Down Counters*** on page 152. |
| Add Object to Library | | ■ **PiP -** Adds the selected PiP to the PiPs section of the Library panel<br>■ **Window** - Adds the selected window to the Windows section of the Library panel<br>■ **Info Panel** - Adds the selected info panel to the Info Panels section of the Library panel |

**Table 4-5** Format Menu Items and Options

| Menu Item | Icon | Description |
|---|---|---|
| Copy Properties | | Copies the properties from the selected object so that they can be pasted to other objects. See ***Copying and Pasting Layout Object Properties*** on page 105. |
| Paste Properties | | Pastes all of the copied properties to the selected object. See ***Copying and Pasting Layout Object Properties*** on page 105. |
| Paste Selected Properties | | Opens the **Paste Category** dialog box, from which you can select the properties you want to paste to the selected object. See ***Copying and Pasting Layout Object Properties*** on page 105. |
| Align |  <br>  <br>  <br>  <br>  <br>  | Opens a drop-down menu, from which you can select the following alignment commands:<br>■ **Left** - Aligns the selected layout objects along the left axis of the first object selected<br>■ **Right -** Aligns the selected layout objects along the right axis of the first object selected<br>■ **Top** - Aligns the selected layout objects along the top axis of the first objects selected<br>■ **Bottom** - Aligns the selected layout objects along the bottom axis of the first object selected<br>■ **Center Vertical** - Aligns the selected layout objects along a vertical axis that runs through the center of the layout window<br>■ **Middle Horizontal** - Aligns the selected layout objects along a horizontal axis that runs through the middle of the layout window<br>See ***Aligning and Distributing Objects in a Layout*** on page 107. |

**Table 4-5** Format Menu Items and Options *(Continued)*

| Menu Item | Icon | Description |
|---|---|---|
| Distribute |   | Opens a drop-down menu, from which you can select the following distribute commands:<br>■ **Widths** - Distributes the distance between the selected layout objects by width<br>■ **Heights** - Distributes the distance between the selected layout objects by height<br>See ***Aligning and Distributing Objects in a Layout*** on page 107. |

**Table 4-6** Tools Menu Items and Options

| Menu Item/ Shortcut Key | Icon | Description |
|---|---|---|
| Connect to Device |  | Connects Layout Designer to the selected multiviewer. |
| Disconnect From Device |  | Disconnects Layout Designer from the currently connected multiviewer. |
| Edit Device |  | Opens the **Device Manager** dialog box, from which you can edit the configuration of the selected multiviewer. See ***Adding Output Displays to the Device List*** on page 63. |
| Delete Device |  | Deletes the selected multiviewer configuration from the folder. |
| Start Multiviewer | | Triggers the selected multiviewer to load its layout. |
| Exit Multiviewer | | Triggers the selected multiviewer to revert to its desktop. |
| Restart Multiviewer | | Restarts the currently connected multiviewer. |
| Reboot Multiviewer | | Reboots the currently connected multiviewer. |
| Shutdown Multiviewer | | Powers down the selected multiviewer. |
| Shutdown all Multiviewers | | Powers down all multiviewers simultaneously. |
| Advanced Configuration | | Opens the **Advanced Configuration** dialog box, from which you can determine various hardware settings. See ***Advanced Configuration*** on page 66. |
| View System Logs | | Provides access to logs by opening a web browser, and then connecting to the Logging Server. |
| Save Configuration Files | | Opens a browse dialog box where you can save files to a specified location. See ***Saving and Loading Configuration Files*** on page 47 for more information. |
| Load Configuration Files | | Opens a browse dialog box, so you can load configuration files to Layout Designer See ***Saving and Loading Configuration Files*** on page 47 for more information. |

**Table 4-7** Layout Menu items and Options

| Menu Item | Icon | Description |
|---|---|---|
| <Layouts> | | There is an item in this menu for each layout that is open. |

**Table 4-8** Help Menu Items and Options

| Menu Item/Shortcut Key | Description |
|---|---|
| Help<br>F1 | Opens the online help. |
| About Layout Designer | Opens the About Layout Designer dialog box, which displays the version of the software. |

## Layout Designer Application Toolbar

You can use the Layout Designer toolbar to access frequently-used commands and options. Some of these functions are also accessible using the Layout Designer application menu (descriptions of their functions are located in ***Application Menus*** on page 30).

Some options are only available from the Layout Designer application toolbar. The following table describes these application toolbar options:

**Table 4-9** Application Toolbar Options

| Option Name | Icon | Description |
|---|---|---|
| New Layout |  | **Layout Using the Layout Creation Wizard** - Opens the **Layout Creation Wizard** dialog box, from which you can create a customized layout. See ***Creating a New Layout Using the Layout Creation Wizard*** on page 83.<br>**Blank Layout -** Opens a blank layout. See ***Creating a New Layout from a Blank Layout*** on page 89.<br>**Configuration -** Opens the **Device Manager** dialog box, which you can use to create a new multiviewer configuration or modify an existing configuration. See **Chapter 5, *Configuring Display Mode*** on page 63. |
| Open Layout<br>Ctrl+O |  | Opens the **Open** dialog box, from which you can open a layout file that is stored on a local or network drive. See ***Viewing Layouts*** on page 92. |
| Save Layout<br>Ctrl+S |  | Saves the layout as a *.lay* file to a previously specified file name and location. See ***Saving Layouts*** on page 91. |
| Print Layout<br>Ctrl+P |  | Opens a Print dialog where you can choose a printer and print the selected layout. |
| Publish Layout |  | Saves the layout to the multiviewer hardware. |

**Table 4-9** Application Toolbar Options *(Continued)*

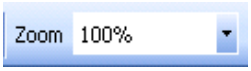
| Option Name | Icon | Description |
|---|---|---|
| Cut<br>Ctrl+X |  | Cuts the selected layout object from the current location and places it on the clipboard, from which the object can be pasted to another location. |
| Copy<br>Ctrl+C |  | Copies the selected layout object and places it on the clipboard, from which the object can be pasted to another location. |
| Paste<br>Ctrl+V |  | Pastes the last layout object placed on the clipboard by either a **Cut** or **Copy** command. |
| Delete |  | Deletes the selected layout object. |
| Clone a Component |  | Creates a control similar to the currently selected control, with the differences being unique number and name, video source, and dynamic source PiP number, and which are all incremented |
| Centralize Layout Components Horizontally and Vertically |  | Moves all objects within the layout so that they are aligned to the center of the layout. This tool does not alter the positional relationships between various items in the layout, but changes all items' position with respect to the canvas |
| Undo<br>Ctrl+Z |  | Cancels the last operation performed on the current layout. Layout Designer supports multiple levels of the **Undo** command. |
| Redo<br>Ctrl+Y |  | Reinstates the last operation performed on the currently open layout when the **Undo** command has been used. |
| Zoom |  | Increases or reduces the size of the current display of the layout. You can choose from zoom options ranging from 15% to 125% (in 1% increments), or you can fit the display on the screen. |
| Rules |  | Provides access to tools for creating and managing alarms and events through a drop-down menu. See ***Using the Rules Menu*** on page 158 for a list.<br>For a complete explanation of events and alarms, see ***Alarms and Info Panels*** on page 157. |
| Open/Close PiP Info Window |  | Opens or closes the PiP Info windows on all PiPs in the layout. |

**Table 4-9** Application Toolbar Options *(Continued)*

| Option Name | Icon | Description |
|---|---|---|
| Layout Designer Panels |  | Highlights the selected panel (either **Properties**, **Multiviewers**, or **Library**). |
| Enable Control |   | Activates mouse control on the multiviewer from the Layout Designer PC. To deactivate the mouse control, press ALT + F7 on your keyboard. For more information, see ***Remote Mouse Control*** on page 192. |
| Lock/Unlock Layout |     | This button has two states: Unlock Layout and Lock Layout. When the layout is unlocked, you can drag and drop items in the layout, in addition to adjusting the attributes of objects in the Properties panel. When a layout is locked, you can still use the Properties panel to adjust attributes of objects in the layout, but you cannot add, delete, or move objects in the layout. Context menus do not appear when you right click on a locked layout. |

## Tools Palette

Use the Tools palette to insert, select, move, and resize layout objects that are in the currently-displayed layout. Objects that are inserted into layouts using the palette's insert tools have default property settings. See ***Layout Objects*** on page 101.

The following table describes each Tools palette option:

**Table 4-10** Layout Editing Palette

| Icon | Tool | Description |
|---|---|---|
|  | Select | Allows you to select, move, or resize individual or groups of objects in the layout. See ***Copying and Pasting Layout Object Properties*** on page 105. |
|  | Pan | Pans across the layout when the layout display is magnified. |
|  | Insert PiP | Inserts a single default PiP into the current layout. See ***About Picture-In-Pictures (PiPs)*** on page 123. |
|  | Insert Label | Inserts a label into the current layout. See ***About Labels*** on page 144. |
|  | Insert Analog Clock | Inserts an analog clock into the current layout. See ***About Layout Clocks*** on page 148. |
|   | Insert Digital Clock | Insert a digital clock into the current layout. See ***About Layout Clocks*** on page 148. |
|  | Insert Audio Meter | Inserts a multi-channel audio meter into the current layout. See ***Defining Alarms for a Layout Object*** on page 161. |
|  | Insert Tally | Inserts a tally into the current layout. See ***Creating Tally Indicators*** on page 141. |

**Table 4-10** Layout Editing Palette *(Continued)*

| Icon | Tool | Description |
|---|---|---|
|  | Insert 5.1 Audio Meter | Using this tool, you can choose to insert a six-channel audio meter for monitoring 5.1 channel surround sound audio. See ***Defining Alarms for a Layout Object*** on page 161. |
|  | Insert Info Panel | Using this tool, you can insert an overlay that provides data from a source or PiP on the display. See ***Creating Info Panels*** on page 177. |
|  | Insert Up/Down Counter | Using this tool, you can insert a unidirectional counter. See ***About Up/Down Counters*** on page 152. |
| Zoom |   | Slides up and down to increase and decrease the size of the current display of the layout. As you drag the slider, the zoom indicator displays the current size. |

## Layout Canvas

The layout canvas is the design space used to create and edit layouts.

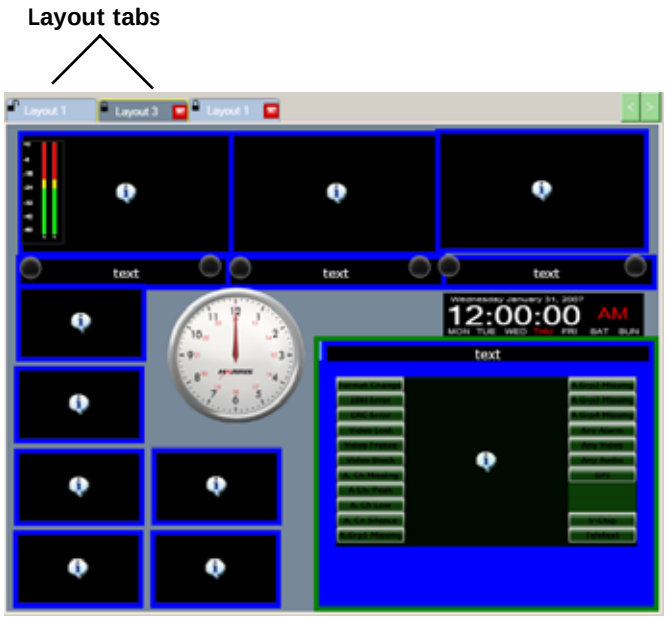



**Figure 4-2** Layout Canvas

When multiple layouts are open in Layout Designer, the layouts' names are listed on multiple tabs across the top of the canvas. Each tab also indicates the layout's locked or unlocked status.

You can use Layout Designer's editing tools to manipulate and modify PiPs and other layout objects. You can add objects to your layout by clicking them in the Tools palette, or by dragging the objects from the Library pane and dropping them onto the layout canvas.

## Multiviewers Panel

The Multiviewers panel lists the multiviewer systems that are currently configured using Layout Designer. In most cases, the multiviewers listed in the panel have been previously configured with Layout Designer. This means that a unique configuration exists for the multiviewers listed in this Multiviewers panel.

**Figure 4-3** shows the Multiviewers panel and its components.

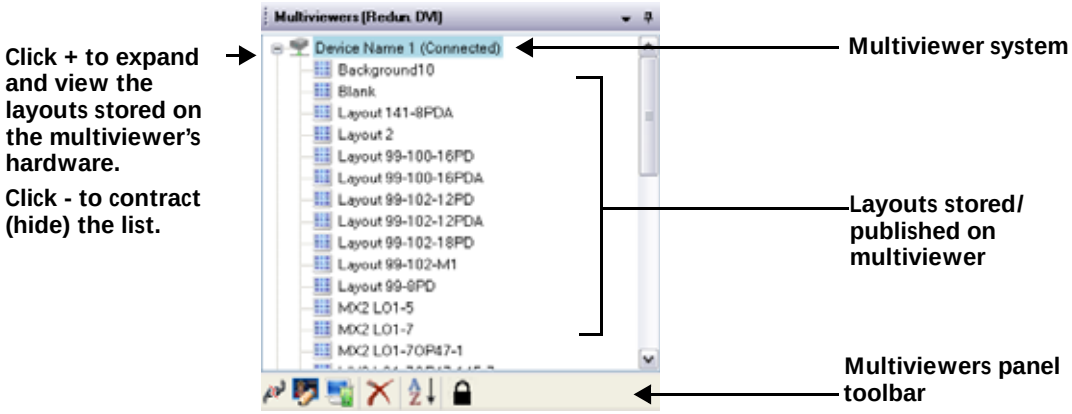



**Figure 4-3** Multiviewers Panel

Expand the multiviewer system icon to display layouts that are currently stored on the multiviewer's hardware.

Use the Multiviewers panel menu or toolbar to connect to and disconnect from multiviewers, open the **Device Manager** dialog box to edit or create a new configuration, and delete a multiviewer from the Multiviewers panel.

If Layout Designer cannot detect a multiviewer that was previously connected to the software, **Disconnected** is displayed in the Multiviewers pane.

Double-click on any layout to open that layout in Layout Designer.

Using the Preferences dialog box, you can choose to have Layout Designer automatically connect to the last multiviewer that was connected to the software at startup, as well as automatically attempt to reconnect to a multiviewer when the previously established connection is lost. For more information, see ***Setting Your Layout Designer Preferences*** on page 47.

## Multiviewers Panel Context Menu and Toolbar

Toolbar icons may not be available depending on the item that is selected. When you right-click on a multiviewer, a context menu appears.

**Table 4-11** describes each Multiviewers panel menu item.

**Table 4-11** Multiviewers Panel Context Menu

| Menu Item | Icon | Description |
|---|---|---|
| Connect to Device<br><br>Disconnect Device |  <br>  | Connects/disconnects Layout Designer to the selected multiviewer. |
| Edit Device |  | Opens the **Device Manager** dialog box, from which you can edit the configuration of the selected multiviewer. See ***Adding Output Displays to the Device List*** on page 63. |
| (New)<br>No menu item available |  | Opens the **Device Manager** dialog box, from which you can create a new multiviewer configuration. See ***Adding Output Displays to the Device List*** on page 63. |
| Delete Device |  | Deletes the selected multiviewer configuration from the library. |
| (Sort)<br>No menu item available |  | Lists multiviewers from A–Z or Z–A, or logically by IP address and display number. Roll the mouse over the button to find out how the devices are currently sorted. |
| Lock Device<br><br>Unlock Device |  <br>  | Locks or unlocks the selected multiviewer display. |
| Start Multiviewer | | Triggers the selected multiviewer to load a layout. |
| Exit Multiviewer | | Triggers the selected multiviewer to revert to its desktop (only available when the device is connected). |
| Restart Multiviewer | | Restarts the currently connected multiviewer (only available when the device is connected). |
| Reboot Multiviewer | | Reboots the currently connected multiviewer. |
| Shutdown Multiviewer | | Powers down the selected multiviewer (only available when the device is connected). |
| **Advanced Configuration** | | Opens the **Advanced Configuration** dialog box, from which you can determine various hardware settings. See ***Advanced Configuration*** on page 66. |
| **View System Logs** | | Provides access to logs by opening a web browser, and then connecting to the Logging Server. |
| Shutdown All Multiviewers | | Powers down all multiviewers simultaneously. |

When you click a layout in the Multiviewers panel, different menu items appear. Table 4-12 describes each layout menu item in the Multiviewers panel.

**Table 4-12** Multiviewers panel Menu When You Click on a Layout

| Menu Item | Description |
|---|---|
| Display this layout on Multiviewer | Displays the selected layout on the selected multiviewer |
| Recall this layout to Layout Designer | Loads the selected layout in Layout Designer |
| Delete this layout on Multiviewer | Deletes the selected layout on the multiviewer (Note: this option is not available when the current layout displayed on the multiviewer is selected) |

## Library Panel

The Library panel has the following sections: Windows, PiPs, and Info Panels. Objects in these sections can be dragged from the Library panel and dropped onto the currently displayed layout.

For information about using the Library panel toolbar to create, edit, or delete new library objects, see ***Using the Layout Designer Library Panel*** on page 60.

The Library panel has a display option menu that you can use to customize how the panel is displayed in the layout workspace. For more information about customizing the Library panel, see ***Customizing the Layout Designer Workspace*** on page 45.

The Library panel items include the following:

- **Windows** - You can select windows from the Library panel, and then drag and drop them onto the currently-open layout. If required, you can then use the Properties pane to modify how a window and its layout objects are displayed in the layout. The window must be ungrouped or "broken" if you want to modify any object. To ungroup objects inside a window, right-click on the window and select **Break Window**. For information about windows, see ***Creating Layout Windows*** on page 109.
- **PiPs** - PiPs in the Library panel are organized according to their aspect ratio. You can select PiPs from the Library panel, and then drag and drop them onto the currently open layout. If required, you can then use the **Properties** pane to modify how the PiPs are displayed in the layout. For information about modifying PiP properties, see ***Layout Objects*** on page 101.
- **Info Panels** - You can drag info panels from the **Info Panels** section and drop them onto PiPs that are displayed in the layout window, or drop them onto the layout background as standalone info panels. You can use the **Properties** pane to modify the contents of an info panel. For information about modifying info panel properties, see ***Modifying Info Panel Properties*** on page 178.

## Properties Pane

The **Properties** pane is located below the Layout canvas.

1 If the **Properties** pane is not currently displayed, select **View** > **Properties** from the application menu.

The **Properties** pane changes based on the object that is selected on the canvas.


**Figure 4-4** Properties Pane

You can modify properties that affect the way layout objects are displayed in the layout. Each group of layout objects has a tab with controls that allow you to adjust the layout object's properties, such as changing the layout output resolution or PiP label text color. You can also add elements (such as audio meters and audio and video alarms) to your layout.

Depending on what object is selected in the layout canvas, different tabs appear in the **Properties** pane. To access the **Properties** pane for a specific layout object, select the object in the layout canvas, and then click the appropriate property tab. The number of tabs that will appear on the Properties pane will vary depending on the selected object.

You can resize the **Properties** pane by dragging its sides with the cursor. Use the scroll bars to view the entire pane. The Properties pane is always on top of other panes in the Layout Designer interface. If a portion of the pane is obscured by the size of the pane, use the scroll bars to view the content.

## Layout Designer Context Menu

The Layout Designer context menu provides quick access to some commands and options that are also available from the application menu.

To access the Layout Designer context menu, in the canvas, select a layout object, and then right-click. The context menu appears.The options available on the context menu depend on the layout object that is currently selected in the layout.

Context menus do not appear when you right click on a locked layout.

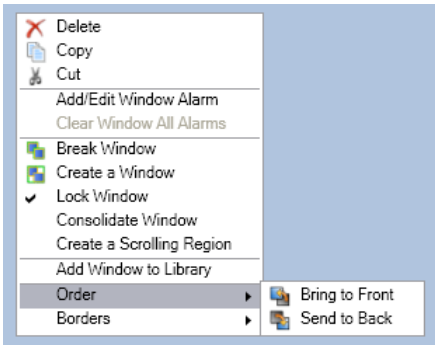



**Figure 4-5** Layout Designer Context Menu

Table 4-13 describes each Layout Designer context menu item.

**Table 4-13** Layout Designer Context Menu

| Option Name | Description |
|---|---|
| Delete | Deletes the selected layout object from the layout currently displayed on the canvas. |
| Copy | Copies the selected layout object and places it on the clipboard, from which the object can be pasted to another location. |
| Cut | Cuts the selected layout object from the current location and places it on the clipboard, from which the object can be pasted to another location. |
| Copy Properties | Copies the properties from the selected layout object so that they can be pasted to another layout object (same type). For information about copying PiP properties, see ***Formatting Layout Objects in the Canvas*** on page 105. |
| Paste | Pastes the last layout object that was placed on the clipboard by either a **Cut** or **Copy** command. |
| Paste Properties | Pastes all of the copied properties to the selected object. For information about pasting properties, see ***Copying and Pasting Layout Object Properties*** on page 105 |
| Paste Selected Properties | Pastes selected categories of properties to the selected object. |
| Add/Edit Window Alarm | Opens the Rules editor for the window, so you can alter the alarm configuration for that window. |
| Clear Window all Alarms | Resets all alarms in the window. |
| Set Properties | This option is available when multiple windows are selected. A submenu offers all types of controls for all window controls within the selection. When you change the settings, all items of that type are altered to match. |
| Break Window | Breaks apart the objects contained in a window. |
| Remove Window Component | This option is available when multiple windows are selected. A submenu offers all types of controls for all window controls within the selection. The selected item is deleted. |
| Create a Window | Groups objects together to create a window. |
| Lock Window | Prevents accessing the properties of individual layout objects within a window. |
| Consolidate Window(s) | Adjusts the background size of the current window so that it is the minimum size to contain all the objects within the window. |
| Create a Scrolling Region | Converts the selected window to display a series of sources that move in a rolling or crawling motion. |
| Lock Scrolling Region | Prevents accessing the properties of individual layout objects within a scrolling region. |

**Table 4-13** Layout Designer Context Menu *(Continued)*

| Option Name | Description |
|---|---|
| Add Scrolling Region to Library | Adds the selected scrolling region to the **Windows** section of the Library panel. |
| Add Window to Library | Adds the selected window to the **Windows** section of the Library panel. |
| Add PiP to Library | Adds the selected PiP to the **PiPs** section of the Library panel. |
| Order | Opens a drop-down menu, from which you can select the following order commands:<br>■ **Bring to Front** - Brings the selected layout object to the top of the object stacking order<br>■ **Send to Back** - Sends the selected layout object to the back of the object stacking order<br>For information about ordering layout objects, see ***Formatting Layout Objects in the Canvas*** on page 105. |
| Info Panel | Opens a drop-down menu, from which you can select the following commands:<br>■ **Remove** - Removes the info panel from a PiP<br>■ **Unlock Info Panel Items** - Unlocks individual items from the Info Panel<br>■ **Move Out** - Allows info panel to move out of PiP<br>■ **Add to Library** - Adds the info panel to the library<br>■ **Enable Resizing Info Panel** - Allows you to drag the edges of the info panel to change its shape and size; this can ensure that the indicators do not fall on top of a PiP's video (you can move the info panel off the PiP, for example).<br>■ **Disable Resizing Info Panel** - Turns off Enable Resizing Info Panel |
| Add Info Panel to Library | Adds the selected info panel to the **Info Panels** section of the library |
| Borders | Opens a drop-down menu, from which you can select from a list of all borders associated with an object (normally a window) |

# Customizing the Layout Designer Workspace

Layout Designer provides a number of different ways that you can customize the workspace to best suit your changing working environment. When you use Layout Designer to create new layouts and design custom layout objects, you can set up the workspace so that the Properties pane and the Library panel are easily accessible. When you are publishing layouts for display, you can hide (or auto hide) panels and the Properties pane to maximize your view of the canvas area on your computer's screen.

When you close Layout Designer, and then reopen it, any previous changes to the pane states are retained. To return Layout designer to its default state, select **View** > **Restore All Panel Default States** from the main menu.

You can also set default layout and PiP property options.

## Setting Panels and Panes Viewing Options

Layout Designer has view options for the Properties pane and Multiviewers and Library panels that you can use to customize the Layout Designer workspace. For example, you can move these items to different locations in the workspace, or you can hide the items from the workspace view.

To access the Properties pane and the Multiviewers and Library panel view options, click the down-arrow icon located at the end of the item's title bar. The drop-down menu displays the view options.

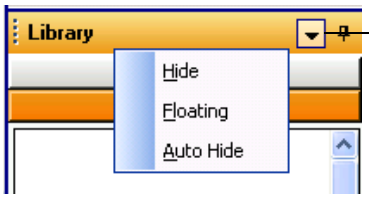



**Figure 4-6** Panel and Pane View Options Menu

Each menu option is described below:

- **Hide** Select this option to remove the panel or pane from the Layout Designer workspace. After the item has been hidden, select one of the following options to add the item back to the workspace:
  - **View** > **Properties**
  - **View** > **Multiviewers**
  - **View** > **Library**
- **Floating** - Select this option to undock the panel or pane from its stationary location in the Layout Designer workspace (bottom of the workspace for the Properties pane and the right side of the workspace for the Multiviewers and Library panels). You can then use the mouse to move the item to different locations in the workspace. Double-click the item to redock it.

  When a workspace item is undocked, you can resize it by clicking then dragging the item's outer edge while holding down your mouse button. The mouse pointer will turn to a double-headed arrow to indicate that you have selected the workspace item's outer edge.
- **Auto Hide** - Select this option to collapse (temporarily hide) the menu item. When the **Auto-Hide** option is enabled, the collapsed items are stored either at the bottom (**Properties** pane) or to the right (**Multiviewers** library and Layout Designer **Library**) of the Layout Designer workspace. An auto-hidden workspace item is identified by a vertical or horizontal tab. To access the workspace item library, hold the pointer over the item's tab.

  You can also activate or deactivate the **Auto Hide** option by clicking

  the  icon from the workspace item title bar.

## Panning and Zooming in the Canvas Workspace

To view more or less of the canvas workspace, use one of the following tools:

- Choose a display percentage from the **Zoom** drop-down menu on the application toolbar at the top of the screen.

  You can also type a number between 15 and 125 in this field.
- Click **To Fit** on the application toolbar at the top of the screen to size the canvas so that its entire area is visible on the screen.
- Use the slider to the left of the canvas to increase or decrease the percentage of the display that is visible.

  When you click the pointer, the current display percentage appears.

If you are zoomed in close on an area of the canvas, you can pan the canvas by selecting the Pan tool.

## Saving and Loading Configuration Files

### To save configuration files

1 From the main menu, choose **Tools** > **Save Configuration files**.

A **Browse** dialog box opens.

2 Choose a location to save the files.

### To load configuration files

1 From the main menu choose **Tools** > **Load Configuration Files**.

A **Browse** dialog box opens.

2 Choose a location to load the files from.

Files that are loaded and saved during this process include:

- Configuration.xml for the device and multi-viewer configuration
- Preference.dat for the Layout Designer application preference.
- dockManager.xml for the states of Multi-viewer panel, library panel and the property panel.
- Alarms.dat for the alarm template
- WindowCustomLibrary.xml for the customer-defined window library
- PiP16by9Library.xml for the customer-defined PiP library
- BorderStyles.xml for the custom-defined border style library

***Note:*** *You can select multiple files at one time by holding down the CTRL key.*

# Setting Your Layout Designer Preferences

Using the **Layout Designer Preferences** dialog box, you can set the application's global preferences, including default settings for new layouts, windows, labels, and PiPs. You can also recall Layout Designer factory default settings.

To access the **Layout Designer Preferences** dialog box, from the Layout Designer application menu, select **Edit** > **Preferences**. There are five tabs on the **Layout Designer Preferences** dialog box. See the following topics:



After you finish setting your preferences, click **OK** to apply them. Your preference settings are automatically saved each time you exit Layout Designer.

# Setting General Preferences

Use the **General** tab of the **Layout Designer Preferences** dialog box to set the number of levels for **Undo** and **Redo** commands, set auto connection options, and return to factory defaults.

## Setting Undo and Redo Levels

You can set the number of undo and redo levels that can be applied to when the **Undo** and **Redo** commands are used after an editing operation.

### To set the number of undo and redo levels:

- Under **Undo/Redo**, type a value in the **Undo/Redo** field.

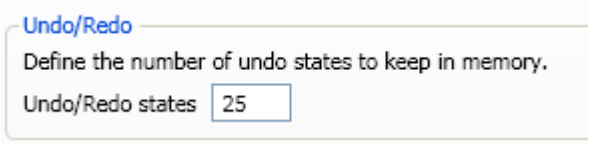



**Figure 4-7** Setting Undo and Redo Levels

## Setting Multiviewer Connection Preferences

You can set up Layout Designer to automatically connect to the last connected multiviewer when a connection between the Layout Designer and the multiviewer is lost.

### To select Layout Designer's auto connect option:

1 Under **Autoconnect**, select **Auto connect to multiviewer if connection is lost** check box**.** If you clear this check box and a connection is lost, you can manually reconnect to the multiviewer using the **Multiviewers** panel menu.


**Figure 4-8** Autoconnect Option in General Preferences Dialog Box

## Setting Factory Default Recall Preferences

### To set factory recall preferences and recall factory defaults:

1 Under **Recall Layout Designer Defaults**, select which options you want reset to factory default settings.

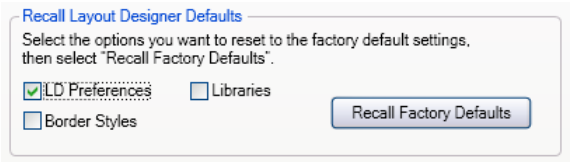



**Figure 4-9** Recalling Factory Default Settings in General Preferences Dialog Box

You can select from the following options:

- **LD Preferences** - Resets all Layout Designer preferences that you can set using the **Layout Designer Preferences** dialog box (**General** and **Default Properties** tabs)
- **Libraries** - Resets the Library panel to the default state.
- **Border Styles** - Resets all the available border styles available from the **Border** tab of the **Properties** pane factory default selection. This means that any created new borders added to the Border Styles selection are removed.

2 To recall the factory default options that you selected in step 1, click **Recall Factory Defaults**.

## Overwriting Layouts

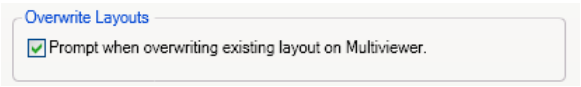



**Figure 4-10** Overwrite Option in General Preferences Dialog Box

If you want to be prompted before overwriting layouts on multiviewers, check this option. Otherwise, leave it blank.

## Setting the Default View

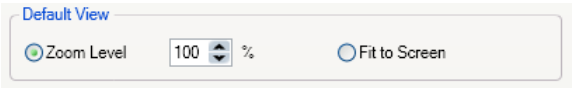



**Figure 4-11** Default View Settings in General Preferences Dialog Box

Choose one of the following:

- **Zoom Level** - When a new layoutis created, it is displayed at the percentage defined in the field to the right of the radio button. The range is from 15% to 125% in 1% increments.
- **Fit to Screen** - When a new layout is created, the entire layout is displayed in the available screen space. The display size is limited by the size of the Properties pane.

### Determining Auto Placement

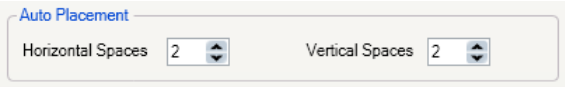



**Figure 4-12** Auto Placement Settings in General Preferences Dialog Box

When you add items to the layout using the **Clone a Component** button on the toolbar, they are spaced from one another using the Auto Placement settings. Use the Horizontal Spaces and Vertical Spaces fields to increase or decrease this padding. The available range is from 0 to 200.

## Setting Default Layout Properties

You can use the Layout tab of the **Layout Designer Preferences** dialog box to define the default properties for layouts and layout objects, and to configure email settings.

### Configuring General Layout Properties

Layout default properties are used when Layouts are created from a blank layout **(File** > **New** > **Blank Layout**) or when using the Layout Creation Wizard (**File** > **New** > **Layout Using Layout Creation Wizard**). For more information, see ***Using a Blank Layout*** on page 90.

To access these settings, from the Layout Designer application menu, select **Edit** > **Preferences**, and then click the **Layout** tab. After you finish setting your preferences, click **OK** to apply them.

#### To set default layout properties:

1 On the **Layout Designer Preferences** dialog box, select the **Default Properties** tab.

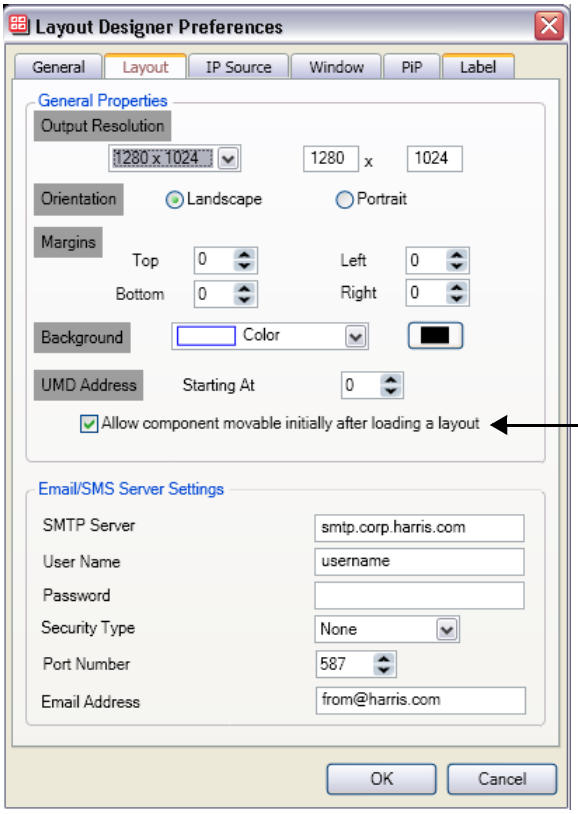



**Figure 4-13** Setting Default Layout Properties

2 Under **Layout**, select a resolution from the **Output Resolution** drop-down list.

3 If you selected **Custom** from the **Output Resolution** list, type pixel values for the layout's width and height in the field provided (width first and height second).

4 Under **Margins**, enter the amount of padding you would like between the edge of the layout and where objects, including the background, appear in the layout.

Layout margins determine the boundary of the layout area where objects, including the background, can be placed. The overall layout size is maintained, not cropped. The maximum size for margins varies depending on the resolution of the layout.

5 Beside **Background**, select either **Color** or a background image (**Background 1** to **Background 10**) from the drop-down list.

6 If you selected **Color** as your default background, click the button to access the **Select a Color** dialog box, and then use the slider to select a color, and click **OK**.

For more information about using the **Select a Color** dialog box, see ***Setting Default Window Properties*** on page 55.

7 Under **Orientation**, select either **Landscape** (wider than tall) or **Portrait** (taller than wide).

8 Under **UMD Address**, if you want fixed UMDs to start at a number other than 0, enter a number beside **Starting at**.

For information on changing a layout's properties, see ***Modifying Layout Properties*** on page 96

## Configuring E-Mail Settings

The email settings determine the SMTP server for sending email and SMS text message alarm actions. See ***Setting Alarm Actions*** on page 166 for more information.

**Table 4-14** Email Settings in General Preferences

| Parameter | Content |
|---|---|
| SMTP Server | Enter the address of the mail server. |
| User Name | Enter the account name. |
| Password | Enter the password, if required, to send mail from that address. |
| Security Type | Choose None or SSL. |
| Port Number | Enter the SSL service port for the sending email address. This is only required for SSL-type security settings. |
| Email Address | Enter the user email address on the server, not necessarily the target email address of the alarm action. |

## Setting Default IP Source Properties

You can use the IP Source tab of the **Layout Designer Preferences** dialog box to define the default properties for IP sources.

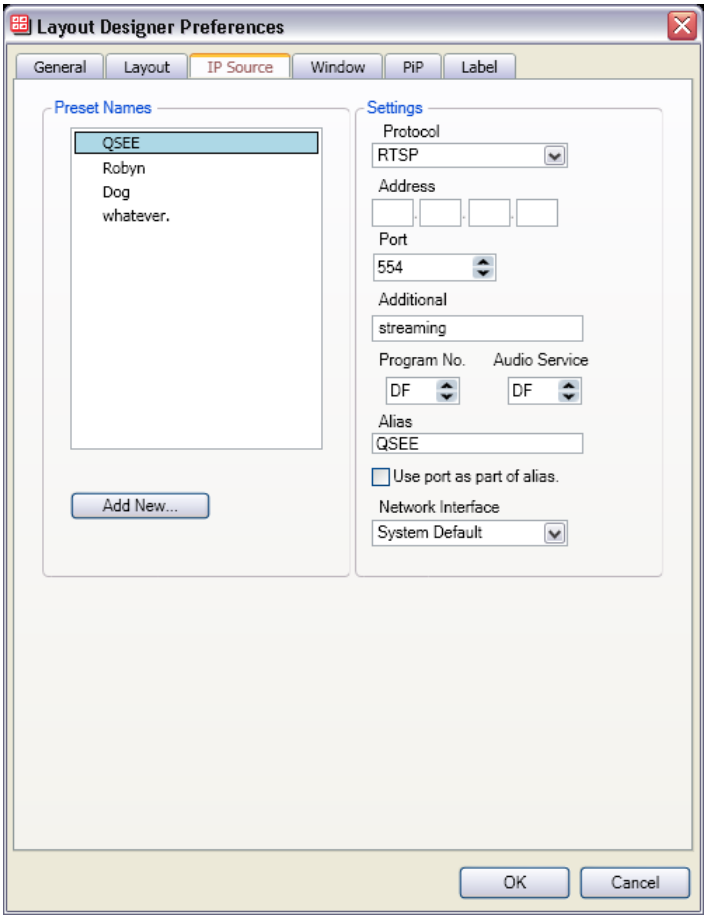



**Figure 4-14** Default IP Source Preferences

On this screen, you can choose from various presets in the table at the right of the screen.

## Modifying a Preset

Click on any preset in the **Preset Names** table to modify its settings. Preset options are listed in **Table 4-15**

**Table 4-15** Options for Configuring Default IP Sources

| Item | Description and Options |
|---|---|
| Protocol | The multiviewer hardware supports the following protocols:<br>■ **RTP** (Real Time Protocol or Real-time Transport Protocol) is a data transport protocol specifically designed for transporting real-time signals such as streaming video and audio. RTP is often used in conjunction with UDP and provides packet sequence numbering and packet time stamping. RTP is used in conjunction with RTCP (Real Time Control Protocol), a data transport control protocol for transporting real-time media streams and including functions to support synchronization between different media types (eg. audio and video) and providing information to streaming applications about network quality, number of viewers, identity of viewers, etc.<br>■ **RTSP** (Real Time Streaming Protocol) is a protocol used to set up and control real-time streams. It is commonly used to create links on Web sites that point to streaming media files.<br>■ **UDP**-(User Datagram Protocol) is a data transfer protocol used on IP networks that offers connectionless, stateless data transport. It is often used in video transport applications (along with RTP) because it offers low overhead and does not provide automatic rate reductions and packet retransmissions (supplied by TCP) that can interfere with video transport. |
| IP Address | Enter the IP address of the source. |
| Port | Enter the port. |
| Additional | Additional arguments; for example the QSEE requires ‘streaming’. |
| Program Number | Enter the program within the video stream to be decoded. |
| Audio Service | Enter the audio service within the stream to decode. |
| Alias | Enter an alternate name for the source. |
| Use port as part of alias | Adds the port number to the alias name. |
| Network Interface | From the rear, **ENET 1**, on the left, is the Streaming port, and **ENET 2**, on the right, is generally used for Layout Designer and networking. |

## Creating a New Preset

To create a new preset on the Default IP Presets Preferences dialogue box, follow these steps:

1 Click **Add New**.
A new preset appears in the **Preset Names** table.

2 Click the name, enter new text, and then press Enter to give the preset a relevant name.
3 Make changes to the preset configuration.
4 Changes to the preset are stored immediately.

## Setting Default Window Properties

You can set the default properties for windows that are created using the **Create Window** command from the Layout Designer context menu. For more information about windows, see ***Creating Layout Windows*** on page 109.

### To set default window properties:

1. From the **Layout Designer Preferences** dialog box, select the **Window** tab.
2. Under **Background**, select either **Color** or a background image (**Background 1** to **Background 10**) from the drop-down list.

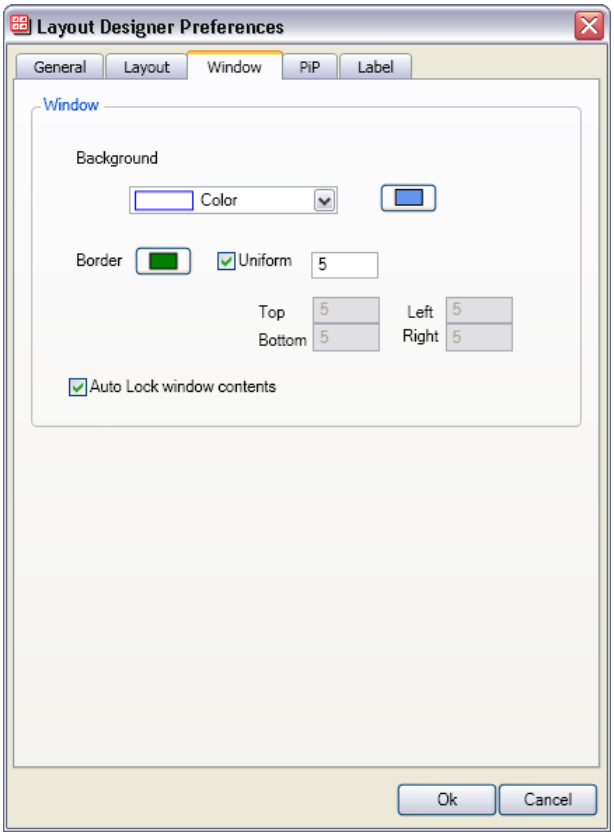



**Figure 4-15** Setting Default Window Properties

3. If you selected **Color** as your default background, click the  button to open the **Select a Color** dialog box.

   To select a color, do either of the following:

   - Use the slider to select a color.
   - Enter the color values you want to use in one of the **ScRGB**, **sRGB**, or **Hexadecimal Notation** fields.

     Your selected color is previewed below **Selected Color**.

4. Under **Border**, if you want a uniform border width around layout objects, select the **Uniform** check box.

   If you do not want a uniform border width, clear the **Uniform** check box, and then type or select the values for the **Top**, **Bottom**, **Left**, and **Right** border widths.

   To select the default border color, beside **Border Color**, click the  to open the **Selector a Color** dialog box.

In the **Select a Color** dialog box, use the slider to select a color, and then click **OK**.

If required, use the **Opacity** slider to adjust the color's opacity value, and then click **OK**.

5 Select **Auto Lock window contents**, if you want the **Lock Objects in Window** to be enabled when a window is created.

When a window is locked, you cannot move or modify the layout objects contained in the window until **Lock Window** is cleared. For more information, see ***Modifying Window Properties Using the Properties Pane*** on page 112.

## Setting IP Source Properties

You can create default IP Source properties, and also create presets so a series of properties can be reused.

**Table 4-16** IP Source Settings Options

| Item | Description and Options |
|---|---|
| Preset Names | Click a name to update the contents of the Settings portion of the screen with the definitions for that preset. |
| Add New | Adds a row to the Preset Names list. Click the new row and type a new label to rename the preset. |
| IP Address | Enter the IP address of the source. |
| Protocol | The multiviewer hardware supports the following protocols:<br>■ **RTP** (Real Time Protocol or Real-time Transport Protocol) is a data transport protocol specifically designed for transporting real-time signals such as streaming video and audio. RTP is often used in conjunction with UDP and provides packet sequence numbering and packet time stamping. RTP is used in conjunction with RTCP (Real Time Control Protocol), a data transport control protocol for transporting real-time media streams and including functions to support synchronization between different media types (eg. audio and video) and providing information to streaming applications about network quality, number of viewers, identity of viewers, etc.<br>■ **RTSP** (Real Time Streaming Protocol) is a protocol used to set up and control real-time streams. It is commonly used to create links on Web sites that point to streaming media files.<br>■ **UDP**-(User Datagram Protocol) is a data transfer protocol used on IP networks that offers connectionless, stateless data transport. It is often used in video transport applications (along with RTP) because it offers low overhead and does not provide automatic rate reductions and packet retransmissions (supplied by TCP) that can interfere with video transport. |
| Port | Enter the port the URL communicates over. |
| Additional | ■ Streaming |
| Alias | Enter an alternate (unique) name for the source. |
| Use port as part of alias | When selected, this option appends the port number to the alias name. |

## Setting Default PiP Properties

You can set the default properties for PiPs that are created using Layout Designer's Insert PiP commands. Default PiP properties are applied to PiPs that are created using **Insert** > **PiP** from the application window, and the Insert PiP tool from the **Tool** palette. For more information, see ***Adding PiPs to a Layout*** on page 125.

### To define default PiP values:

1 From the **Layout Designer Preferences** dialog box, select the **PiP** tab.

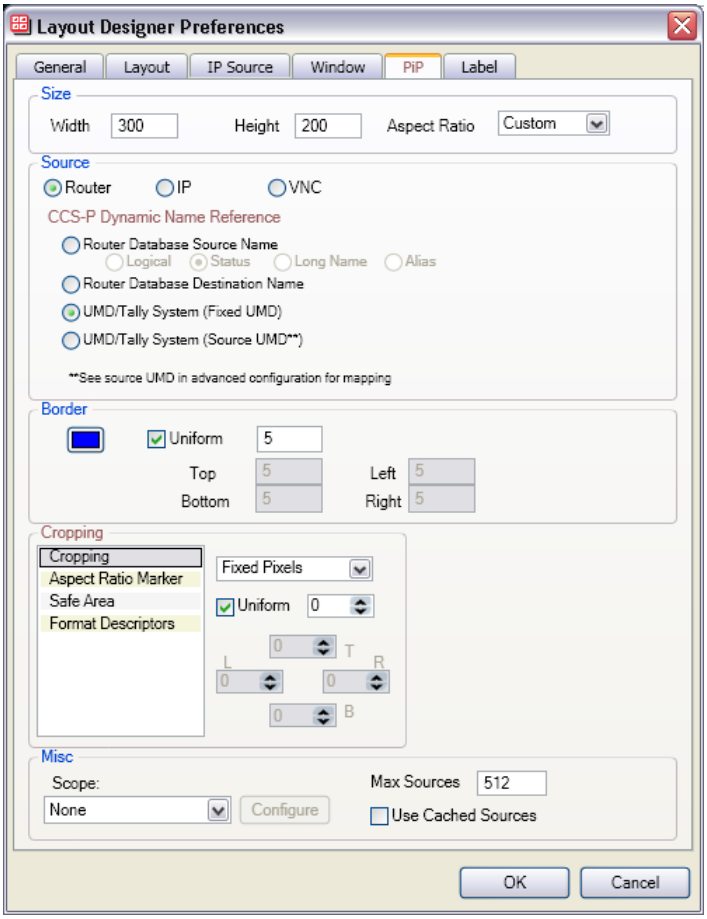



**Figure 4-16** Setting Default PiP Video Dimensions

2 Type the values you want to use for the default PiP width and height in the **Width** and **Height** boxes.

3 Beside **Aspect Ratio**, select an aspect ratio from the drop-down list.

4 In the **Source** section of the screen, choose **IP**or **VNC**.

If you choose IP, the **CCS-P Dynamic Name Reference** section of the screen is available. Choose the source from which your PiPs will derive their names. See ***Modifying PiPs Using the Properties Pane*** on page 125 for more information.

5 Beside **Borders**, if you want a uniform border width around layout objects, select the **Uniform** check box.

If you do not want a uniform border width, clear the **Uniform** check box, and then type or select the values for the **Top**, **Bottom**, **Left**, and **Right** border widths.

To select the default border color, beside **Border Color**, click the  to open the **Selector a Color** dialog box. In the **Select a Color** dialog box, use the slider to select a color, and then click **OK**.

6 (Optional) Under **Cropping & Markers,** select **Cropping**, and then do either of the following:

- If you want a uniform cropping area around the PiP, select the **Uniform** check box, and then select a value.
- If you do not want a uniform cropping area, clear the **Uniform** check box, and then type or select the values for the **Top**, **Bottom**, **Left**, and **Right** cropping.

Cropping rescales the video on the Multiviewer; the lines will not show when you publish the layout.

7 (Optional) Add markers to your PiP.

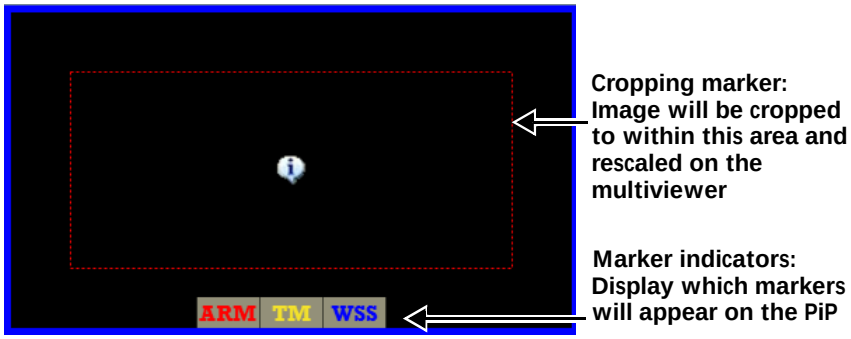



**Figure 4-17** Markers on a PiP in Layout Designer

Under **Cropping & Markers**, you can choose the following options:

- **Aspect Ratio Markers**—An indicator of correct aspect ratio on the PiP to let you know whether the video is properly scaled when a source that is one aspect ratio is put on a PiP that has a different aspect ratio. The aspect ratio markers displays the area of an image with a 16:9 aspect ratio within a 4:3 coded frame, or an image with a 4:3 aspect ratio within a 16:9 coded frame.

  Click **Enable** to activate a marker on the PiP. To determine the color of the marker, click **Color**, make a selection, and then click **OK**.
- **Safe Area**—adds a Title Marker indicator on the PiP to indicate the safe area for titles to be displayed (80% of the picture area).

  Click **Title Marker** to activate a marker on the PiP. To determine the color of the marker, click **Color**, make a selection, and then click **OK**.
- **Active Format Description**—adds an indicator that displays the AFD description present on the incoming video. There are two options:
  - **AFD** - HD and SD video
  - **WSS** - SD 625 video only

  Click **Enable** to activate a marker on the PiP. To determine the color of the marker, click **Color**, make a selection, and then click **OK**.

  From the drop-down menu, there are two options:
  - **Display** mode—(note, this option is always selected) markers on the multiviewer PiP indicate the active picture area indicated by the AFD or WSS code on the input.
  - **Convert** mode—scales the video on the input source as indicated by the AFD or WSS code on the input.

8 If you want PiPs to have a default scope assigned to them (and you have the Test and Measurement option), under **Scope**, choose the scope to assign.

Click **Configure** to further define the scope.

9 Beside **Max Sources**, type the maximum number of inputs.

10 Check **Use Cached Sources** if you want the multiviewer to use the source names from the last time it connected, when the multiviewer is disconnected at Layout Designer start-up.

For information about altering an individual PiP's properties, see ***Modifying PiPs Using the Properties Pane*** on page 125.

## Setting Default Label Properties

You can set the default properties for labels that are created using Layout Designer's Insert Label commands. Default PiP properties are applied to labels that are created using **Insert** > **Label** from the application window, and the Insert Label tool from the **Tool** palette. For more information, see ***About Labels*** on page 144.

### To define default Label values:

1 From the **Layout Designer Preferences** dialog box, select the **Label** tab.

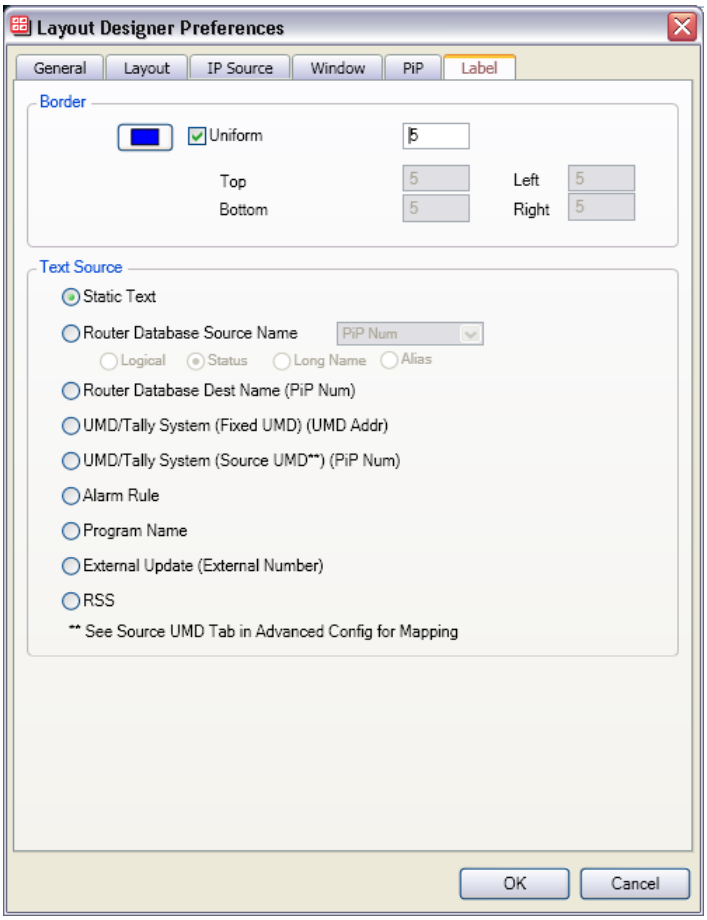



**Figure 4-18** Setting Default Label Preferences

2 Beside **Borders**, if you want a uniform border width around layout objects, select the **Uniform** check box.

If you do not want a uniform border width, clear the **Uniform** check box, and then type or select the values for the **Top**, **Bottom**, **Left**, and **Right** border widths.

To select the default border color, beside **Border Color**, click the  to open the **Selector a Color** dialog box. In the **Select a Color** dialog box, use the slider to select a color, and then click **OK**.

3 Under **Text Source**, choose an option.
All the options are described in ***Setting the Label Text Source*** on page 145.

For information about altering an individual label's properties, see ***About Labels*** on page 144.

## Closing Layout Designer

When you close Layout Designer, the following dialog box appears:

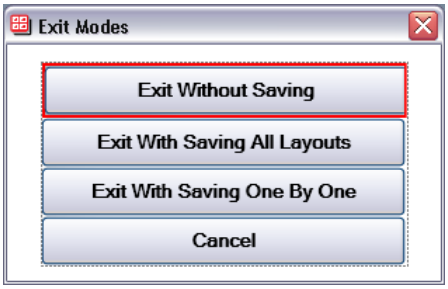



**Figure 4-19** Exit Modes Dialog Box

Choose one of the following options:

- **Exit without saving** - closes all layouts, discarding changes or updates, and exits Layout Designer.
- **Exit with Saving All Layouts** - saves all changes to all open layouts, and then exits Layout Designer.
- **Exit With Saving One by One** - for each layout that has changes, asks if you do or do not want to save changes, or if you want to cancel out of closing the multiviewer. If you do not click **Cancel** at any time, Layout Designer closes.
- **Cancel** - does not save any layouts, does not close Layout Designer.

Layouts that have been changed since they were last saved have an asterisk (*) in the layout tab.

# Using the Layout Designer Library Panel

The Layout Designer Library panel stores a collection of default and custom layout objects that can be dragged from the Library and dropped onto the currently-displayed layout. In the Library panel, layout objects are listed by name (which is indicated on each library tab) and a preview of the layout object. For information about adding new layout objects to the Library, see ***Adding Objects to the Library Panel*** on page 61.

The Library panel has view options that customize the way the panel is displayed in the Layout Designer workspace. For example, you can undock Library panel items and move them to different locations in the workspace, or you can hide the items from the workspace view. For more information about the Library view options, see ***Setting Panels and Panes Viewing Options*** on page 46.

*Your layout must be in an **unlocked** state to use the Library panel.*
*See **Locking and Unlocking Layouts** on page 90.*

## Adding Objects to the Library Panel

You can design custom layout objects and add them to the appropriate tab in the Library panel by right-clicking on the object.

You can delete any new object using **Delete** on the Library panel menu. You cannot delete the default items from a Library panel.

*If you delete a Library object, you cannot use the **Undo** command to restore the object to the Library.*

### Adding Layout Objects to the Library Panel

To add a PiP, info panel, or window from a layout to the Library panel, from the layout, select the object you want to add to the Library panel and do one of the following:

- From the application menu, select **Insert** > **Add Object to Library,** and then, depending on the object you want to add, select **PiP**, **Info Panel**, or **Window**.

  If no object is selected, you will be instructed to select the type of object you specified.
- Right-click, and then depending on the object you want add, select **Add PiP to Library**, **Add Info Panel to Library**, or **Add Window to Library**.

*You will only have the option to add an info panel to the Library panel if the info panel is not attached to a PiP or a window. However, if a window or PiP contains an info panel, the info panel will be added to the Library panel as part of that object.*

When you add a PiP to the Library panel, it is automatically added to the tab for the corresponding aspect ratio.

## Using Objects from the Library Panel

You can use objects from the library panel as long as the currently selected layout is not locked. If the layout is locked, unlock it by clicking **Layout** in the main toolbar.

### Adding Layout Objects from the Library Panel to a Layout

To add a PiP, Info Panel, or Window to a layout, select the object with the mouse and while holding down the mouse button, drag the object and drop it on the layout. You can readjust the position of the object once it has sized itself in proportion with the rest of the layout.

### Searching a Library

When you have a large number of objects in a library, it can be difficult to find an object by scrolling. You can search a library for an item with a string of text in its title.

1 Select a library to search.

The active library is indicated by a green button next to its name.

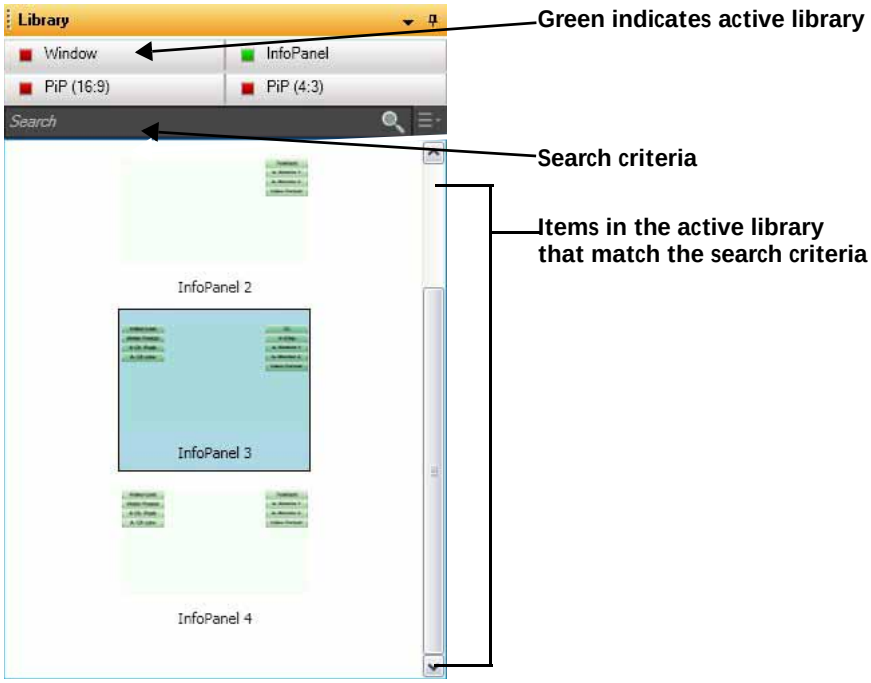



**Figure 4-20** Searching a Library

**2** Enter your search criteria in the **Search** field, and then press **Enter**.

The library display updates to show all items in the selected library that meet your search criteria.

# 5 Configuring Display Mode

## Overview

Once configured using Layout Designer, your multiviewer is automatically added to the Layout Designer **Multiviewers** panel.

Before you can create a multiviewer system with Layout Designer, you must add the multiviewer that you want to set up to the Devices list. Layout Designer software then scans the multiviewer hardware to detect specific hardware settings. You may need to enter additional information to complete the set up.

The chapter contains the following sections:



For information about your multiviewer system hardware, see ***HView IP Hardware*** on page 5.

## When No Multiviewers are Connected

When a computer running Layout Designer cannot discover any multiviewers on the network, the following functionality will not be available in Layout Designer:

- **Enable Control** button on toolbar
- **Global Alarms** and **Global Events** options in the **Rules** menu
- Start, Exit, Connect, Disconnect, Edit, Delete, Restart, Reboot, and Shutdown Multiviewer options in **Tools** menu
- On Screen Messages **Reset** and **Preview Margins** on **Layout** properties pane
- **Publish** option in **File** menu
- Download and Upload tools in the **IP Configuration Manager** (See ***IP Configuration Manager*** on page 70)

You can enable these features by connecting to a multiviewer. See ***Device Manager Dialog Box*** on page 64 for more information.

## Adding Output Displays to the Device List

The first step in configuring your multiviewer is adding it to the Device list. Then you can configure the connected output display.

There are two ways to add a multiviewer to the Devices list. Both methods are performed using the **Device Manager** dialog box.

- Use the Discovery tool to scan the network for devices.

- Manually enter the IP address of the device that you want to set up.

### To open the Device Manager dialog box:

1 Select **Edit** > **Multiviewer Configuration** from the application menu.

## Device Manager Dialog Box

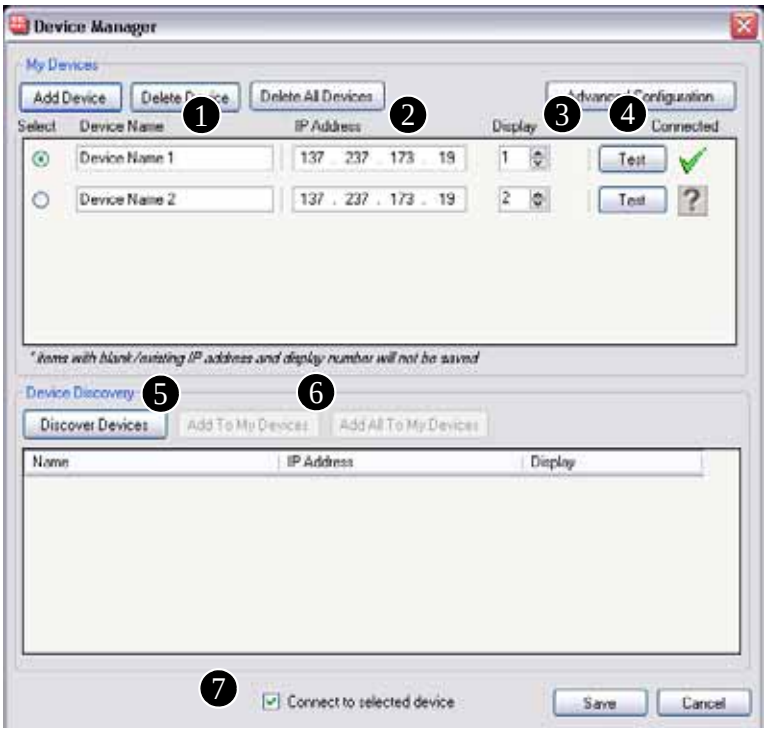



**Figure 5-1** Device Manager Dialog Box

1. Lists by name the devices that have been added to the Devices list. You can add or edit the name of a multiviewer at any time.
2. Lists the IP address of devices in the Devices list. You can add devices to the list manually by typing the IP address of a multiviewer in the **IP Address** field.
3. Displays the number of multiviewer systems or independent displays. The number of displays depends on the display mode; for example, Spanned mode has one.
4. Tests the validity of the device connection by pinging the IP address. Invalid connections are indicated by the **X** icon.

   The Multiviewer application must be running to pass this test.
5. Discovers devices on the network and displays discovered devices by name and IP address.
6. Adds detected devices to the Devices list.
7. When **Connect to selected device** is checked, Layout Designer connects to the specified multiviewer immediately once you click **Save** on the Device Manager dialog box.

## Adding Devices by Scanning the Network

When you use the Discovery tool to add multiviewers to the Device list, Layout Designer scans the network and reports all devices with an IP address. The amount of time that a discovery takes depends on the number of devices you have on your network. Layout Designer may discover devices that you do not want to add to the devices list.

### To discover devices:

1 Open the **Device Manager** dialog box.

2 Under **Device Discovery**, click **Discover Devices**.

3 When the discovery is complete, do either of the following:

- Select the devices that you want to add to the Devices list, and then click **Add to My Devices**.
- To add all of the discovered devices, click **Add All to My Devices**.

The selected devices appear in the Devices list.

4 Click **Save** to save the list and connection information.

You can now set up your multiviewer using Layout Designer's Layout Creation Wizard.

## Adding Devices Manually

To add a multiviewer manually, it must have a valid IP address and reside on the same subnet as the PC that is running Layout Designer.

### To add a device manually:

1 Open the **Device Manager** dialog box.

2 Click **Add Device**.

A new device appears in the Device list.

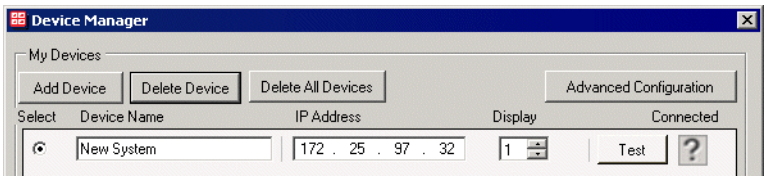



**Figure 5-2** Adding Devices

3 Under **Device Name**, enter a new name for the multiviewer hardware.

4 Under **IP Address**, type the IP address of the multiviewer.

5 Under **Display**, type the number of the display on the multiviewer.

6 To test the validity of the module's connection, click **Test**.

One of the following appears in the **Connection** column.

The connection has not been tested.

The connection is valid.

The connection is invalid.

7 Click **Save** to save the list and connection information.

*If your connection is reported as invalid, check the IP address of the device that you want to add, and then test the connection again. The Multiviewer application must be running for this test to pass.*

# Advanced Configuration

The **Advanced Configuration** dialog box allows you to define different aspects of your device, including its IP, communication options, and output display format.

### To open the Advanced Configuration dialog box:

1 Do either of the following:

- Click **Advanced Configuration** on the **Device Manager** dialog box.
- Right-click on a multiviewer in the Multiviewers panel and select **Advanced Configuration**.

## Configuring Output Display Devices

On the **Display** tab of the Advanced Configuration dialog box, you can output to a single or dual configuration. For information about connecting monitors and other devices, see ***HView IP Hardware*** on page 5.

For the Video Output options, the following terminology is used:

- **Redundant** options display the same content on each screen.
- **Spanned** options display a single layout across multiple screens.
- **Dual** options display two different layouts on two screens.

### To configure your output display devices:

1 Open the **Advanced Configuration** dialog box.

2 Choose the appropriate display format.

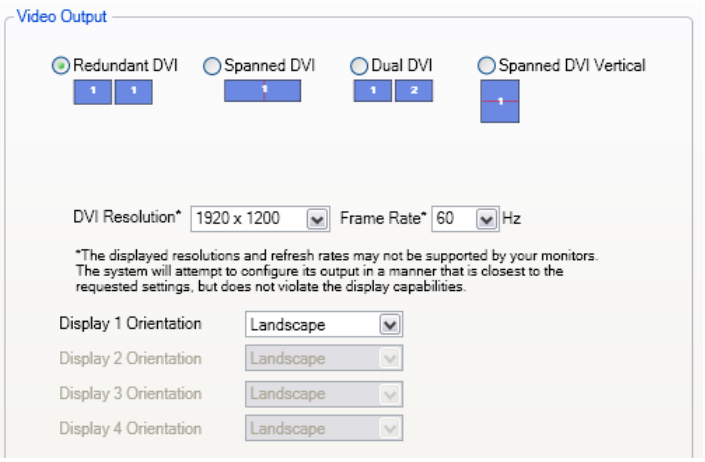



**Figure 5-3** DVI Display Options (Redundant DVI Selected)

3 Choose an output resolution from the **DVIResolution** drop-down list, and set the frame rate, if necessary.

4 To change the orientation of the output from landscape to portrait, select portrait in the **Display # Orientation** drop-down list.

5 Click **Done**.

## Viewing IP Address Settings

Your multiviewer ships with the default IP address 192.168.100.250. You can use this IP address to connect your multiviewer directly to Layout Designer or add the multiviewer to your network.

*To change the IP address, your PC must be on the same subnet as the multiviewer (192.168.100.xxx).*

To view the IP address settings for the multiviewer in the **Advanced Configuration** dialog box, click the **IP Settings** tab.

## Setting Up External Devices

External devices for use with HView IP multiviewers include the JLCooper Electronics eBOX™ Quad Serial to Ethernet Interface for GPI control and monitoring, and UMD devices.

### Adding External Devices

1 Open the **Advanced Configuration** dialog box.

2 Select the **External Devices** tab.

3 In the **Device Name** list, select the multiviewer that the external device is going to communicate with.

4 Beside **Name**, enter a descriptive title for your device.

5 Select the appropriate option from the **Type** list.

**Table 5-1** Supported External Devices

| External Device | Function | Specific Settings |
|---|---|---|
| TSL Protocol | Provides tally and UMD data | N/A for HView IP |
| JL Cooper E-Box | Provides GPI control and monitoring | |
| Image Video Tally | Provides tally and UMD data | |
| Kalypso Tally | Provides tally data | |
| Ross Tally | Provides tally data | |
| D-Series UMD | Provides UMD data | |
| Sony Tally | Provides tally data | |
| Dak RTD | Provides scoreboard data to an info panel or label. See ***Using the Scoreboard Option*** on page 183 for more information. Supports only one device, and only over serial. | Port: COM port 1<br>Data Bits: 8<br>Baud rate: 9600<br>Parity: None<br>Stop: 1 |

6 Beside **Port**, select the communication port that the device is using.

Devices can communicate through either COM Port 1 or TCP/IP.

7 Do either of the following:
   - If the device is communicating through TCP/IP, enter the device's IP address and port.
     The default IP address of the JL Cooper eBOX is 192.168.254.102, and its default port is 23.
   - If the device is communicating through COM Port, enter values for **Data Bits**, **Baud Rate**, **Parity**, and **Stop**.
     These settings should match those of the unit to be communicated with.

8 Click **Add**.
   A row is added to the list at the bottom of the dialog box.

9 Repeat steps 4 to 8 for each external device that you want to add.

### Removing External Devices

If you are no longer using an external device to communicate with your multiviewer, remove it so that the multiviewer no longer accepts inputs from that source.

1 Open the **Advanced Configuration** dialog box.
2 Select the **External Devices** tab.
3 Select an item in the list near the bottom of the dialog box.
4 Click **Remove**.
   The row is removed from the list.

### Binding UMD Addresses to Input Sources

Source UMD functionality is not available for HView IP.

## Getting Version Information

Select the **Version** tab to see version information about the hardware and software components and keys, which is for informational purposes only.

## Configuring Network Time Protocol (NTP)

Use the Network Time Protocol (NTP) synchronizes the clocks of computer systems over internet connections.

1 Open the **Advanced Configuration** dialog box.
2 Select the **NTP** tab.

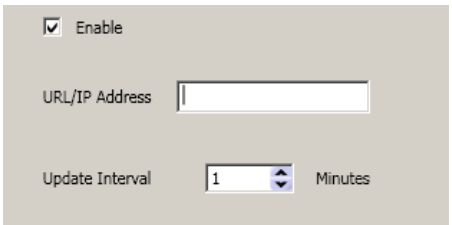



**Figure 5-4** NTP Settings in the Advanced Configuration Dialog Box

3 Click **Enable**.

4 Enter the IP Address or URL of your NTP source.
5 Beside **Update Interval**, select the frequency with which the multiviewer will check for updates.
6 Click **OK**.

## Enabling Alarm Logging

When alarm logging is enabled, alarms are added to the system log, when the Log Message alarm action is set for a particular alarm. See ***Setting Alarm Actions*** on page 166.

1 Open the **Advanced Configuration** dialog box.
2 Select the **Miscellaneous** tab.
3 Click **Enable Alarm Logging**.

# IP Source Update

The first time you connect to amultiviewer device, it has no database. Subsequently, if you switch to a different, already configured multiviewer, the following screen appears:

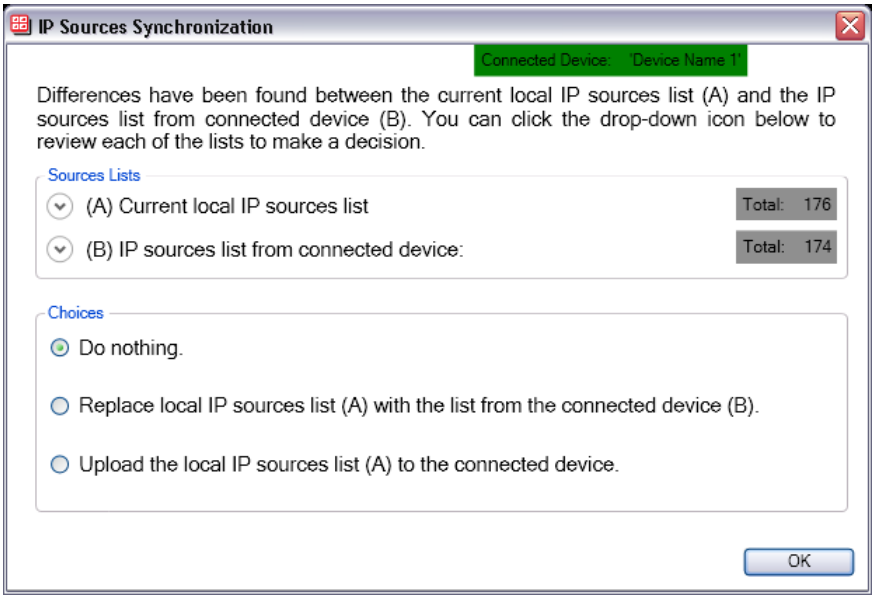



**Figure 5-5** IP Sources Update Dialog Box

Layout Designer can refer to only one database of IP sources at a time, so you must choose whether to use the current database or switch to the database used by the new (different) multiviewer.

### To complete the window

1 (Optional) To view the different databases, click the down arrows beside A and B.

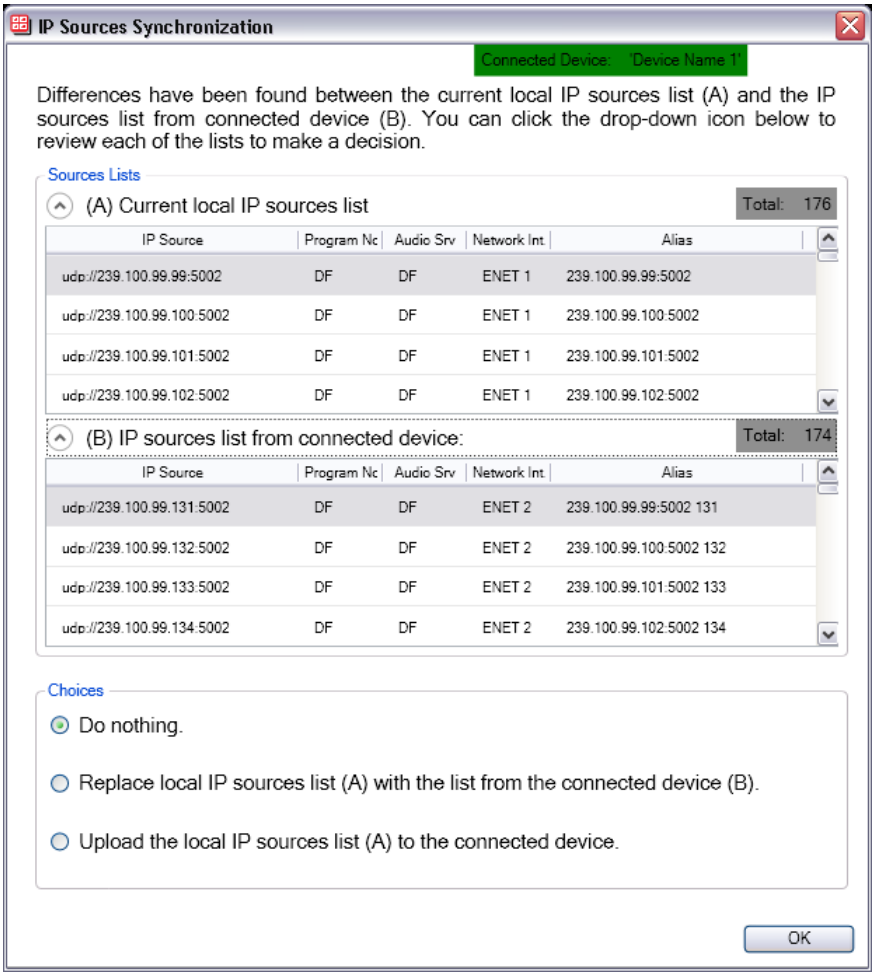



**Figure 5-6** IP Sources Update Dialog Box, with Lists Expanded

You can now sort and compare the two lists.

2 Choose one of the following:

- **Do Nothing**—Both devices retain their own sources lists. This can create problems where dissimilarities occur.
- **Replace local IP sources list (A) with the list from the connected device (B)**—Both HView IP and Layout Designer use the list stored on the multiviewer. (You can perform this function later using the IP Configuration Manager. See ***Downloading IP Sources*** on page 76)
- **Upload the local IP sources list (A) to the connected device**—Both HView IP and Layout Designer use the list stored on Layout Designer. (You can perform this function later using the IP Configuration Manager. See ***Uploading IP Sources*** on page 75)

3 Click **OK** to close the window.

# IP Configuration Manager

IP sources are configured using the IP Configuration Manager. You can open the IP Configuration Manager as long as Layout Designer is physically connected to a multiviewer.

The IP Configuration Manager can be accessed from the following locations:

- **PiP** properties pane
- **Info Panel** properties pane
- **Audio Meter** properties pane
- **5.1 Audio Meter** property pane
- **Scrolling Regions** property pane (click the **Add** button)
- Main menu under **Edit** > **IP Configuration Manager**
- Third page of the Layout Creation Wizard
- **Change PiP Source** action (alarms and rules)

The top portion of the IP Configuration Manager displays a list of all the sources currently configured for the specified Multiviewer.

*A new multiviewer starts with no list of sources.*

Each row in the table represents a single source. Information defined for each source is explained in **Table 5-2**.

**Table 5-2** Sources List

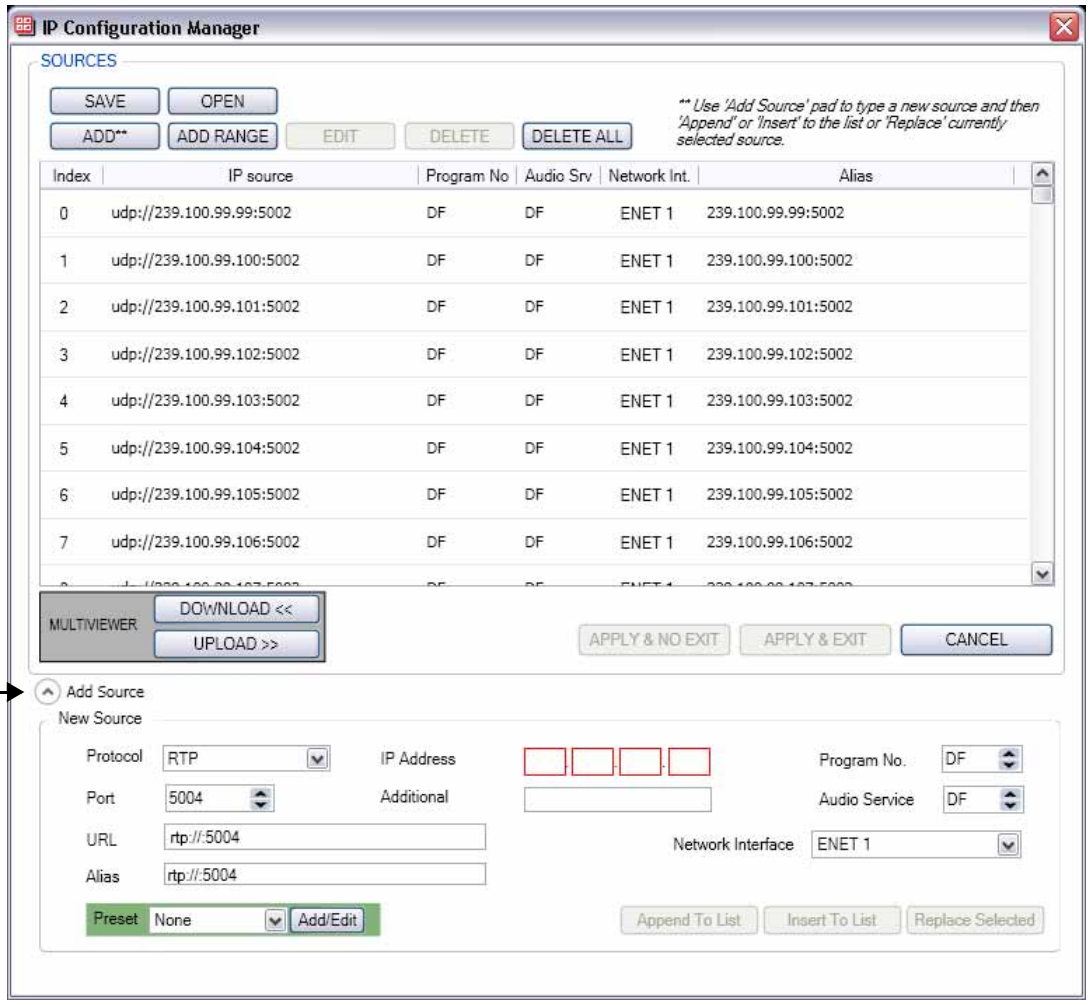
| Item | Description |
|---|---|
| Index | System-generated number that you can select this IP address by. |
| IP Source | The specific address at which the IP source is derived. |
| Program Number | Displays the program within the video stream that is decoded. When set to DF (default), the first program in the IP source is displayed. |
| Audio Service | Displays the audio pair (channel) to decode. When set to DF (default), the first audio service in the IP source is displayed. |
| Network Interface | Displays the type of interface used for this IP source. |
| Alias | User-defined name for the IP address. |

To monitor more than one audio service from an IP source that contains more than one, create a separate entry for each service in the IP source database for each service.

You can monitor a Dolby audio service on the audio meters only, and not through the audio monitor output.

You can modify the contents of a row by selecting the row and then clicking Edit. See ***Editing an IP Source*** on page 75.

The bottom portion of the dialog box opens with different options depending on the function you are performing.




**This section of the screen is closed by default, and displays differently depending on the option selected.**

**Figure 5-7** IP Configuration Manager Dialog Box with Add Source Selected

## Adding an IP Source

To add an IP source for a multiviewer, follow these steps:

1. In the IP Configuration Manager dialog box, click **Add**.
   The lower half of the dialog box opens or updates to appear similar to **Figure 5-7**.
2. Complete the following fields:

**Table 5-3** Options for Adding Sources in the IP Source Manager Dialog Box

| Item | Description and Options |
|---|---|
| Protocol | The multiviewer supports the following protocols:<br>■ **RTP** (Real Time Protocol or Real-time Transport Protocol) is a data transport protocol specifically designed for transporting real-time signals such as streaming video and audio. RTP is often used in conjunction with UDP and provides packet sequence numbering and packet time stamping. RTP is used in conjunction with RTCP (Real Time Control Protocol), a data transport control protocol for transporting real-time media streams and including functions to support synchronization between different media types (eg. audio and video) and providing information to streaming applications about network quality, number of viewers, identity of viewers, etc.<br>■ **RTSP** (Real Time Streaming Protocol) is a protocol used to set up and control real-time streams. It is commonly used to create links on Web sites that point to streaming media files.<br>■ **UDP** (User Datagram Protocol) is a data transfer protocol used on IP networks that offers connectionless, stateless data transport. It is often used in video transport applications (along with RTP) because it offers low overhead and does not provide automatic rate reductions and packet retransmissions (supplied by TCP) that can interfere with video transport. |
| IP Address | Enter the IP address of the source |
| Port | Enter the port |
| Program Number | Enter the program within the video stream to be decoded |
| Audio Service | Enter the audio pair (channel) to decode |
| Additional | ■ Streaming |
| URL | This field is automatically filled in while entering data in the **Protocol**, **IP address**, **Port**, and **Additional** fields. |
| Alias | Enter an alternate name for the source (optional) |
| Network Interface | When looking at the back of the frame:<br>■ **ENET 1** is the port on the left (default), and is normally used for streaming video.<br>■ **ENET 2** is the port on the right, and is normally used for Layout Designer and networking. |

**3** Once the Alias has been designated, the **Append**, **Insert**, and **Replace** options become available. Choose one of these options to add the IP source to the **Sources List**.

- **Append to List**—Adds the IP source at the end of the Sources list.
- **Insert to List**—Adds the IP source above the currently selected item in the sources list. All following indexes below this point are increased by one.
- **Replace Selected**—Places the IP source instead of the currently selected item in the sources list. Items below this item in the list retain their index identifications.

## Adding a Range of IP Sources

To add a range of IP sources for a multiviewer, follow these steps:

1 In the IP Configuration Manager dialog box, click **Add Range**.
The lower half of the dialog box opens or updates to appear similar to **Figure 5-8**.

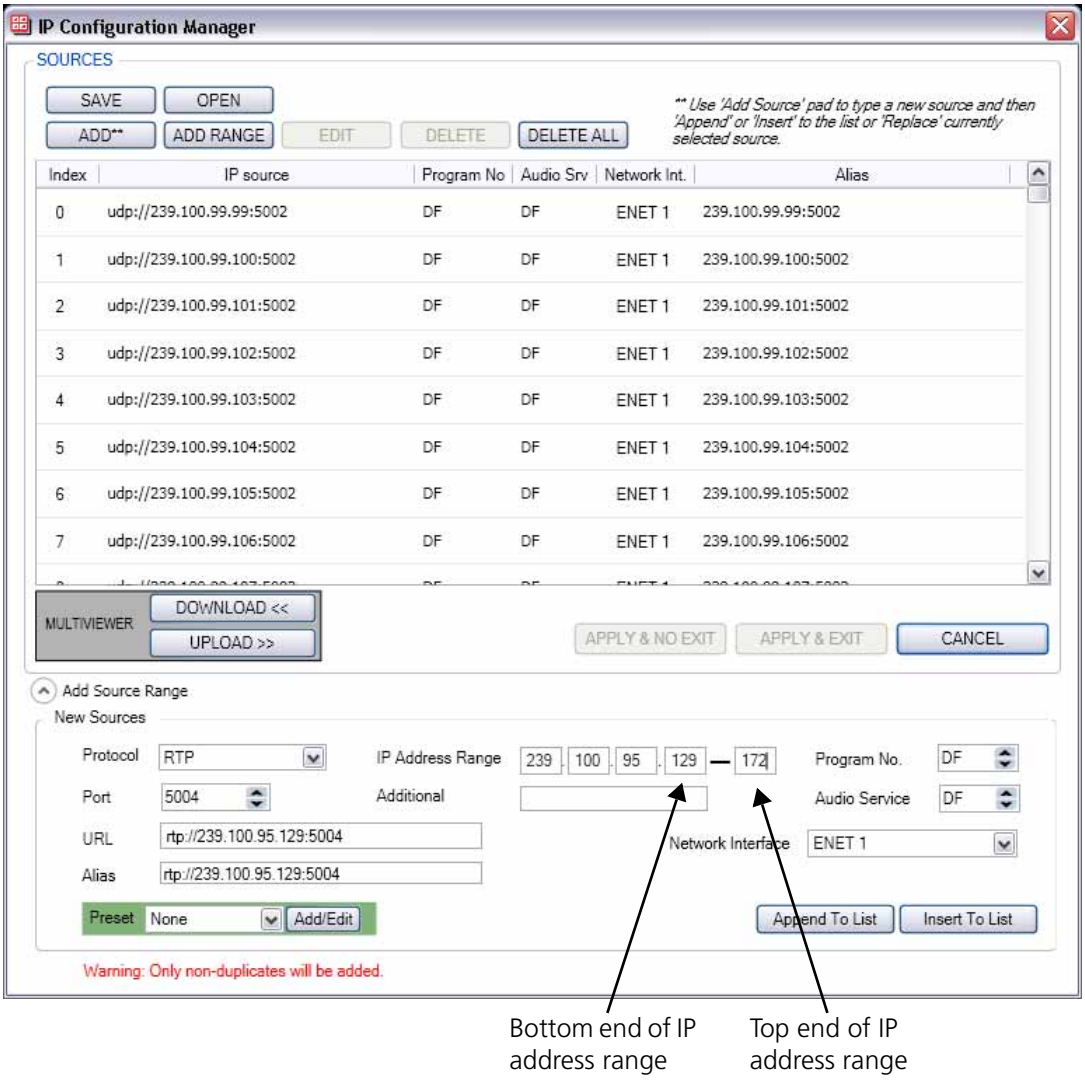



**Figure 5-8** Adding a Range in the IP Configuration Manager

2 Complete the fields in the Add Source Range section of the screen, as described in **Table 5-3**.
For a range of IP addresses, add the low end of the final octet in the field with the rest of the IP address, and the high end of the range of the final octet in the field to the right.

3 Once the Alias has been designated, the **Append to List** and **Insert to List** options become available. Choose one of these options to add the IP source to the **Sources List**.

- **Append to List**—Adds the IP source range at the end of the Sources list.
- **Insert to List**—Adds the IP source range above the currently selected item in the sources list. All following indexes below this point are increased by one.

## Editing an IP Source

You can edit an IP source, changing only some of the data associated with that source without deleting the source from the sources list. Follow these steps:

1 In the IP Configuration Manager dialog box, select a row in the **Sources List** table, and then click **Edit**.

The lower half of the dialog box opens or updates to appear similar to **Figure 5-9**.

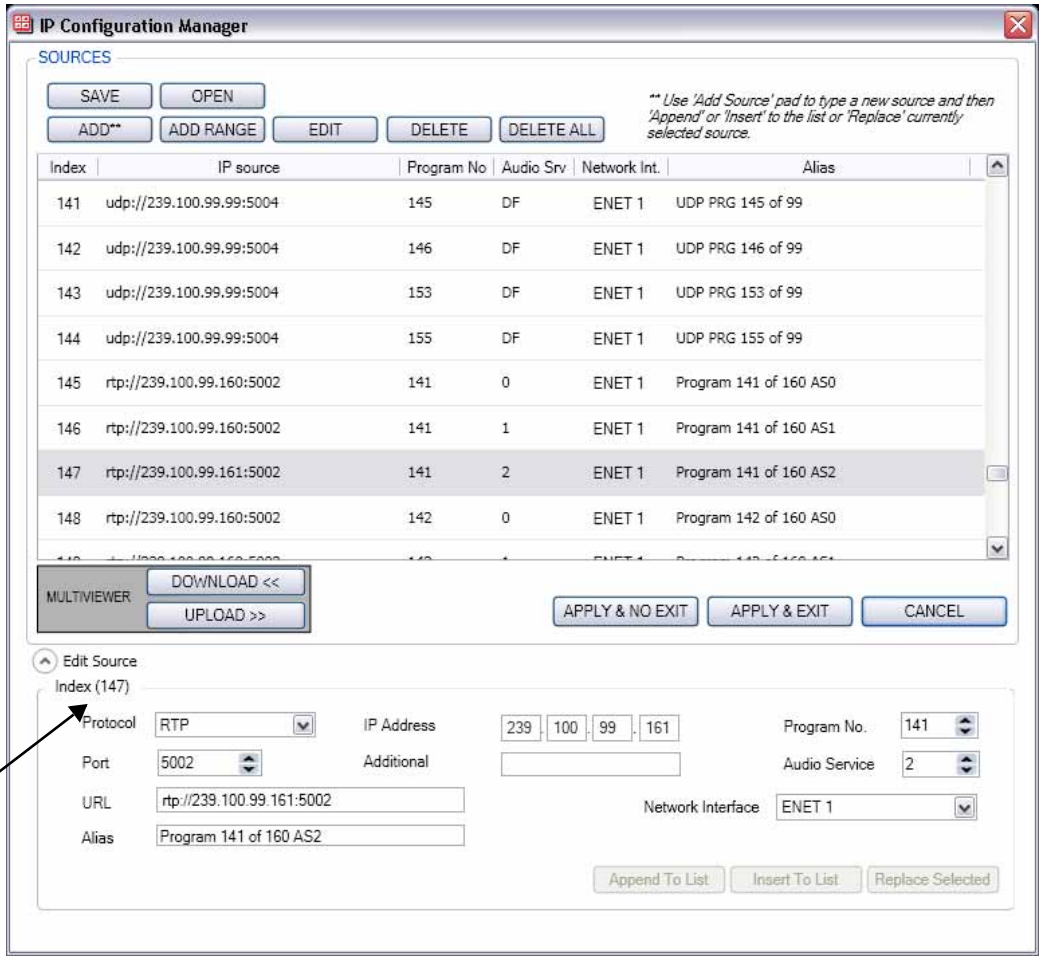



**Figure 5-9** IP Configuration Manager Dialog Box with Edit Source Selected

2 Make changes to the settings, as described in **Table 5-3**.

Changes appear in the SOURCES table as you make them.

You can make edits to other sources by clicking a different row in the SOURCES table. Once a row in the table is selected, use your keyboard's arrow keys to move up and down the list.

3 Click **Apply & No Exit** to save the changes on the Layout Designer PC only, or **Apply and Exit** to save the changes locally and close the window.

4 To save the changes to the multiviewer, see ***Uploading IP Sources*** on page 75.

## Uploading IP Sources

To upload sources to the multiviewer, follow these steps:

1 In the IP Configuration Manager dialog box, click **Upload**.

The lower half of the dialog box opens or updates to appear similar to **Figure 5-10**.

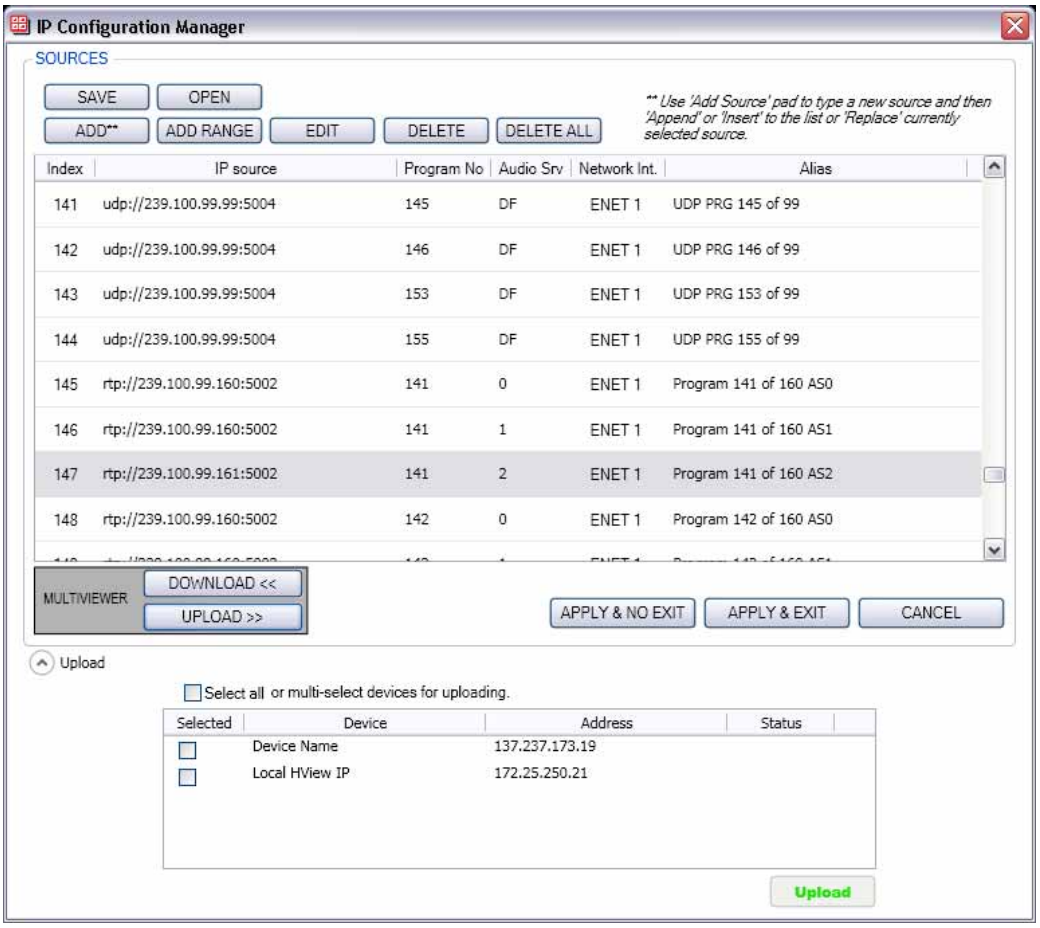



**Figure 5-10** Upload Sources Portion of IP Configuration Manager Dialog Box

2 Do either of the following:

- To upload the same IP sources to more than one multiviewer in this session, place a check beside **Select all or multi-select devices for uploading**.
- Place a check beside each device you want to upload the same IP sources to.

3 Click **Upload**, and then click **OK** to confirm.

The IP settings are done on a per-multiviewer basis, so IP sources are replaced on all layouts on that multiviewer.

The Status column in the **Upload** table of the IP Sources Update dialog box indicates whether your upload was successful.

## Downloading IP Sources

To download the IP Sources database from a multiviewer, follow these steps:

1 In the IP Configuration Manager dialog box, click **Download**.

The lower half of the dialog box opens or updates to appear similar to **Figure 5-11**.

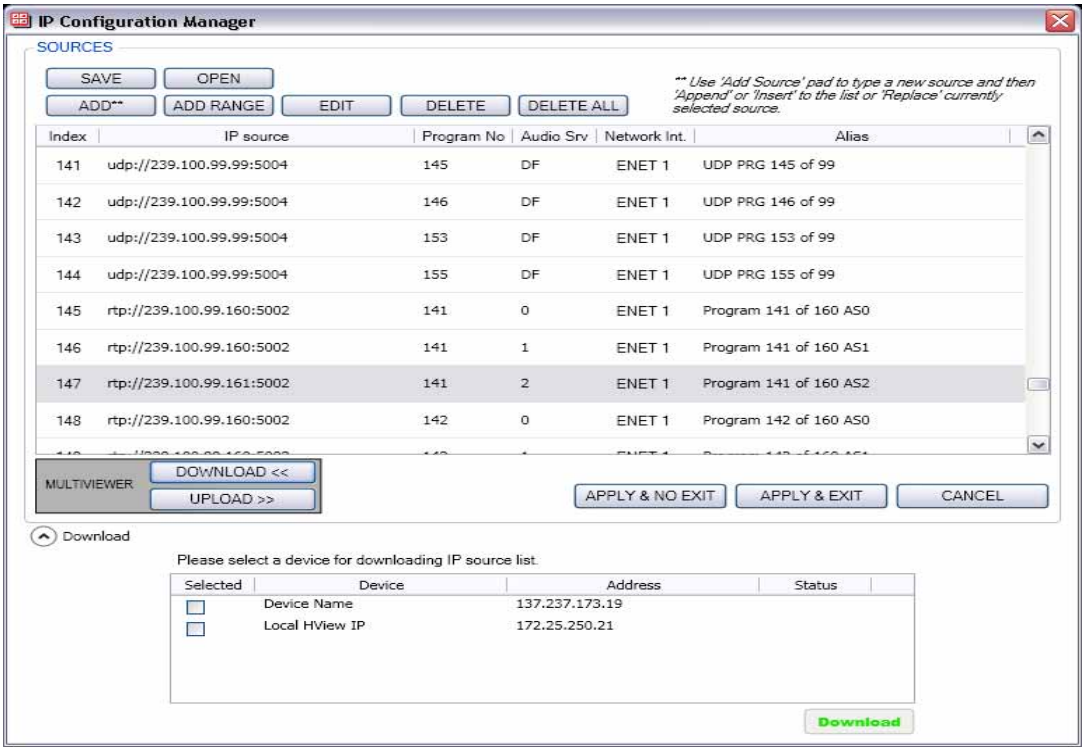



**Figure 5-11** Download Sources Portion of IP Configuration Manager Dialog Box

2 Select the device you want to download the same IP sources from.

3 Click **Download**, and then click **OK** to confirm.

Messages appear at the bottom of the dialog box, indicating the stage of the activity. When downloading is complete, the **Status** column of the **Download** table updates to indicate the success or failure of the procedure.

### Saving IP Sources

When you click **Save** on the IP Configuration Manager, a dialog box opens. To save the table contents as an XML file, select a location and file name and then click **OK**.

## Opening a Saved IP Sources File

To open an XML file containing a previously-saved list of IP sources, follow these steps:

1 On the IP Configuration Manager dialog box, click **Open**.

A dialog box opens.

2 Browse to the location of the saved file, click on the saved file, and then click **Open**.

### Deleting IP Sources

To delete a source from an IP source table, follow these steps:

1 In the IP Source Manager dialog box, select the row that contains the IP source targeted for deletion.

2 Click **Delete**.

The row disappears from the table.

3 Click **Apply & No Exit** to save the changes on the Layout Designer PC only, or **Apply and Exit** to save the changes locally and close the window.

To ensure your change is saved, upload the file to the multiviewer, and save the file as an XML file. See the following topics:

- ***Uploading IP Sources*** on page 75
- ***Saving IP Sources*** on page 77

## Using IP Source Profiles

Use an IP source profile to add similar devices with similar settings to the IP Configuration Manager.

### Creating an IP Source Profile

With the **IP Configuration Manager** dialog box open, follow these steps:

1 If the **Add Source** portion of the screen is not open, click **Add**.

2 Beside Preset, click Add/Edit.

The **Layout Designer Preferences** dialog box opens.

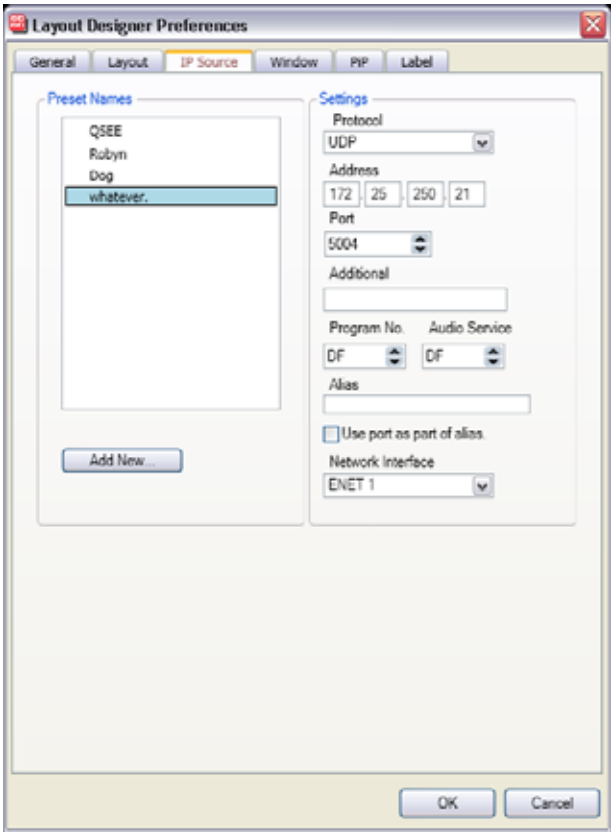



**Figure 5-12** IP Source Preferences

3 Click **Add New**.

A new row appears in the Preset Names list.

4 Click the new row and enter an unique name for the preset.

5 Complete the rest of the screen.

The contents of the **IP Sources** screen are described in **Table 5-3**.

6 Check **Use port as part of alias** if you want the port number appended to the alias name.
7 Click **OK**.

## Modifying an IP Source Profile

With the **IP Configuration Manager** dialog box open, follow these steps:

1 If the **Add Source** portion of the screen is not open, click **Add**.
2 Choose a preset from the **Preset** menu, and then click Add/Edit to open the **Layout Designer Preferences** dialog box to the **IP Source** tab.
3 Update the settings in any field, and then click **OK**.

## Using an IP Source Profile

In the **IP Configuration Manager** dialog box, follow these steps:

1 If the **Add Source** portion of the screen is not open, click **Add**.
2 Choose a preset from the **Preset** menu.
The Add Source portion of the screen updates to display the default settings in that preset.

3 Update the settings in any field.
4 Change the content of the **Alias** field.
The **Append**, **Insert**, and **Replace** options become available.

5 Choose an option to add the IP source to the **Sources List**.

# 6 Working with Layouts

## About Layouts

Layouts are made from an arrangement of windows, PiPs and other layout objects, including windows, PiPs, labels, tally indicators, clocks, up/down counters, and on-screen alarms. The largest single unit of a layout is a window. Windows are containers that are used to store a compilation or arrangement of layout objects, such as PiPs, audio meters, and tally indicators. PiPs, the main component of layouts, display video from the multiviewer's various input sources.

Layout Designer provides a number of different ways to create new layouts for display on your multiviewer system. After layouts are created, you can use the editing options to define how you want the layout to appear in output display devices.

Use the Layout Designer to modify the default assignment of video before displaying the layout in the output display devices.

Layout objects do not need to be part of a window to be displayed in a layout.

The following figure illustrates a layout comprised of windows and layout objects.

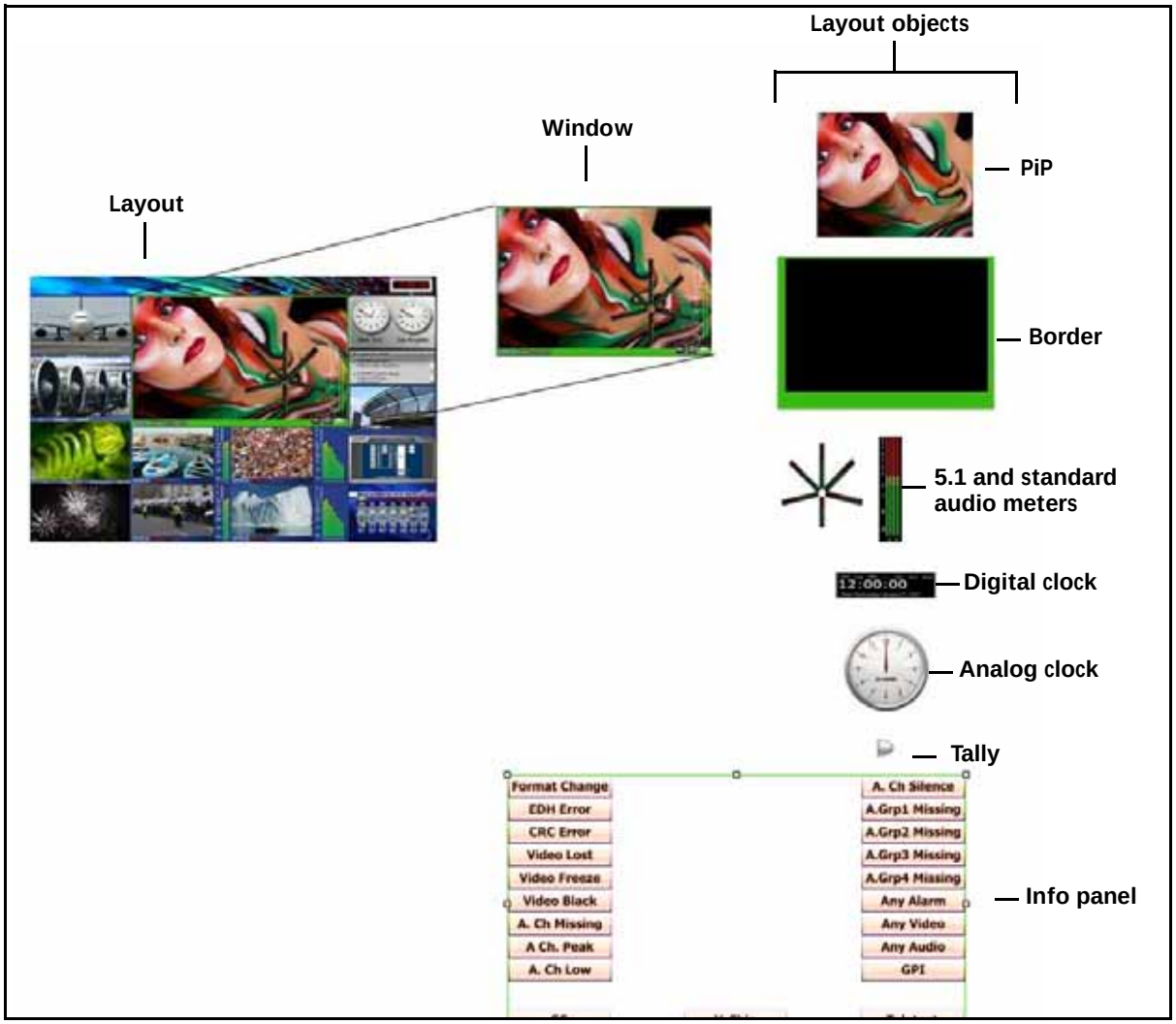



**Figure 6-1** Layout, Windows, and Layout Objects

Windows are similar to grouped layout objects with the exception that windows have a set of distinct properties associated with them. You can apply properties, such as scrolling properties, to affect how the window looks and behaves in a layout. Grouped layout objects are defined by the individual object properties. For information about creating and editing windows, see ***Creating Layout Windows*** on page 109.

The display characteristics of a layout are determined by layout objects including PiPs, alarms, and audio meters. In additional to these objects, PiPs are associated with attributes: borders and labels. In layouts, the position and appearance of layout objects and PiP attributes are determined by properties.

## Creating New Layouts

It is important to know the native resolution of the display monitor before you create an optimized layout. The native resolution varies from manufacturer to manufacturer. Please refer to your display monitor's manual to find the native resolution.

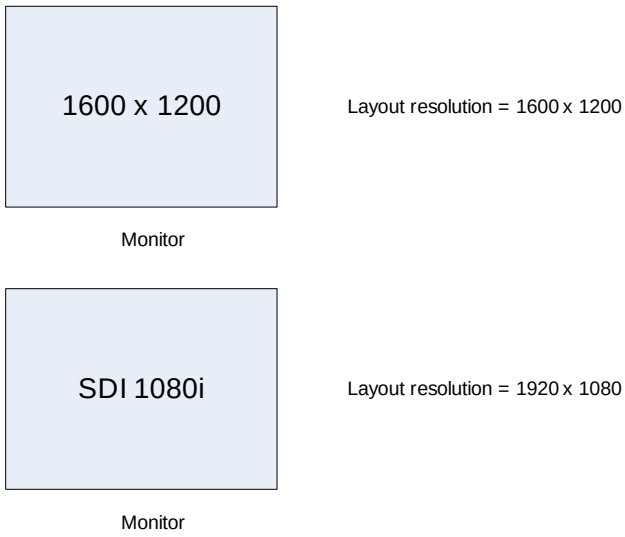



**Figure 6-2** Sample Monitor Resolutions and Layout Designer Resolutions

There are two ways of creating layouts: online and offline.

New layouts can be created "online," which means you can take a published layout, edit it in Layout Designer, and then re-publish it.

New layouts can be created "offline," which means that you can use Layout Designer to create a layout, save it to a network or local drive, and then publish it to a connected multiviewer at a later time. You do not need to be connected to a multiviewer to create and save new layouts. (You must be connected to an multiviewer to publish layouts to it.)

After you create your layout, save it to a layout (*.lay*) file. For information about saving layouts, see ***Saving Layouts*** on page 91.

## Layout Creation Workflows

There are a number of different ways or workflows that you can follow to create or edit existing layouts. These workflows depend on the level of customization and complexity that your new layout requires. You can modify layouts at any time by adding layout objects, such as audio meters, on-screen video alarms, or rules.

You can also drag layout objects from the Library panel and drop them on the layout that is currently in the canvas.

There are two main workflows that you can use to start creating your new layouts: using the Layout Creation Wizard, and using a blank layout.

## Creating a New Layout Using the Layout Creation Wizard

Using the Layout Creation Wizard, you can create customized layouts by defining the layout's basic building blocks, including layout output resolution, the arrangement of PiPs (the number of PiPs across and the number of PiPs down) in the layout, as well as the style of the PiPs in the layout. The selection of PiP styles that you can choose are defined by the PiP styles listed in the **PiP** tab of the Layout Designer Library. The Layout Creation Wizard dialog box has a preview window that displays how your layout will appear in the Layout window.

After you have created the layout, you can add layout objects such as audio meters, tally indicators, and alarms. You can then save your custom layout to a layout (*.lay*) file.

The following figure illustrates the different options available when you create a new layout from the Layout Creation Wizard.

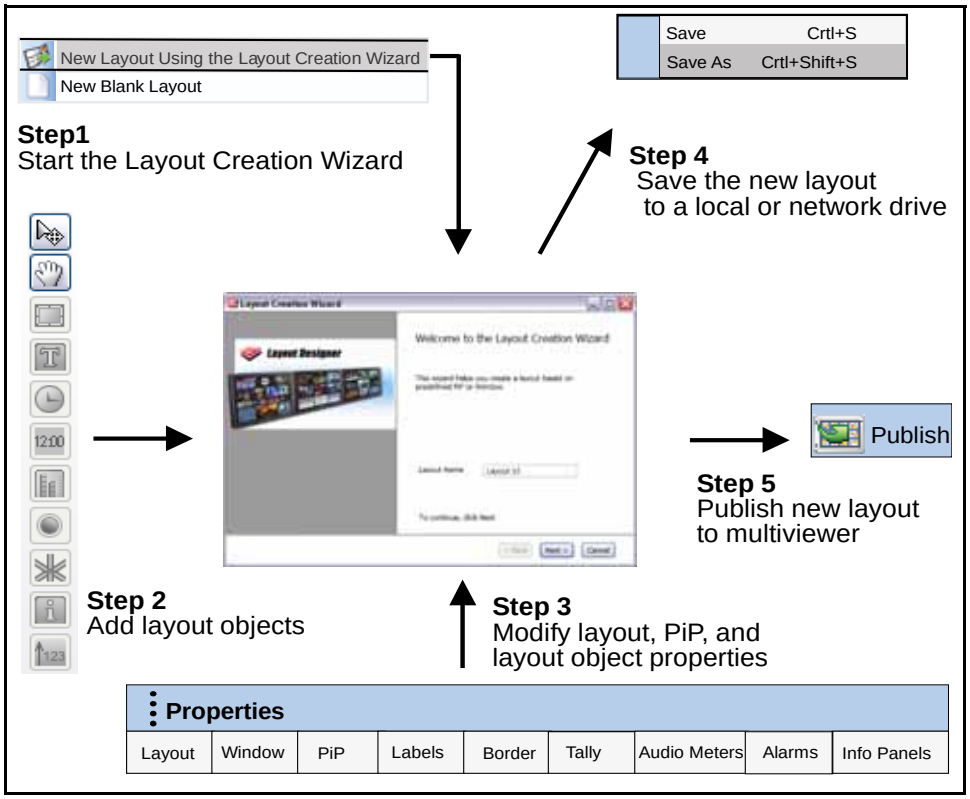



**Figure 6-3** Creating a New Layout Using the Layout Creation Wizard

*Clicking on any layout object in the Tools palette creates that object on the design canvas. You cannot drag and drop objects to the canvas.*

For more information about customized layouts, see ***Using the Layout Creation Wizard*** on page 84.

## Using the Layout Creation Wizard

Use the Layout Creation Wizard to create custom layouts that you can save, and then publish to your multiviewer for display.

*Initial settings for many portions of the Layout Creation Wizard are derived from user preferences (**File** > **Edit** > **Preferences** > **Default Properties**).*

1 To access the **Layout Creation Wizard**, select **File** > **New** > **Layout Using Layout Creation Wizard**.

The **Layout Creation Wizard** dialog box opens.

2 In the **Layout Name** field, enter a name for your new layout.

The layout name is used to identify the layout on the **Properties** pane and when the layout is published to your multiviewer hardware.

3 Click **Next**.

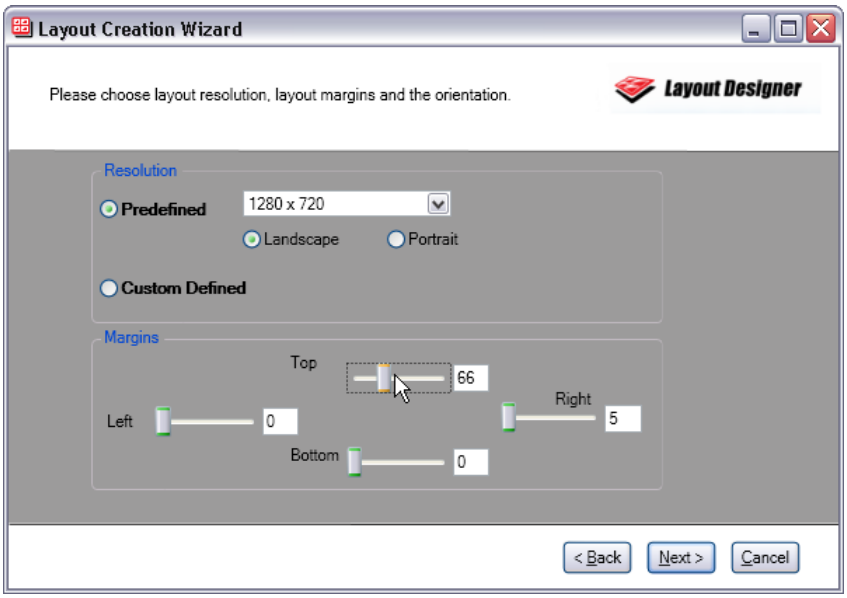



**Figure 6-4** Wizard Page 2—Resolution and Margins

4 To select an output resolution, under **Resolution**, do either of the following:

- For a standard output resolution, select **Predefined**, choose either **Landscape** or **Portrait**, and then make a selection from the **Output Resolution** list.
- For a custom output resolution, select **Custom Defined,** and then type or select values for width and height.

For best results, select an output display resolution that matches the native resolution of your output display device.

5 Under **Margins**, enter the amount of the layout area you would like to have reserved, so that objects, including the background, cannot be placed there.

The margin setting does not affect the size or resolution of the layout as a whole. The maximum size for margins will vary depending on the resolution of the layout.

6 Click **Next**.

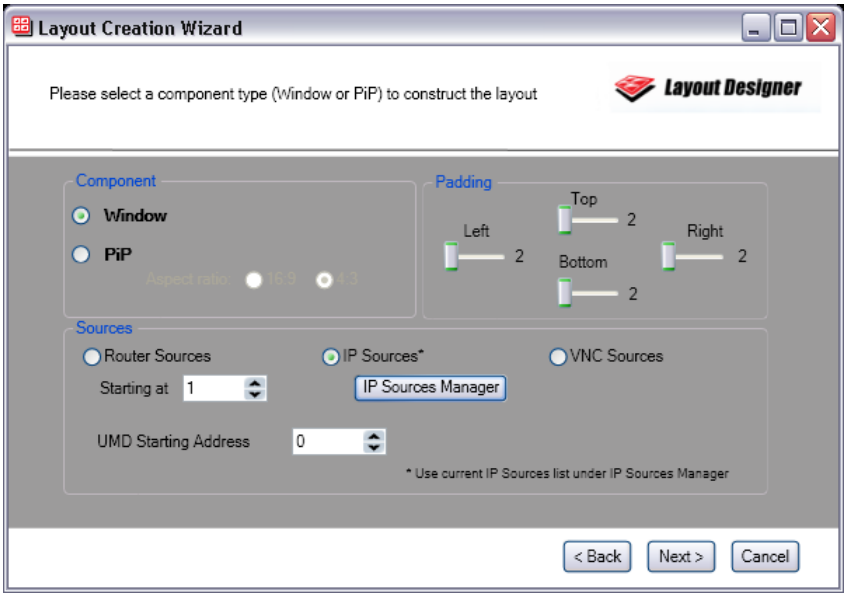



**Figure 6-5** Wizard Page 3—Component Type

7 Under **Component**, select either **PiP** or **Window**.

The component type you choose here will be the basic item that will fill your layout.

If you choose **PiP**, select the an aspect ratio.

The aspect ratio you select determines the PiPs that are available when you select a style from the **Select PiP** tab. For example, if you want to select a style from the **16:9** tab of the **PiP** Library, select 16:9 from the **Aspect Ratio** list.

8 Below **Source**, choose one of the following:

- IP Sources (See ***Selecting an IP Source*** on page 129)
- VNC Sources (See ***Selecting a VNC Source*** on page 128)

9 Select a select a starting source for your PiPs.

The Source PiP property of the first PiP will be set to the value of Starting Source, and following PiPs will use the next sources in sequential order.

*To find the index number for the first source of the layout, you can click **IP Sources Manager**, and then use cancel to return to the wizard.*

10 Beside **UMD Address**, enter the first number as output by your UMD device when using layouts with a fixed UMD address.

11 Under **Padding**, choose the amount of padding to add to the top, bottom, left, and right of components in the layout.

Padding is the distance between the components.

12 Click **Next**.

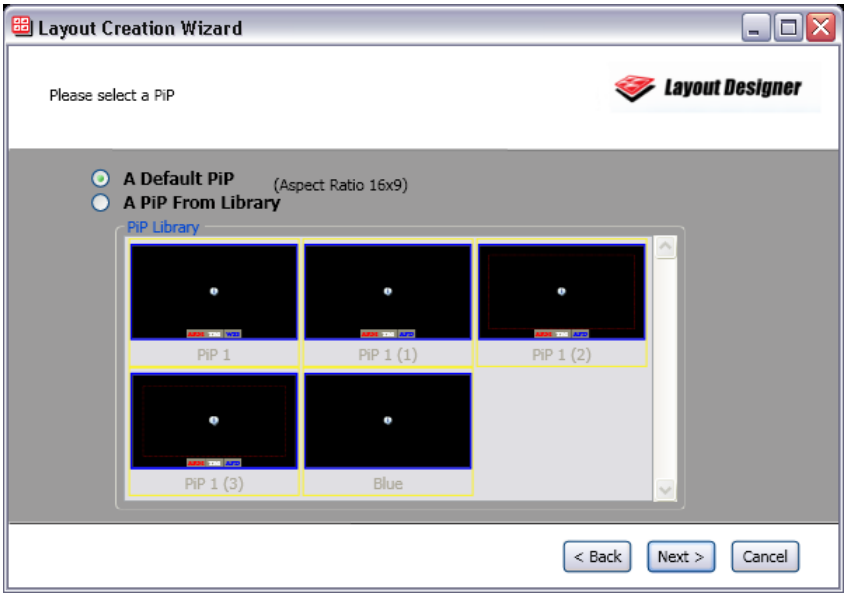



**Figure 6-6** Wizard Page 4—Choose PiP or Window Format

**13** Depending on whether you chose to populate your layout with PiPs or windows, do either of the following:

- If you chose PiPs on the previous page of the wizard, select the PiP style you want to use for your new layout.

  Click **Default PiP**, in which case the PiP will match the settings as configured in the Default Properties tab of the Preferences window, or click **A PiP from Library**, and then choose a PiP from the **PiP Library** field. Only the page of the PiP library which has the aspect ratio you chose on the previous page will be available.

- If you chose windows (which includes PiPs and other layout objects) on the previous page of the wizard, select the window style you want to use for your new layout from the **Window Library**.

  If the window you choose has alarms, you can select **Keep Alarms**, and the alarm settings, except those that point to controls outside the window, are retained and will appear in the new layout. When a window has no alarms, this option is unavailable.

**14** Click **Next**.

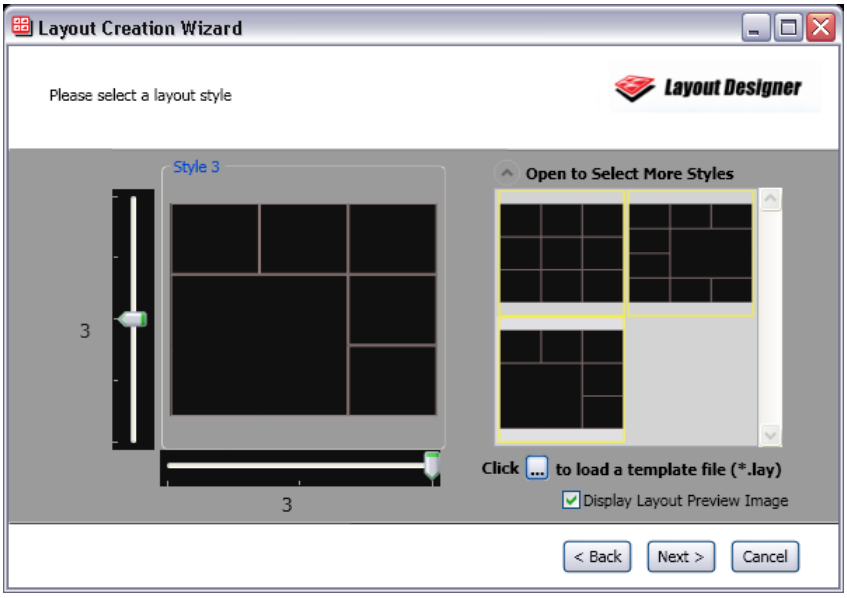



**Figure 6-7** Wizard—Choosing a Layout Style

**15** Use the tools on this page to assign a number of rows and columns of PiPs or windows on your layout.

Drag the slider to the left of the preview to change the number of rows of displays, and drag the slider below the preview to change the number of columns. The range these sliders can be dragged through depends on settings you made in previous pages of the wizard.

**16** (Optional) To choose a non-uniform style of layout (where PiPs or windows may vary in size), click **Open to Select More Styles**, and then click on a style in the pane that appears. The additional styles will update as you move the sliders on the preview pane.

If you choose a previously stored layout for your layout style, click the **Browse** button, and then choose any *.lay file, and then Click **OK**.

When you click **Next**, if you have chosen a custom layout, these options appear:

**Use selected PiP** or **Window (contains PiP) to:**

- **Replace all windows that contain PiPs**—replaces all windows with the default window or PiP selected in the wizard.
- **Replace all PiPs that are not in the windows**—replaces all PiPs with the default window or PiP selected in the wizard.

If both options are selected, then all windows and PiPs are replaced with the default PiP or window.

If neither option is selected, then no PiPs or windows are replaced with the default PiP or window.

**17** (Optional) Click **Display Layout Preview Image**.

**18** Click **Next**.

The final screen of the wizard displays a preview of your layout, if you chose **Display Layout Preview Image** on the previous screen.

**19** To complete the layout and exit the **Layout Creation Wizard**, click **Finish**.

Before you make changes to the layout or publish your new layout, save it as a layout file on a local or network drive. See ***Saving Layouts*** on page 91.

You can add layout objects (such as clocks and tally indicators, audio meters, and on-screen alarms) to your layout before publishing the layout to your multiviewer. You can also modify layout and layout object properties such as re-assigning input channels to PiPs. See the following sections for more information:

- ***Layout Properties*** on page 96
- ***Layout Object Properties*** on page 103
- ***Formatting Layout Objects in the Canvas*** on page 105
- ***About Monitoring Tools*** on page 157

## Creating a New Layout from a Blank Layout

When you select a blank layout as the starting point, there is no pre-arrangement of PiPs or other layout objects in the layout canvas. You must add all of the layout objects, including PiPs, to your new layout by either dragging them from the Library panel or by inserting the objects using the Tool palette. You can also add layout objects by using the application menu's insert commands.

*Layout Designer does not restrict you from positioning PiPs so that they overlap one another.*

After you add PiPs and objects to your new layout, you can use Layout Designer's formatting tools, such as Align and Distribute, to create custom PiP arrangements. You can also use the Properties pane to modify the layout, PiP, and object properties, as well as add audio meters and alarms. You can then save your custom layout to a layout (*.lay*) file.

The following figure illustrates the different options you can use to create a new layout from a blank layout.

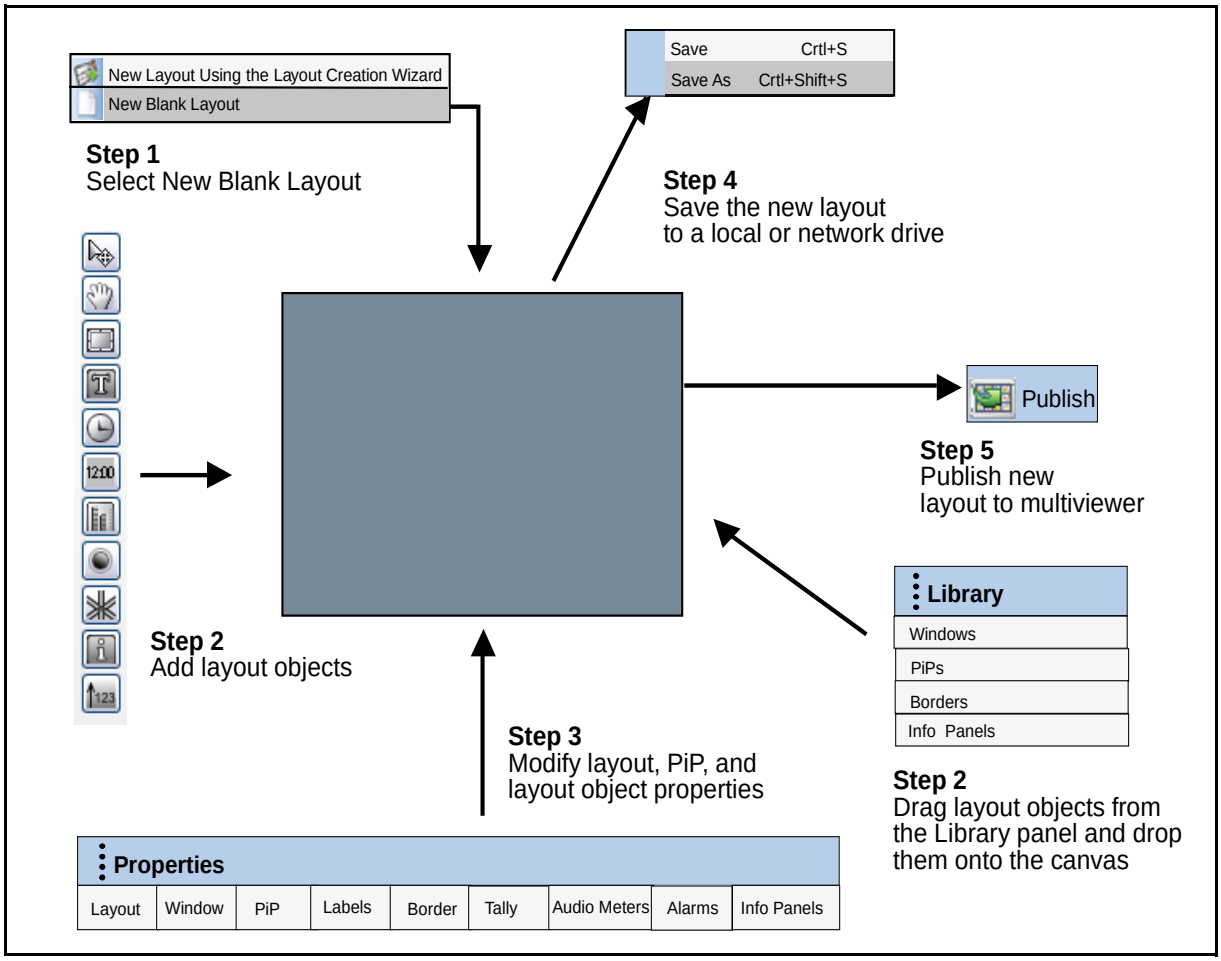



**Figure 6-8** Creating a New Layout from a Blank Layout

## Using a Blank Layout

You can create a layout by dragging layout objects from the Layout Designer Library onto a blank layout.

### To create a layout from a blank layout:

1 Select **File** > **New** > **Blank Layout**.

The Layout window opens and displays a blank layout.

2 Set the layout properties using the **Properties** pane.

For information about viewing and setting layout properties, see ***Viewing Layout Properties*** and ***Modifying Layout Properties*** on page 96.

## Locking and Unlocking Layouts

When a layout is locked, it displays a closed padlock icon in the top left corner of the layout tab. When it is unlocked, the padlock icon is open.

The Lock/Unlock Layout button is on the button bar at the top of the Layout Designer screen.

### To lock a layout:

1. Click **Lock Layout**.

You can use the Properties panel to adjust attributes of objects in the layout, but you cannot add, delete, or move objects in the layout. Context menus do not appear when you right click on a locked layout.

### To unlock a layout:

1. Click **Unlock Layout**.

You can drag and drop items in the layout, in addition to adjusting the attributes of objects in the Properties panel.

## Saving Layouts

After creating a new layout using the Layout Creation Wizard or a blank layout, you can save your layout. Layouts saved as layout files are opened using Layout Designer's **Open Layout** command.

You can save your layout as layout (.lay) files to a local or network drive so that you can open the layout in Layout Designer at any time. Layouts that have been changed since they were last saved have an asterisk (*) in the layout tab.

### To save your new layout as a layout file:

1. Select **File > Save As**.
2. Type a name for your new layout in the **Save As** dialog box, and then click **OK**.

*When you close Layout Designer, you are offered the opportunity to save layouts. For more information, see* ***Closing Layout Designer*** *on page 60.*

To save all open layouts, select **File** > **Save All**.

To overwrite the layout when you have already saved it, select **File** > **Save**.

## Opening Layouts

If you have closed a layout, depending on where it was saved, you can open it in the following ways:

- If the layout was published to a multiviewer and you are connected to that multiviewer, double-click the layout in the **Multiviewers** pane.
- If the layout was saved to a hard drive, USB key, or other backup storage system, from the main menu select **File** > **Open** and then browse to the location where the layout was saved. Select the layout and click **Open**.

The layout opens in a locked state.

# Viewing Layouts

To display a layout on the layout canvas, you must connect Layout Designer to the HView IP multiviewer, and then select the layout you want to display. You can open multiple layouts in the layout canvas; however, you can only view one layout at a time. You can toggle between the different layouts that are currently open in the layout canvas by clicking the tabs located at the top of the layout canvas (see **Figure 6-9**). When a layout is displayed in the canvas, you can modify its appearance and add new layout objects. You can create new layouts, edit existing layouts, and define audio and video alarms and rules.

*If you want to modify a layout, you may need to unlock it. See **Locking and Unlocking Layouts** on page 90.*

For information about how to connect Layout Designer to a HView IP multiviewer and select layouts for display on the layout canvas, see ***Connecting Layout Designer to an HView IP Multiviewer*** on page 93 and ***Displaying and Publishing Layouts*** on page 94.

**Figure 6-9** illustrates an overview of Layout view options and controls.

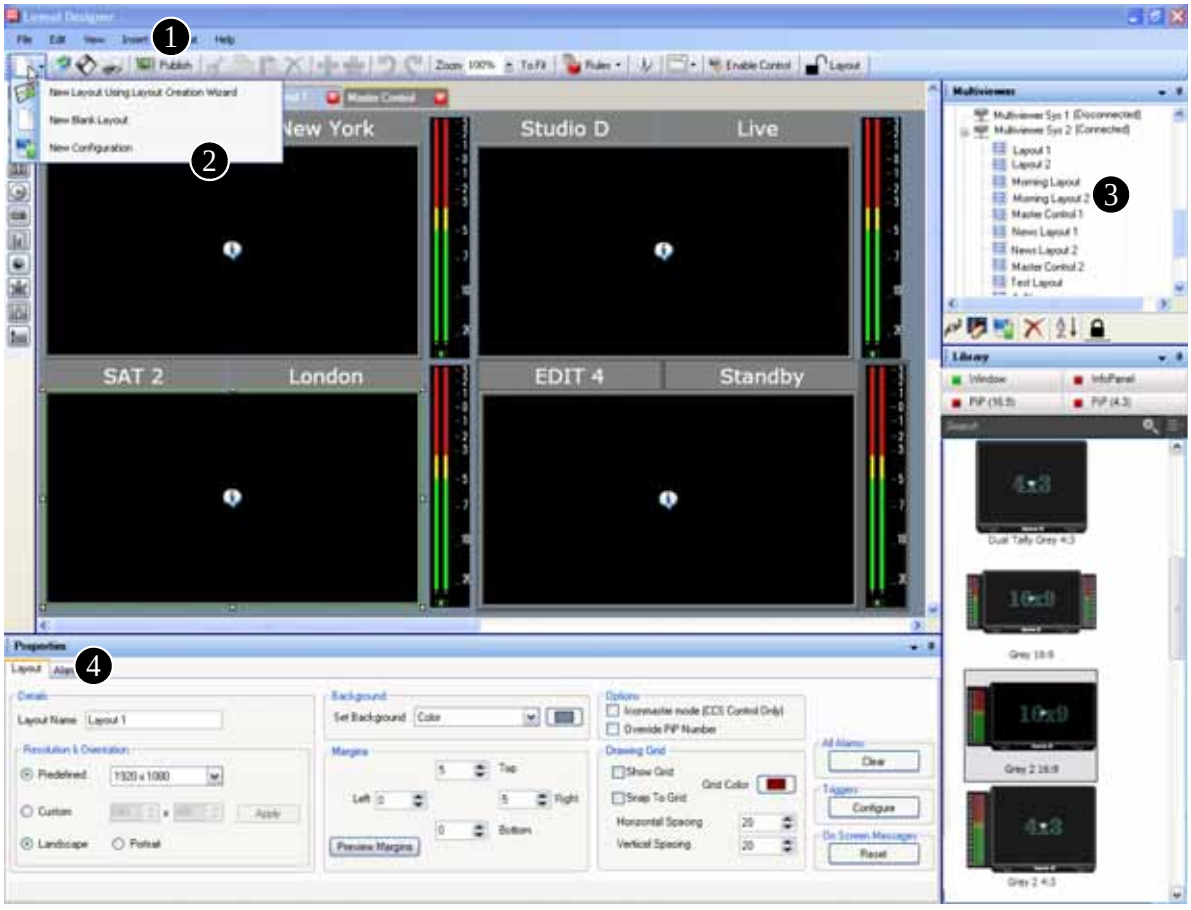



**Figure 6-9** Using Layout Designer Controls and Options

1. Publish layouts to the selected multiviewer. For information, see ***Displaying and Publishing Layouts*** on page 94.
2. Create new layouts from a blank layout, or by using the Layout Creation wizard. For more information, see ***Creating New Layouts*** on page 82.
3. Select a layout stored on a multiviewer for display or for editing. See ***Displaying and Opening Layouts Stored on the Multiviewer*** on page 94.

4 Modify layout properties, such as display output resolution and background color, using the Layout Properties pane. See ***Modifying Layout Properties*** on page 96.

# Connecting Layout Designer to an HView IP Multiviewer

If Layout Designer is not currently connected to a HView IP multiviewer, or if you want to connect to any of the multiviewers that are displayed in the **Multiviewers** library, use the **Connect** command. If Layout Designer cannot find a configuration for the selected multiviewer, you must create one using the Configuration Wizard. For information about configuring multiviewers, see **Chapter 5, *Configuring Display Mode*** on page 63.

### To connect the multiviewer to Layout Designer:

1. From the **Multiviewers** panel, select the multiviewer to which you want to connect.
2. Right-click the selected multiviewer, and then select **Connect to Device** from the context menu.

   It may take up to three seconds for Layout Designer to connect with the multiviewer. When connected, Layout Designer displays **(Connected)** after the multiviewer name. The layouts stored in the connected hardware are listed below the multiviewer name.

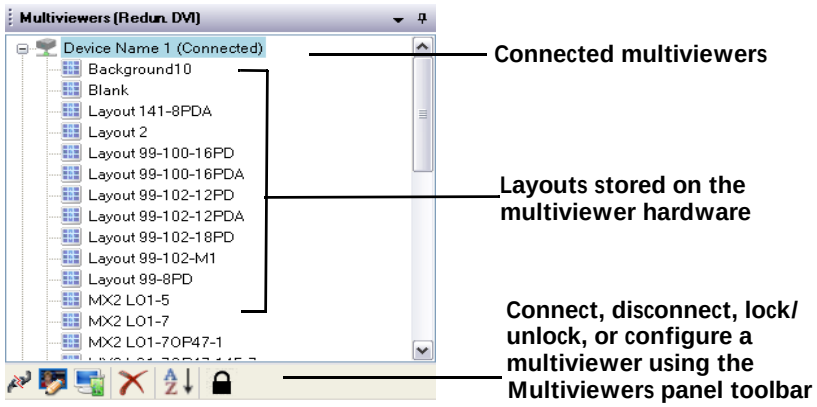



**Figure 6-10** Connected Multiviewers

## Disconnecting Layout Designer from an HView IP Multiviewer

1. Right-click the selected multiviewer, and then select **Disconnect Device** from the context menu.

## Rebooting and Restarting a Connected HView IP Multiviewer

After you have connected to a multiviewer system, you can use the **Multiviewers panel** context menu to perform various hardware-related operations. In the **Multiviewers panel**, right-click the connected multiviewer, and then, from the context menu that appears, select from the following options:

- **Start Multiviewer** - Select this option to trigger the selected multiviewer to load a layout.
- **Exit Multiviewer** - Select this option to trigger the multiviewer to revert to its desktop.

- **Shut Down Multiviewer** - Turns off the selected multiviewer without restarting.
- **Restart Multiviewer** - Select this option to restart the multiviewer's On-Screen application. Restarting the multiviewer will disrupt the displays connected to the multiviewer.
- **Reboot Multiviewer** - Select this option to reboot the multiviewer hardware, including its central processing unit (CPU). Rebooting the multiviewer will disrupt the displays connected to the multiviewer.

# Displaying and Publishing Layouts

After you have connected Layout Designer to a multiviewer, you can select layouts and display them on the multiviewer's output display devices. Using Layout Designer, you can choose to display layouts that are currently stored on the multiviewer or you can open layouts that are saved as layout files. You can then use the **Publish** command to display the layouts on the multiviewer's output display devices.

The following sections describe how to display layouts. For information about displaying new layouts, see ***Viewing Layouts*** on page 92.

## Displaying and Opening Layouts Stored on the Multiviewer

When Layout Designer is connected to a multiviewer, the layouts currently stored on the multiviewer hardware are shown in the **Multiviewers** panel. To view the layouts that are stored on a multiviewer, in the **Multiviewers panel**, click or expand the multiviewer's icon.

**Click the + to view all the layouts on the multiviewer system.**

**Click - to hide them.**

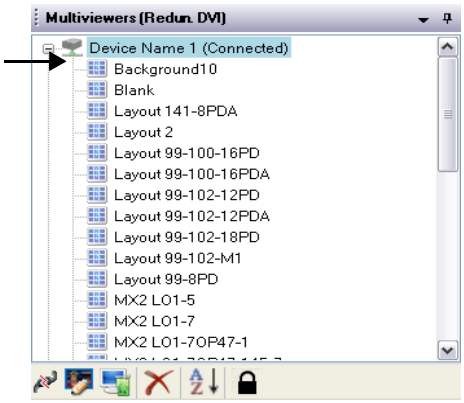



**Figure 6-11** Multiviewers Panel

If you do not want to view or modify the layout, you can display the layout without opening it in Layout Designer. If you want to view, modify, or save the layout to a local or network drive, you must open it in Layout Designer. You can then use the **Publish** command to display the modified layout. For more information, see ***Publishing Modified Layouts*** on page 95.

If Layout Designer is not connected to a multiviewer, see ***Connecting Layout Designer to an HView IP Multiviewer*** on page 93.

If you want to modify the layout, you may need to unlock it. See ***Locking and Unlocking Layouts*** on page 90.

### To display a layout:

1 On the Multiviewers panel, right-click the layout that you want to display on the multiviewer(s), and then select **Display this Layout on** Multiviewer from the context menu that appears.

The selected layout is now displayed in the output display device(s).

### To open a layout in Layout Designer:

1 Do either of the following:

- From the Multiviewers panel, select the layout that you want to open in Layout Designer, right-click, and then select **Recall this Layout to Layout Designer** from the context menu.
- In the Multiviewers panel, double-click the layout that you want to open in Layout Designer.

You can use tools to modify the layout and objects as well as add objects to the layout, and then use the **Publish** command to display the layout on the multiviewer. For more information, see ***Modifying Layout Properties*** on page 96 and ***Layout Object Properties*** on page 103. For information about publishing a layout, see ***Publishing Modified Layouts*** on page 95. You can also save the layout as a layout (*.lay*) file. For more information, see ***Saving Layouts*** on page 91.

## Publishing Modified Layouts

You can open a layout in Layout Designer, modify it by adding objects, such as audio meters or alarms, and then use the **Publish** command to display the modified layout on the output display devices. When the layout is published, the multiviewer is automatically updated with the modified layout.

The following section describes how to open a layout in Layout Designer, and then publish the layout to the multiviewer. For information about modifying layouts and adding layout objects, see ***Modifying Layout Properties*** on page 96.

### To publish a modified layout:

1 From the **Multiviewers** library, double-click the layout you want to modify.

The selected layout opens in the layout window.

2 Make the required modifications to the layout. For information about modifying a layout, see ***Modifying Layout Properties*** on page 96.

3 To publish your modified layout to the mulitiviewer, click **Publish** on the Layout Designer application toolbar.

## Publishing Layouts From Layout Files

You can select a layout file from a local or network drive, and then publish it to your multiviewer display. There is no limit to the number of layouts that you can store on your multiviewer hardware, as long as there is enough disk space.

*To ensure that you do not lose any of the layouts currently stored on the multiviewer hardware, open them in Layout Designer, and then save them to a local or network drive.*

### To publish a layout that is stored on a local or network drive:

1 To open a layout (*.lay*) file, select **File** > **Open**.

2 In the **Open** dialog box, browse to the location of the layout file you want to open, and then click **OK**.

The layout file opens in the layout window. You can make modifications to the layout before you publish it to the multiviewer display. For information about modifying a layout, see ***Modifying Layout Properties*** on page 96.

3 To publish the layout, click **Publish** from the Layout Designer application toolbar.

# Layout Properties

Layout property settings define how the area of the layout window is displayed in the output display device(s) that are connected to the multiviewer. When you create new layouts, you need to select options for your layout properties. Layout properties can be modified any time layouts are open in the Layout Designer canvas. You can view and change layout properties using the Layout tab in the Properties pane.

*For best results, ensure that the Output Resolution and frequency settings match the resolution and refresh rate of the output display device(s) connected to your multiviewer.*

## Viewing Layout Properties

You can view and change layout properties using the Properties pane.

### To access the Properties pane:

1 Select **View** > **Properties**.

The Layout Properties pane appears similar to the following:

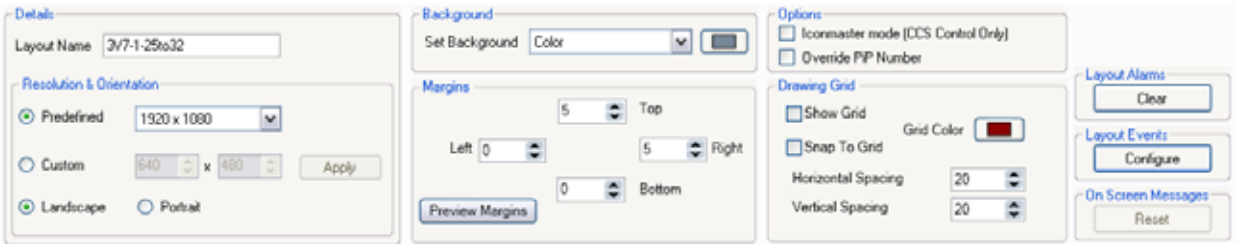



**Figure 6-12** Layout Properties Pane

## Modifying Layout Properties

You can modify the properties of a layout that is currently open in the Layout Designer canvas. This includes layouts that have been created using a blank layout or the Layout Creation Wizard. See the following sections:

- ***Modifying the Resolution*** on page 97
- ***Modifying the Background*** on page 97

### Naming Layouts

A Layout's name identifies it in various Layout Designer workspace dialog boxes and tabs including the following tabs:

- Multiviewers panel
- Properties pane

### To modify the layout's name:

1 Under **Properties**, type a name for your layout in the **Layout Name** field.

## Modifying the Resolution

Layout Designer supports a number of standard predefined output resolutions. You can also define custom output resolutions. When selecting the orientation and resolution for your layout, ensure that your output display devices support your selections.

*Your layout must be in an **unlocked** state to change its resolution.*
*See **Locking and Unlocking Layouts** on page 90.*

### To modify the resolution:

1 Under **Resolution**, do one of the following:
- To select a standard output resolution, click **Predefined**, and then select a resolution from the drop-down list.
- To select a custom output resolution, click **Custom**, and then type or select values for output width and height.

2 Click **Apply**.

## Modifying the Background

You can select either a solid color or a predefined background image as your layout's background. There are 10 pre-defined background images.

### To modify the background:

1 Under **Background**, from the **Set Background** list, select either **Color** or a background image (**Background 1** to **Background 10**) from the drop-down list.

2 If you selected Color as your default background, click the  button to access the **Select a Color** dialog box.

3 To select a color, do one of the following:
- Use the slider to select a color.
- Enter the color values you want to use in one of the **ScRGB**, **sRGB**, or **Hexadecimal Notation** fields.

Your selected color is previewed below **Selected Color**.

4 If required, use the **Opacity** slider to adjust the color's opacity value, and then click **OK**.

5 Click **OK**.

## Making Layout-Specific Settings

There are three layout-specific buttons, which control settings on a per-layout basis.

Under **Layout Alarms**, click **Clear** to clear all the component alarms on the active layout opened in LD.

*This does not affect the alarms on the display. To clear alarms on the display, republish the layout.*

This function coincides with the **Reset Alarms** on-screen option as described in **Table 11-1** on page 190.

Under **Layout Events**, click **Configure** to open the **Layout Event Configuration** dialog box. This option is also available from the toolbar by clicking **Rules** and selecting **Layout Events** from the menu that appears. For complete information about setting and using triggers, see ***Configuring Layout Events and Global Events*** on page 175.

Under **On Screen Messages**, click **Reset** to acknowledge all messages displayed by alarm rule message box. This function coincides with the **Clear Messages** on-screen option as described in **Table 11-1** on page 190.

## Margins

You can adjust the margins on the layout by entering numbers in the four Margins fields. The margin limits the size of the entire layout. The background is resized to fit the new area.

The available range for margins varies depending on the resolution of the layout, with an absolute maximum of 200 pixels on the higher resolutions.

*Your layout must be in an **unlocked** state to adjust the margins.*
*See **Locking and Unlocking Layouts** on page 90.*

## Drawing Grid

On the Layout Properties pane, you can activate a grid for the layout canvas. This grid is for layout purposes, and will not appear on the published layout.

**Table 6-1** Drawing Grid Options

| Option | Function |
|---|---|
| Show Grid | Displays a grid on the layout canvas |
| Snap to Grid | Whether the grid is displayed or not, when this is checked, items will snap to grid positions when dragged around the layout |
| Grid Color | Click the button to choose a color for the lines in the grid |
| Horizontal Spacing | Determines the distance (in pixels) of the lines that run from top to bottom on the grid; lines can be spaced from 5 to 40 pixels apart |
| Vertical Spacing | Determines the distance (in pixels) of the lines that run from left to right on the grid; lines can be spaced from 5 to 40 pixels apart |

## IconMaster Mode

(Not applicable to HView IP)

## OverRide PiP Number

When this option is disabled, each PiP is automatically assigned a PiP number, which is greyed out (but still displayed, for informational purposes) on the PiP's Properties pane. When this option is enabled, you can alter the PiP number.

Within a layout, each PiP must have a unique number. If you attempt to assign a number to a PiP, and that number is already in use, the PiP number will automatically jump to the next available PiP number.

# 7 Working with Layout Objects

## Layout Objects

Layout objects are the building blocks that provide the look and feel of a layout. Layout Designer includes a variety of layout objects that perform different types of functions, such as bordering a PiP and metering input audio signals. Layout objects include PiPs, labels, clocks, tally indicators, audio meters, and info panels.

New layouts created using the Layout Creation Wizard contain PiPs and windows, which can contain any layout objects. Ideally, when creating a layout you will use pre-defined windows which contain such objects as audio meters, tallies, labels, and info panels, so the input source for all the objects in the window will track together.

Additional layout objects, such as audio meters and tally indicators, can be added to a layout after the layout has been created. You can add objects to layouts by dragging them from the Library panel onto the layout canvas, or by using the insert commands from the Tool palette and application menu.

You can group Layout objects together so that they can be simultaneously moved and/or formatted in the layout canvas. You can also create an arrangement of layout objects, and then add them to a window. As part of a window, this group of layout objects can be manipulated as a single layout object that has a distinct set of window properties.Window properties include a background (which is different from the layout background color). Scrolling properties can be applied to a window. Windows and the arrangement of layout objects contained in the window can then be added to the Windows tab of the Library panel. The window can be added to other layouts in a single drag-and-drop action.

The display characteristics of layout objects are determined by their individual property settings. Layout object properties are modified in the same way, regardless of how they were added to the layout. For example, a PiP in layout created from the toolbar is modified in the same way as a PiP added to a layout from the Library panel. For information about layout object properties, see ***Layout Object Properties*** on page 103.

The following figure illustrates a typical layout displaying layout objects.

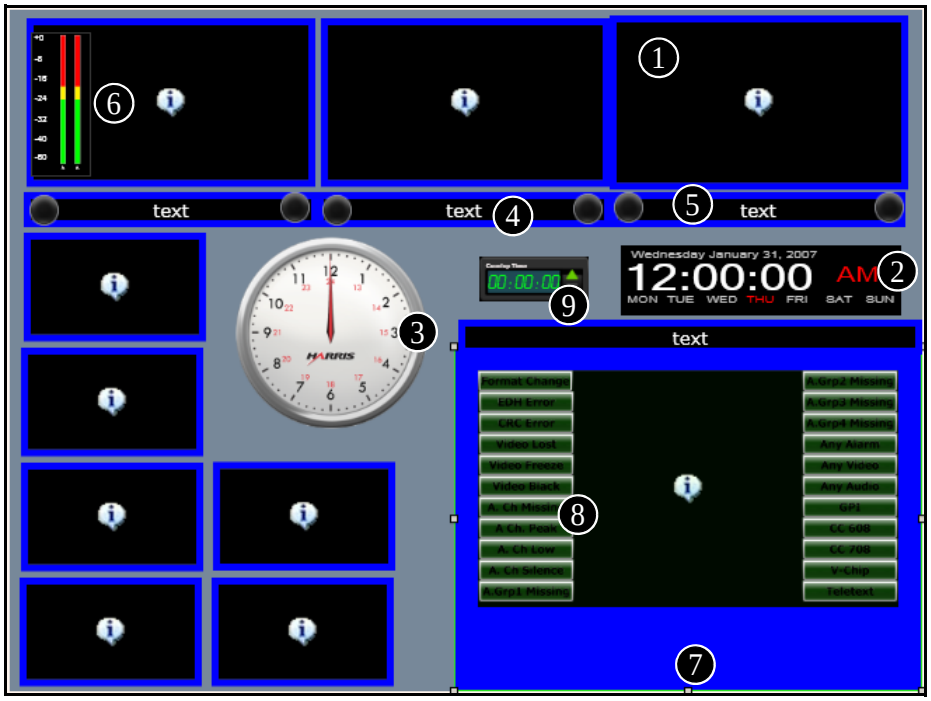



**Figure 7-1** Typical Layout

Each layout object is described below:

1. **PiP** - Displays the input video/graphics from a single input channel. An individual PiP's properties determine how it appears in the layout. Each PiP in a layout can have its own set of properties. For more information, see ***About Picture-In-Pictures (PiPs)*** on page 123.
2. **Digital Clock** - Displays time from NTP or internal reference source. The digital clock can be resized. For information, see ***Setting Digital Clock Format*** on page 150.
3. **Analog Clock** - Displays the time from NTP or internal reference source. There are various styles of analog clocks. For more information, see ***Setting Analog Clock Format*** on page 149.
4. **Label** -Three types of labels display text information, static, dynamic and alarm/rules. A Static label displays manually entered text. A Dynamic label can have an UMD source from external UMD protocol. A alarm/rule label can be configured using the rules editor to display text information upon an event. For more information, see ***About Labels*** on page 144.
5. **Tally** - Displays monitoring status from external UMD protocol, GPI inputs, or an alarm/rule event. For more information, see ***Creating Tally Indicators*** on page 141.
6. **Audio Meter -** Displays audio ballistics from the selected audio service for the IP source. Audio meters can be added to individual PiPs in a layout. You can display up to 16 channels from an audio input on a PiP. For more information, see ***Defining Alarms for a Layout Object*** on page 161.

❼ **Border** - Displays a user-defined graphic area around a PiP. Individual border properties determine how borders appear around the PiPs. Borders can display status from external UMD protocol, GPI inputs, or an alarm/rule event. For more information, see ***Modifying Border Properties*** on page 117

❽ **Info Panel**—Provides such data as alarms, closed captioning, VITC, and teletext data. Info panels can be standalone or overlaid on a PiP. For more information, see ***Creating Info Panels*** on page 177.

❾ **Up/Down Counter**—Provides either a count up or count down timer that can be configured to be triggered by alarm rules, GPI, or SNMP, and can target alarm actions. For more information, see ***About Up/Down Counters*** on page 152.

Using the Layout Designer Properties panel, you can modify layouts and PiP properties, and add audio meters and info panels to create customized layouts that can be displayed in the multiviewer's output display device. Customized PiP attributes such as borders and labels, are stored as part of the PiP in the Library panel.

## Layout Object Properties

Each layout object has a number of unique properties that determine and define how it is displayed and how it behaves in the layout. These properties are independently set; each layout object can have a different set of properties. These settings can be modified at any time. You can use the various tabs of the Properties pane to modify individual layout object properties. PiPs, windows, label text, clocks, and audio meters each have separate property tabs.

To access the Properties pane:

1 Select **View** > **Properties**.

## Adding Layout Objects to a Layout

You can add objects by using the Library panel, the Tools palette, or the Insert menu.

- Drag selected layout objects from the Windows, PiPs, or Info Panel Library panel tab, and then drop them onto the layout canvas. When you use this method of adding layout objects, you can select from standard as well as any customized objects that have been previously created and added to the Library panel.
- Click an object on the Tools palette. The object appears on the layout canvas.
- Choose an object item from the Insert menu.

*Your layout must be in an **unlocked** state to add, move, or delete objects.*
*See **Locking and Unlocking Layouts** on page 90.*

Objects inserted into layouts using the Tools palette or the Insert menu have default object properties. New items are automatically added "on top" of other items. To change the order of items in the layout, use the **Order** > **Bring to Front** and **Order** > **Send to Back** options in the context menu. Items are positioned on the canvas based on your auto placement preferences setting. See ***Determining Auto Placement*** on page 50 for more information.

After you have inserted the objects into a layout, you can use the Properties pane to modify their properties.

### To add layout objects using the Library panel:

1 If the Library panel is not currently visible in the Layout Designer workspace, select **View** > **Library**.

2 From the Library panel, click the tab of the layout objects that you want to add to your layout.

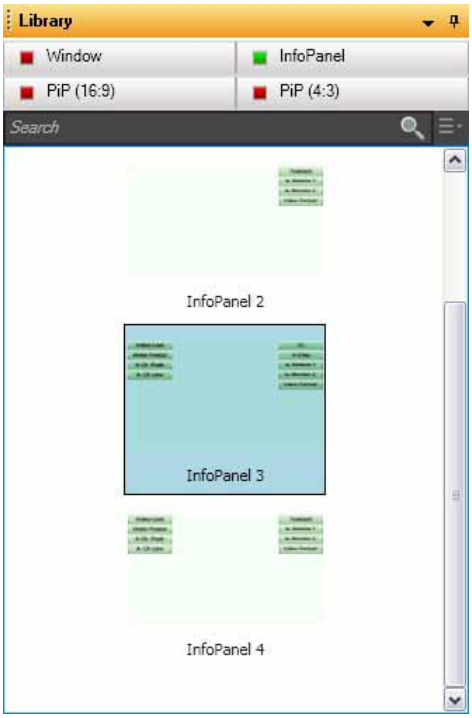



**Figure 7-2** Adding Layout Objects Using the Library Panel

3 Select the layout object that you want to add, drag it to the canvas, and then drop it on to your layout.

To add layout objects using the Tools palette:

1 Click the icon of the layout object to insert.

For information about the options on the Tools palette, see ***Tools Palette*** on page 38.

After you add objects to your layout, you can:

- Use your mouse to move the objects in the layout canvas
- Use Layout Designer's formatting tools to accurately align and distribute the objects in the layout, as well as copy and paste PiP properties
- Modify layout objects using the Properties pane.

Before publishing your new layout, you can save it as a layout file on a local or network drive. For information about saving layouts, see ***Saving Layouts*** on page 91.

See the following sections for information about modifying and formatting layout objects:

- ***Layout Properties*** on page 96
- ***Layout Object Properties*** on page 103
- ***Formatting Layout Objects in the Canvas*** on page 105
- ***About Monitoring Tools*** on page 157

# Formatting Layout Objects in the Canvas

Layout Designer has a number of layout object formatting options that you can use to arrange and resize objects in a layout, as well as cut, copy, and paste properties. These options are especially useful for quickly formatting objects for layouts that are created using a blank layout. For example, if you have dragged a number of objects from the Library panel onto your layout, you can use **Align** and **Distribute** commands to position each object accurately in the layout.

To modify the properties of more than one like object, you can change the property setting on one object, use the **Copy Properties** to copy the modified object's properties, and then use the **Paste Properties** option to paste those modified properties to each like object in the layout.

You can use the formatting options to arrange and format objects in all types of layouts.

*Your layout must be in an **unlocked** state to use the formatting options.*
*See **Locking and Unlocking Layouts** on page 90.*

## Copying and Pasting Layout Object Properties

Use the **Copy Properties** and **Paste Properties** options to copy and paste properties between like objects. This option is useful when you want to modify the properties of multiple PiPs. For example, if you want to modify the same property setting for all the PiPs in your layout, select the PiP from which you want to copy properties, use the **Copy PiP Properties** option to copy those properties, and then paste the properties to other PiPs in the layout using the **Paste PiP Properties** option.

To access Layout Designer's **Copy Properties** and **Paste Properties** options, select and then right-click on a PiP.

*Your layout must be in an **unlocked** state to copy or paste properties.*
*See **Locking and Unlocking Layouts** on page 90.*

### To copy the properties from a selected object and paste them to another, like object in the layout:

1. Right-click the object from which you want to copy properties.
2. From the context menu, select **Copy Properties**.
3. Right-click the like object to which you want to paste the copied properties.
4. Choose one of the following functions:
   - To paste all of the copied PiP properties, select **Paste Properties**.
   - To choose which properties to paste, select **Paste Selected Properties**.

   A **Paste Category** dialog appears.
5. Choose the categories of properties you want to paste by selecting one or more of the following options:
   - Size
   - Border
   - Others

   Selecting **All** will select all three options.
6. Click **OK**.

## Cloning Layout Objects

The cloning tool creates a control similar to the currently selected control, with the differences being unique number and name, video source, dynamic source PiP number, and UMD address, which are all incremented

1. Select the layout object to be cloned.
2. Click **Clone a Component** on the application toolbar.

   The new object's position in the layout canvas is determined by your auto placement preference setting. See ***Determining Auto Placement*** on page 50 for more information.

## Resizing and Moving Layout Objects Using a Mouse

*Your layout must be in an **unlocked** state to resize or move objects. See **Locking and Unlocking Layouts** on page 90.*

You can use your mouse to resize and move selected objects in a layout. You can resize objects by clicking, and then dragging the resizing handles that are located around the outer edge of the object. To move an object, select it, and then hold down the mouse button while dragging the object to a different location in the layout. To make fine positional adjustments, after selecting an object in the layout, press the arrow keys on your keyboard to move the selected object.

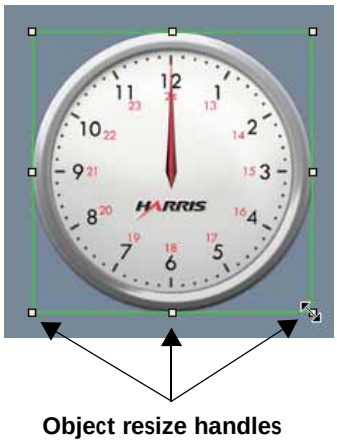



**Figure 7-3** Resizing Layout Objects Using a Mouse

*If the Aspect Ratio property is set to **Custom**, when you resize a PiP, its width and height resizing are not constrained to the proportions of a set aspect ratio.*

When you move an object into alignment with another object in a layout, red lines appear temporarily on the canvas so you can see when they are perfectly aligned.

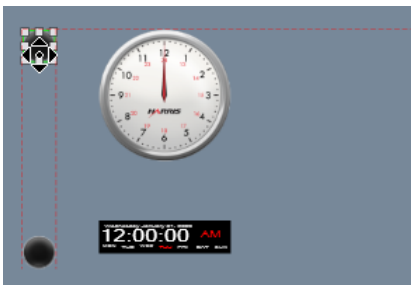



**Figure 7-4** Temporary Alignment Guides

# Working With Groups of Objects

It is sometimes useful to select a group of like objects and alter them all the same way -- for example, resize all PiPs within a group of windows.

To select more than one object, hold down the CTRL key on your keyboard while clicking the objects in the layout. To remove an object from the selection group, click on it again with the CTRL key held down.

## Setting Like Objects' Properties

1. Right-click a group of objects, which can include one or more windows and select **Set properties**.

   A submenu lists all the object types that are selected, including the non-border items in the windows. The sub-menu can contain PiPs, Tallies, Labels, Clocks (analog or digital), Info panels, etc.

2. Select one of the items in the sub-menu to open the properties pane for that type of object.

   You can now make changes to all the selected like objects simultaneously.

## Remove Like Objects from Control for a group of windows

1. If a selection contains a window and at least one other object, right click and select **Remove Window Component**.

   A submenu lists all the object types that are selected, including the non-border items in the windows. The sub-menu can contain PiPs, Tallies, Labels, Clocks (analog or digital), Info panels, etc.

2. Select one of the items in the sub-menu to delete all instances of that type of object within the selection, for example all PiPs within the selection.
3. To resize the window to match the size of its contents, right-click and select **Consolidate Window**.

   You cannot remove the first item in a window.

## Aligning and Distributing Objects in a Layout

To align or distribute objects in a layout, you can use the **Align** and **Distribute** commands, which are located in the application menu or as right-click options when two or more items are selected. You can use the **Align** and **Distribute** commands to arrange objects in all types of layouts.

*Your layout must be in an **unlocked** state to align or distribute objects. See* ***Locking and Unlocking Layouts** on page 90.*

To access these commands, you must select multiple objects in your layout. To select multiple objects, hold down the CTRL key while selecting individual objects with your mouse. To deselect multiple objects, click on an empty space in the window. The following figure illustrates a layout with multiple selected PiPs.

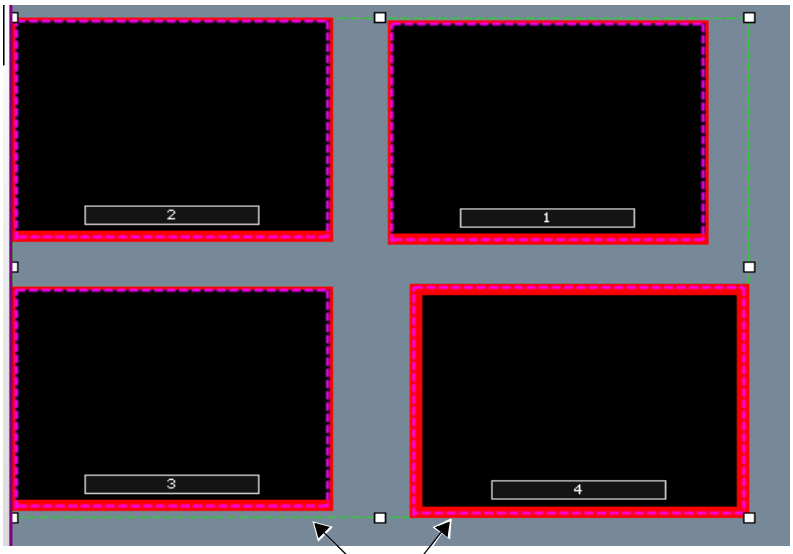



**Figure 7-5** Multiple Selected PiPs

Table 7-1 lists the **Align** commands you can use to arrange objects in a layout.

**Table 7-1** Align Commands

| Menu Name | Toolbar Icon | Description |
|---|---|---|
| Left |  | Aligns two or more selected objects along the left axis of the first object selected |
| Right |  | Aligns two or more selected objects along the right axis of the first object selected |
| Top |  | Aligns two or more selected objects along the top axis of the first object selected |
| Bottom |  | Aligns two or more selected objects along the bottom axis of the first object selected |
| Center Vertical |  | Aligns two or more selected objects along a vertical axis that runs through the center of the canvas |
| Middle Horizontal |  | Aligns two or more selected objects along a horizontal axis that runs through the middle of the canvas |

Table 7-2 lists the **Distribute** commands you can use to arrange objects in a layout.

**Table 7-2** Distributing Commands

| Menu Name | Toolbar Icon | Description |
|---|---|---|
| Widths |  | Distributes the width distance between two or more selected objects |
| Heights |  | Distributes the height distance between two or more selected objects |

## Creating Layout Windows

Windows allow you to create containers for layout object compositions or arrangements. Each window can be copied and pasted as a single object. A window can be created from a selection of PiPs, labels, info panels, borders, clocks, audio meters, up/down counters, and tally indicators. After you create a window, you can add it to the Library panel, so it is ready to be dragged onto other layouts.

When you select a window in a layout, you can view and modify all the alarms for all the objects within that window on the Alarms tab of the Properties pane.

You can make the window a scrolling region and set it to crawl (scroll in the horizontal direction) or roll (scroll in the vertical direction). Configuring windows with scrolling properties allows you to display more video inputs that are connected to your multiviewer system than it would otherwise have capacity for.

You can use the Window Properties tab to modify window properties as well as to configure window rolling and crawling settings. Similar to layout objects, windows can be moved and resized in the layout canvas using a mouse. For more information see, ***Copying and Pasting Layout Object Properties*** on page 105.

*Your layout must be in an **unlocked** state to create or break windows, or to modify their contents, position, or size. See* ***Locking and Unlocking Layouts** on page 90.*

The following figure illustrates window specific options and operations.

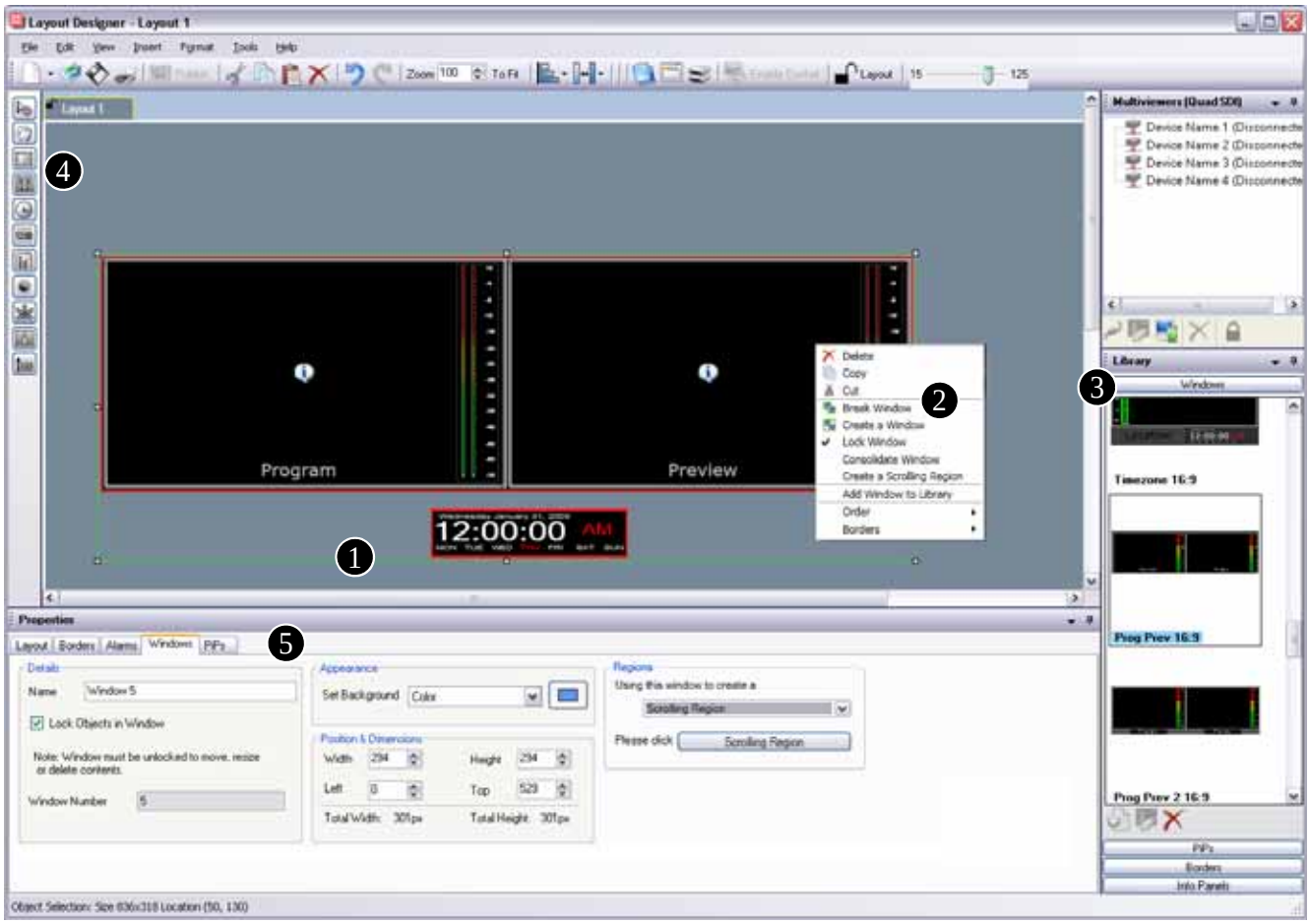



**Figure 7-6** Windows Options and Operations

1. Create a window by selecting the layout objects that you want to include, and then use the context-menu's Create a Window command. You can add your new window to the Library panel. See ***Creating New Windows*** on page 111
2. Break apart a selected window. For information, see ***Breaking Apart a Window*** on page 111.
3. Drag a window from the Library panel and drop it on to the layout canvas. For information see, ***The animations are not displayed on the Layout Designer canvas, and can only be viewed once the layout is published to a display.*** on page 121.
4. Add PiPs and other layout objects for use as a window in your layout. ***Working With Groups of Objects*** on page 107.
5. Modify window properties and configure window settings using the Window Properties tab. ***Modifying Window Properties Using the Properties Pane*** on page 112.

## Creating New Windows

You can create a window from two or more selected layout objects in any combination, including other windows, to form a new window. When layout objects become part of a window, they maintain their position, order, and size. The window background and border are the lowest layer among the objects contained in the window. This means that layout objects that are part of the window cannot be positioned behind the window background.

The properties of individual Layout objects can be modified when they are contained within a window. However, you cannot resize or position objects beyond the borders of the window.

### To create a window:

1 To select multiple layout objects you want to add to the new window, hold down the CTRL key while selecting individual objects with your mouse.

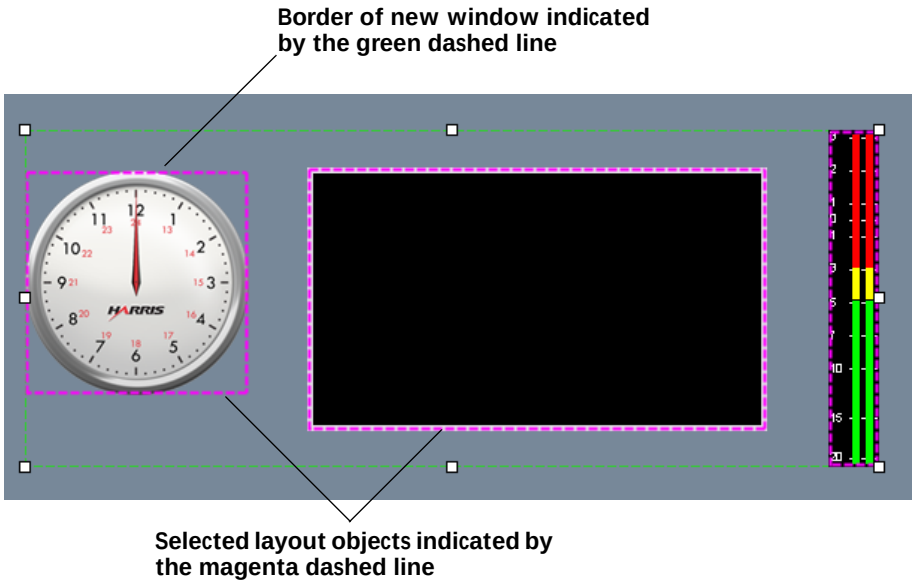



**Figure 7-7** Window Objects

Selected objects are indicated by the magenta dashed line. The new window border is indicated by the green dashed line.

2 Right-click the objects, and then select **Create a Window** from the context menu.

After you create a new window, you can add it to the **Windows** tab of the Library panel by selecting **Add Window to Library**.

The layout objects are superimposed over the window background, and surrounded by a layout border. You can name the window and modify some window properties using the **Window Properties** tab. For more information, see ***Modifying Window Properties Using the Properties Pane*** on page 112.

*To view your new window on output display devices, you must publish the current layout to the multiviewer hardware. For information, see* ***Displaying and Publishing Layouts*** *on page 94*.

## Breaking Apart a Window

When a window is broken apart, the objects contained in the window maintain their order in the canvas.

### To break a window apart:

1 Select the window you want to break apart.
2 Right-click, and then choose **Break Window** from the context window.

## Consolidating a Window

If you have removed objects or changed their positions within a window, right click on the window and choose **Consolidate Window** to recreate the window.

If more than one window is selected and you select **Consolidate Windows**, this option consolidates all windows within the selection.

## Modifying Window Properties Using the Properties Pane

You can use the **Windows Properties** tab to modify window properties such as window size and position. Window border size and color properties are modified using the **Borders** tab.

*To view your modifications on output display devices, you must publish the current layout to the multiviewer hardware. For information, see* ***Displaying and Publishing Layouts** on page 94.*

### Viewing Window Properties

#### To access the Windows Properties tab:

1 In the canvas, select the window you want to modify.
2 If the Properties pane is not open below the layout canvas, select **View** > **Properties**.

### Naming Windows

The name you give to a window identifies it when you add the window to the Library panel.

#### To name your new window:

1 In the **Windows** Properties tab, under **Details**, type a name into the **Name** field.

### Modifying the Contents of a Window

To select the individual components in your window, the window must be unlocked.

#### To unlock the contents of the window:

1 Do either of the following:
- In the **Windows** Properties tab, under **Details**, clear the **Lock Objects in Window** field.
- Right-click on the window in the canvas and unselect **Lock Window**.

You can now change the properties of individual items within the window, including size, position, and other attributes.

### To lock the contents of the window:

1 Do either of the following:

- In the **Windows** Properties tab, under **Details**, select the **Lock Objects in Window** field.
- Right-click on the window in the canvas and select **Lock Window**.

You can now click anywhere in the window, including any object contained within it, to move, resize, or adjust the attributes of the entire window.

## Modifying a Window's Background

Windows are created with a user-defined default background color. You can select a color or a pre-defined graphic image as the background to your window.

### To modify a window's background:

1 Under **Appearance**, select either **Color** or a predefined background image from the drop-down list.

2 If you selected **Color** from the **Set Background** list, click the  icon to open the **Select a Color** dialog box.

3 Select or enter a color value.

Your selected color is previewed below **Selected Color**.

4 If required, use the **Opacity** slider to adjust the color's opacity value.

5 Click **OK.**

## Resizing and Moving Windows Using the Windows Properties Pane

Use the Windows tab on the Properties panel to resize and move windows. When you resize or move a window, the properties of the layout objects contained in the window are not modified. For example, if you resize a window, the layout objects remain anchored in their original position.

### To resize a window:

1 Under **Position & Dimensions**, type or select values for the width and height in the **Width** and **Height** fields.

### To move a window:

1 Under **Position & Dimensions**, type or select values for the window's horizontal position in the **Left** field and vertical position in the **Top** field.

The **Left** control positions the window horizontally using the left edge of the layout canvas as the point of reference. A value of **0** places the window along the left edge of the layout canvas. The Top control positions the window vertically using the top the of the layout canvas as the point of reference. A value of **0** places the window along the top edge of the layout canvas

# Creating Scrolling Regions

A scrolling region is a special window that allows you to display more sources than your multiviewer hardware will normally show. Unlike other windows, a scrolling region cannot be broken. Nor can you create a window around it. Scrolling regions can be added to the window library.

## Creating a Scrolling Region

To create a scrolling window, do one of the following:

- Right click on a window in the Layout pane, and from the context menu that appears, choose **Create a Scrolling Region**.
- Choose Scrolling Region from the Regions section of the Window panel.

A scrolling region appears initially as a green line around the window.

The **Windows** tab is replaced by a **Scrolling Regions** tab in the **Properties** pane. Click on the scrolling region's background for the **Scrolling Region** pane to be available.

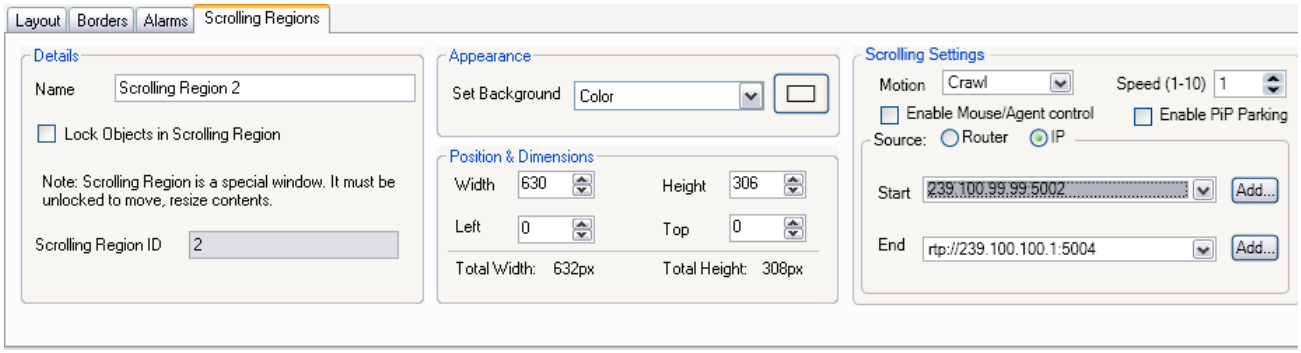



**Figure 7-8** Scrolling Regions Tab in the Properties Pane

To replace a scrolling region with a new one, drag the new scrolling region on top of the old one. A text message flashes to indicate it has approached its boundary. The size of scrolling region is adjusted according to the new area.

You can also drag a window from the window library on top of a scrolling region to replace the scrolling region.

A scrolling region can only contain one PiP or window. When you publish the layout to a multiviewer, the scrolling region will fill with PiPs or windows, based on the movement you choose. See ***Assigning a Motion Type to a Scrolling Region*** on page 115.

## Changing Details for a Scrolling Region

The following options and information is provided in the **Details** section of the **Scrolling Regions** Properties pane.

- **Name**: Identifier for the region when configuring other objects to connect to it.

- **Lock Objects in Scrolling Region**: Locks the scrolling region so elements in it cannot be changed or moved. Alternately you can right click on a scrolling region and select **Lock Parent Window** or **Lock Scrolling Region**.

  When created, scrolling regions are initially unlocked so you can revise the window control inside the scrolling region. For best results, when you are done configuring a scrolling region, lock it so it is not altered by accident.
- **Scrolling Region ID**: This is the ID, unique within this layout, that is automatically assigned to this scrolling region when the scrolling region is created. You cannot change the scrolling region ID, but may use it when with various rules connected with the scrolling region.

## Assigning Sources to a Scrolling Region

A scrolling region needs a range of PiPs assigned to it. No PiPs in a scrolling region can be VNC type.

### Selecting Router Sources

Router sources are not available for HView IP.

### Selecting IP Sources

Beside **Start**, choose the first IP address you would like use, and beside **End**, choose the last IP address you would like to use.

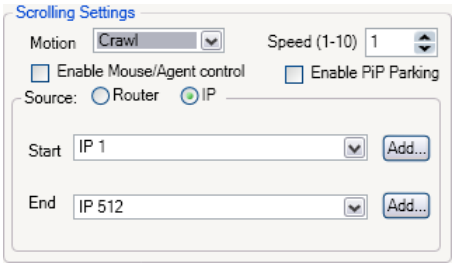



**Figure 7-9** IP Source Settings for a Scrolling Region

To access the IP Configuration Manager from the pane, click either of the **Add** buttons. (See ***IP Configuration Manager*** on page 70.)

## Assigning a Motion Type to a Scrolling Region

You can alter a scrolling region's motion in the following ways:

**Motion**: Determines the direction of movement for the series of sources.

- **Crawl**: A sequence of sources progresses from right to left across the window.
- **Roll**: A sequence of sources progresses from the bottom to the top of the window.
- **Flip**: One PiP appears on the screen. It rotates on its center horizontal axis, and each time the image returns, it contains a different source.

- **Circle**: Three PiPs are on the screen at a time. One source appears in the center and the foreground, with the other two are behind and to the left and the right. The PiPs change position using video scaling so that the foreground PiP moves to the right background position, the left background position moves to the foreground, and a new source replaces the left background PiP.

**Speed**: Ranges from 1 (slowest) to 10 (fastest).

**Enable mouse/agent control:** Allows or disables mouse wheel control of the sources within the scrolling region from the Multiviewer itself after the layout is published to the multiviewer. When enabled, the scrolling region will only move with mouse control.

**Enable PiP Parking:** When this is checked, a PiP that exhibits an alarm situation appears always "on top" of the scrolling region. If more than one PiP has alarms, then the PiP on top cycles through the PiPs with triggered alarm conditions.

## Modifying a Scrolling Region's Background

Scrolling Regions are created with a user-defined default background color. You can select a color or a pre-defined graphic image as the background to your scrolling region.

### To modify a scrolling region's background:

1. Under **Appearance**, select either **Color** or a predefined background image from the drop-down list.
2. If you selected **Color** from the **Set Background** list, click the  icon to open the **Select a Color** dialog box.
3. Select or enter a color value.

   Your selected color is previewed below **Selected Color**.
4. If required, use the **Opacity** slider to adjust the color's opacity value.
5. Click **OK.**

## Resizing and Moving Scrolling Regions

You can use the Scrolling Regions tab on the Properties panel to resize and move scrolling regions. When you resize or move a scrolling region, the properties of the layout objects contained in the scrolling region are not modified. For example, if you resize a scrolling region, the layout objects remain anchored in their original position.

*Resizing is not allowed when the scrolling region is locked.*

### To resize a scrolling region:

1. Under **Position & Dimensions**, type or select values for the width and height in the **Width** and **Height** fields.

### To move a scrolling region:

1. Under **Position & Dimensions**, type or select values for the scrolling region's horizontal position in the **Left** field and vertical position in the **Top** field.

The **Left** control positions the scrolling region horizontally using the left edge of the layout canvas as the point of reference. A value of **0** places the scrolling region along the left edge of the layout canvas. The Top control positions the scrolling region vertically using the top the of the layout canvas as the point of reference. A value of **0** places the scrolling region along the top edge of the layout canvas.

*You can also reposition a scrolling region by dragging it using the mouse, or by clicking the arrow keys on your keyboard (when the scrolling window is selected).*

You can also resize a scrolling region by dragging its corners and sides. See ***Resizing and Moving Layout Objects Using a Mouse*** on page 106.

### Adding a Scrolling Region to the Library

If you intend to use your scrolling region to other layouts, you can add it to the library.

#### To add a scrolling region to the library pane:

1. Right-click on the scrolling region in the layout pane.
2. From the context menu that appears, choose **Add Scrolling Region to Library**.

   The scrolling region is added to the **Windows** section of the library.

## Modifying Border Properties

Borders display a user-defined graphic area around some layout objects, such as PiPs, windows, and labels. Like other layout objects, individual properties determine how the borders appear around supported layout objects. Border properties can only be modified using the **Borders** tab of the Properties pane. You cannot use your mouse to modify object borders directly in the canvas.

*Your layout must be in an **unlocked** state to change a border's properties. See **Locking and Unlocking Layouts** on page 90.*

Borders normally provide a graphic area around PiPs and windows. However, when a border is applied to a PiP, and that PiP is in an alarm state, the border can be used to signal an alarm condition. For example, you can create customized borders for Black Video and Frozen Video alarm conditions. See ***Alarms and Info Panels*** on page 157 for more information.

*Default values for **Border** property settings are defined in the **Layout Designer Preferences** dialog box (see **Setting Your Layout Designer Preferences** on page 47).*

### Selecting a Border for Modification Within a Window

Multiple objects within a window can have border properties. In order to modify the border properties of a PiP or other object within a window, you must first select that object. By default, when you select a window and then select the **Borders** properties tab, you modify the border of the window itself.

#### To modify the border of an object within a window:

1. Right-click on the window.

2 Select **Borders** > **[Component] Border** where [Component] is the item with a border that you want to modify.

3 Make modifications on the **Borders** properties tab.

Within the Borders submenu, you can select the window itself and any sub-windows it may contain, as well as PiPs and labels.

## Applying Borders Using the Properties Pane

To apply a border style from the Properties pane, you must first select a layout object that supports borders. This includes PiPs, info panels, and windows.

1 From the **Properties** pane, click the **Borders** tab to display the selected layout object's border properties.

2 Click an item in the **Border Styles** field, and then click **Apply**.

## Modifying Borders Using the Properties Pane

To modify a border style, click **Edit Style**. The tools are the same as those used in creating a border style. See ***Creating New Border Styles*** on page 119 for more information.

1 From the **Properties** pane, click the **Borders** tab to display the selected layout object's border properties.

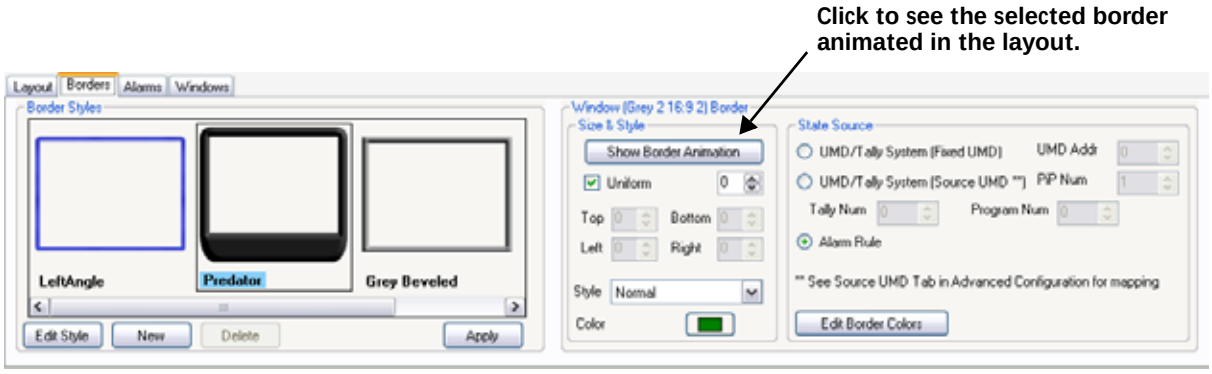



**Figure 7-10** Modifying Border Properties

2 To set the width, do one of the following:

- To set a uniform border width around the layout object, under **Border**, select **Uniform**, and then type or select a border weight in pixels.
- To set different values for the top, bottom, left, and right border weights, clear **Uniform**, and then type or select border weight values in the **Top**, **Bottom**, **Left**, and **Right** boxes.

3 To select a new border color:

a Click **Edit Border Colors** to open the **Border Colors** dialog box.

b On the **Normal** tab, click beside **Primary Color** to set the color of the border before an alarm or tally is triggered.

c Click **OK**.

4 From the **Style** drop down box, select from the following outline styles and effects:

- **Normal** - Border outline has color characteristics only
- **Rounded** - Border outline has four rounded corners, instead of square corners

- **Beveled** - Border outline has a beveled edge effect
- **Texture** - Border fill is textured. You can select from three texture styles

You can also select combinations of outline styles and effects (**Rounded Texture 1**).

For information on filling out the Color Selector dialog box, see ***Setting Default Window Properties*** on page 55.

## Creating New Border Styles

Using the Properties pane, you can create new border styles which can be applied to layout objects such as PiPs, windows, and labels. After you create a border style, it appears in the **Borders** Properties tab under **Border Styles**. The border you create or modify is displayed in the **Border Styles** dialog box under **Preview**.

### Setting new border style details:

1 In the current layout, select an object that has an associated border.

2 Under **Border Styles**, select **New**.

The **Border Styles** dialog box appears.

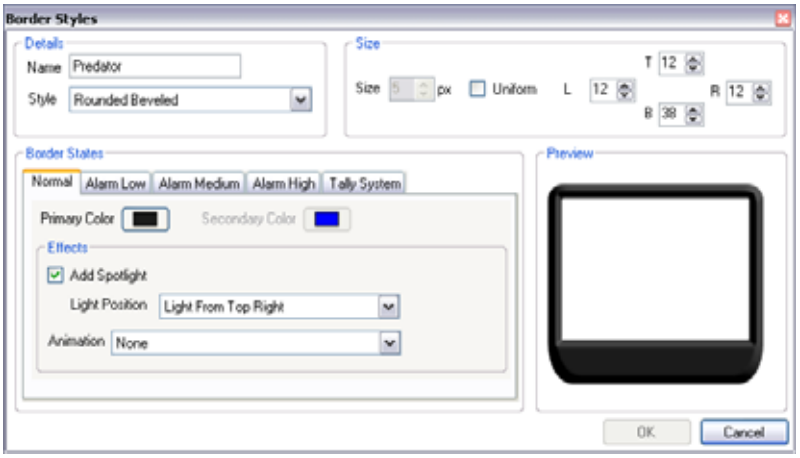



**Figure 7-11** Border Styles Dialog Box

3 Under **Details**, type a name for your new label style in the **Name** field.

This name is used to identify the style in **Border Styles** section of the **Borders** Properties tab.

4 From the **Style** drop down box, select from the following outline styles and effects:

- **Normal** - Border outline has color characteristics only
- **Rounded** - Border outline has four rounded corners, instead of square corners
- **Beveled** - Border outline has a beveled edge effect
- **Texture** - Border fill is textured. You can select from three texture styles

You can also select combinations of outline styles and effects (**Rounded Texture 1**).

## Setting Border Size

Do one of the following:

- To set a uniform border width, under **Size**, select **Uniform**, and then type or select a border weight in pixels in the **Size** box.

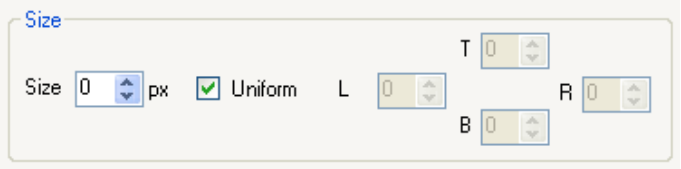



**Figure 7-12** Setting Border Size

- To set different values for the top, bottom, left, and right border weights, clear **Uniform**, and then type or select border weight values in the **T**, **B**, **L**, and **R** boxes.

## Setting the Border State Source

In the Border State Source area, there are three options:

**Table 7-3** Border State Source Options

| Border State Source Option | Configuration Options |
|---|---|
| UMD/Tally System (Fixed UMD Addr) | Select the **UMD address** that will be the input source for the border. |
| UMD/Tally System (Under Monitor Display) | Select the **PiP Number** that will be the input source for the border. |
| Alarm Rule | Select this option if you want the border to be the target for an alarm, and then follow these steps to define the alarm source:<br>1. With the border selected in the layout, select the **Alarms** tab in the **Properties** pane.<br>2. Following the instructions in ***Defining Alarms for a Layout Object*** on page 161, configure the **Detectors** and **Actions** pages of the **Rules** dialog box.<br>On the **Actions** page, choose **Set Tally Alarm State**, and complete the **Action Parameters** section for that action. |

For UMD/Tally options, make the following selections:

- **Tally Number–**the number of the tally within the UMD address that is monitored.
- **Program Number**–Enter the correct number in this field if you are using Ross Protocol. If you are using another protocol, the data in this field will be ignored.

## Setting Border Colors

You can set primary and secondary colors, and add animation and lighting effects to the border.

1 On the Border Properties pane, click **Edit Border Colors**.
The **Border Colors** dialog box opens.

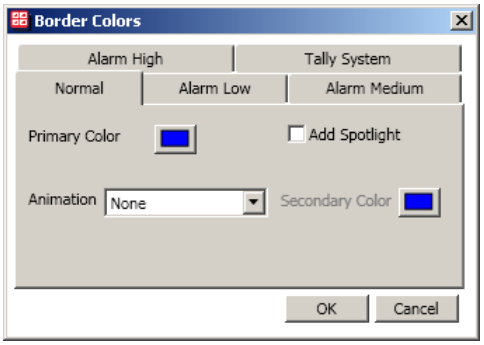



**Figure 7-13** Setting Border State Properties

2 Select the tab that identifies the state that you want to edit.

For a static border, select **Normal**.

3 To create or modify a border for a tally or alarm, you can select colors that identify the border's primary and secondary states. Layout Designer provides **Custom**, **Web**, and **System** color palettes. To select your new border color, make the following selections:

- Click beside **Primary Color** to set the color of the border before an alarm or tally is triggered. You can choose colors from a menu.
- Click beside **Secondary Color** to set the color of the border after an alarm or tally is triggered.

4 To add a spotlight effect to your border, select **Add Spotlight**, and then choose the angle from which the light appears from the **Light Position** menu.

*The spotlight effect is only available when the border style is Beveled or Rounded Beveled.*

5 To apply animation effects to the border state, select one of the following from the **Animation** drop-down list:

- **Color Change**—Applies a primary to secondary color change to the border
- **Moving Light**—A moving light travels around the border perimeter.
- **Flashing/Transition**—The lighting flashes and changes to different colors.

The animations are not displayed on the Layout Designer canvas, and can only be viewed once the layout is published to a display.

# 8 Working with PiPs

## About Picture-In-Pictures (PiPs)

PiPs display the input video from a single input channel. You can input video channels to PiPs for display on multiviewer output display devices. Each PiP has a number of properties that determine how it is displayed in the layout. PiP properties are independently set; each PiP in a layout can have a different set of PiP properties. All properties associated with a PiP can be modified using the Properties pane. You can also select a PiP in the layout and use your mouse to resize and move a PiP in a layout as well as format groups of PiPs using the align and distribute commands.

Layouts made from the Layout Creation Wizard are preconfigured with a predetermined number of PiPs and predefined PiP properties.

For information about adding PiPs from the Layout Object library, see ***Adding Layout Objects to a Layout*** on page 103.

You can modify all PiPs, regardless of how they were created.

*Your layout must be in an **unlocked** state to add, move, or delete objects. You can adjust properties of objects on a locked layout. See **Locking and Unlocking Layouts** on page 90.*

The following figure illustrates the various PiP operations.

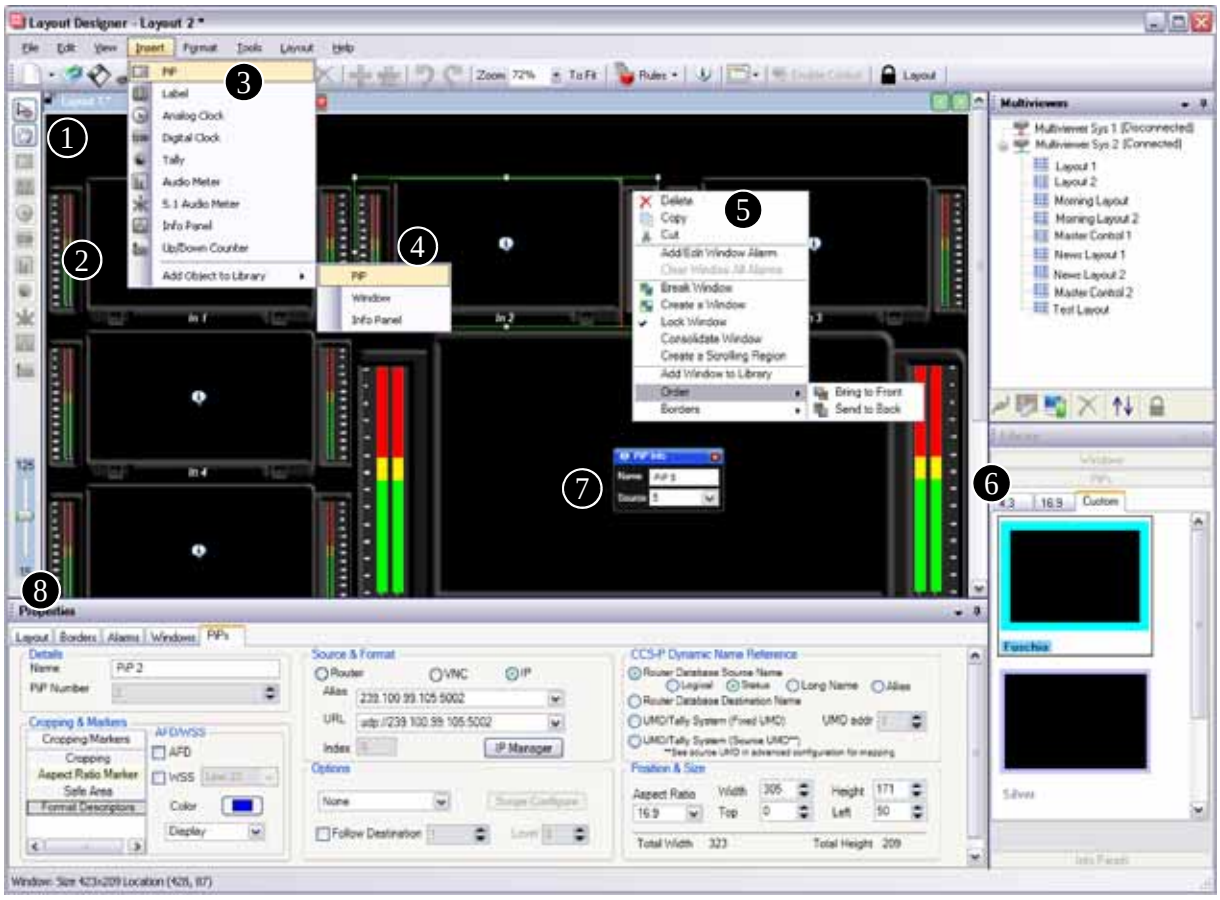



**Figure 8-1** PiP Operations

1. Insert a PiP into a layout using the tool palette. See ***Adding PiPs to a Layout*** on page 125.
2. Move and resize PiPs using your mouse. See ***Resizing and Moving Layout Objects Using a Mouse*** on page 106.
3. Insert a PiP into a layout using the **Insert** > **PiP** command. See ***Adding PiPs to a Layout*** on page 125.
4. Add PiPs to the Library panel. See ***Adding Objects to the Library Panel*** on page 61.
5. Copy and paste PiP properties from one PiP to one or more other PiPs. See ***Copying and Pasting Layout Object Properties*** on page 105.
6. Drag PiPs from the Layout Designer Library and drop them onto a layout. See ***Adding PiPs to a Layout*** on page 125.
7. View PiP source information by clicking on the icon in the middle of the PiP.
8. Modify PiP properties using the PiP Properties pane. See ***Modifying PiPs Using the Properties Pane*** on page 125.

## Adding PiPs to a Layout

You can use the canvas Tool palette and the application menus to add PiPs. You can also drag PiPs from the Library panel, and then drop them onto the canvas. For information about using the Layout Designer library, see ***Adding Layout Objects to a Layout*** on page 103.

PiPs added to the layout canvas have default properties. See ***Setting Default Layout Properties*** on page 50.

### To add a PiP to your layout:

1 Select **Insert** > **PiP**.

## Modifying PiPs Using the Properties Pane

Layout Designer provides a numbers of way to modify the appearance, size, and position of a PiP in a layout. You can use the PiP properties tab to modify a selected PiP by adjusting PiP property values such as width and height, and by selecting or changing the input channel you want the PiP to display in a layout. After completing the required modifications, you can copy the properties from the modified PiP, and then paste them to other PiPs in the same layout (see ***Copying and Pasting Layout Object Properties*** on page 105).

### To access the Properties pane:

1 Select **View** > **Properties**.

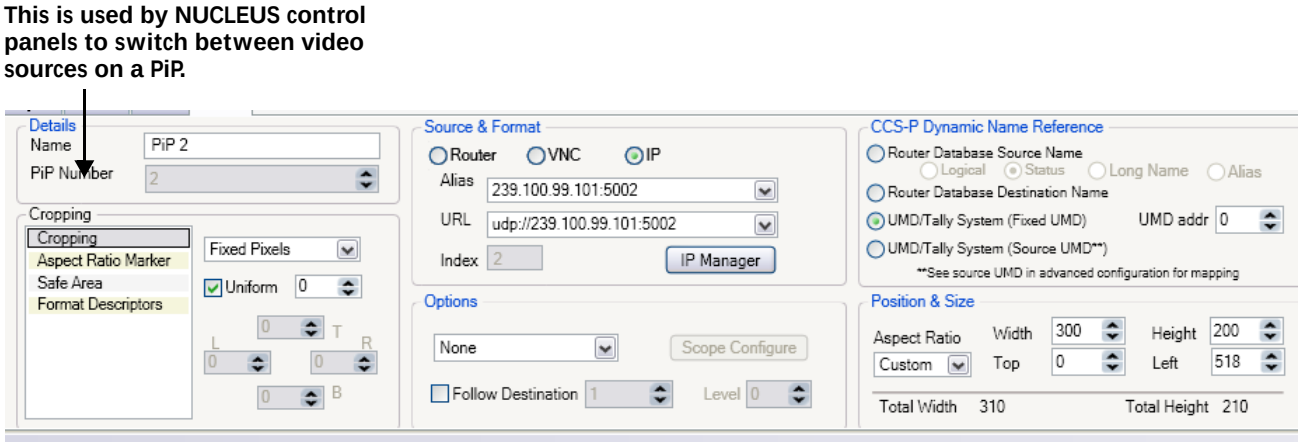



**Figure 8-2** PiP Properties Pane

See the following sections for additional PiP related modifications:

- ***Applying Borders Using the Properties Pane*** on page 118
- ***Creating New Border Styles*** on page 119
- ***Copying and Pasting Layout Object Properties*** on page 105
- ***Resizing and Moving Layout Objects Using a Mouse*** on page 106
- ***Aligning and Distributing Objects in a Layout*** on page 107

## Modifying PiP Size and Aspect Ratio

PiP width and height sizes do not include border size. The minimum PiP size for 4:3 and custom aspect ratios is 113×85 pixels. The minimum PiP size for 16:9 aspect ratio is 114×64 pixels. Maximum PiP size depends on the video standard of the input channel. When PiPs are resized, the width and height proportions are constrained by the aspect ratio. When you select a custom aspect ratio, the width and height sizes are not constrained.

*You can set the default PiP width value in the **Default Preferences** tab of the **Layout Designer Preferences** dialog box. For more information, see **Setting Default Layout Properties** on page 50.*

### To modify PiP size and aspect ratio using the Properties pane:

1. In the layout, select the PiP you want to modify, and then select the **PiPs** tab from the **Properties** pane.
2. Under **Video/Graphics Dimensions**, select the aspect ratio that you want to use from the **Aspect Ratio** list.

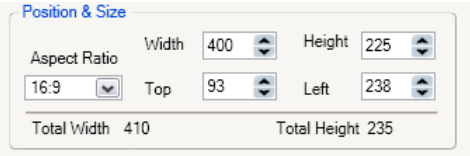



**Figure 8-3** Setting PiP Size and Aspect Ratio

3. To set the PiP width and height, type or select in the **Width** and **Height** boxes.

   If you selected **4:3** or **16:9** as your aspect ratio, the aspect ratio is maintained when you select a value for width and height.

4. (Optional) Add markers to your PiP.

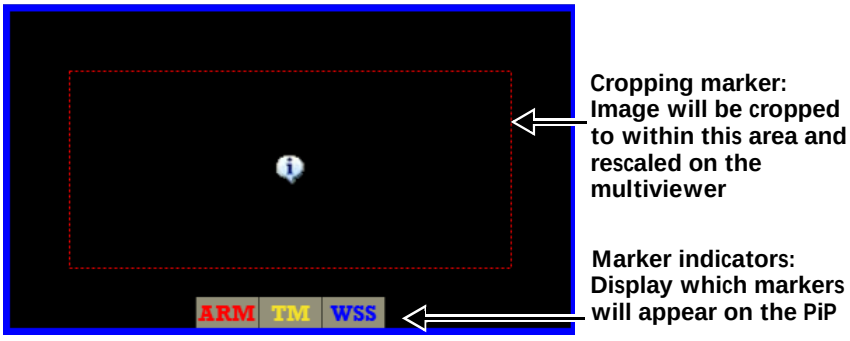



**Figure 8-4** Markers on a PiP in Layout Designer

Under **Cropping & Markers**, you can choose the following options:

- **Aspect Ratio Markers**—An indicator of correct aspect ratio on the PiP to let you know whether the video is properly scaled when a source that is one aspect ratio is put on a PiP that has a different aspect ratio. The aspect ratio marker displays the area of a 4:3 coded frame on a 16:9 frame, or a 16:9 coded frame within a 4:3 frame.

  Click **Enable** to activate a marker on the PiP. To determine the color of the marker, click **Color**, make a selection, and then click **OK**.
- **Safe Area**—adds a Title Marker indicator on the PiP to indicate the safe area for titles to be displayed (80% of the picture area).

  Click **Title Marker** to activate a marker on the PiP. To determine the color of the marker, click **Color**, make a selection, and then click **OK**.

- **Active Format Description**—adds an indicator that displays the AFD description present in the incoming video. There are two options:
  - **AFD** - HD and SD video
  - **WSS** - SD 625 video only (with this option, choose the line to read WSS data from in the video stream)

  To determine the color of the marker, click **Color**, make a selection, and then click **OK**.

  From the drop-down menu, there are two options:
  - **Display** mode— markers on the multiviewer PiP indicate the active picture area indicated by the AFD code or WSS code on the input.
  - **Convert** mode—scales the video on the input source as indicated by the AFD code or WSS code on the input.

The Total Width and Total Height indicators describe the size of the PiP including the border. See ***Modifying Border Properties*** on page 117 for more information.

## Setting PiP Cropping Values

You can use Layout Designer's cropping tool to crop the top, bottom, left, and right edges of a selected PiP. All cropping values are in pixels. When cropping a PiP, the cropping area you set is indicated by a red dotted line.

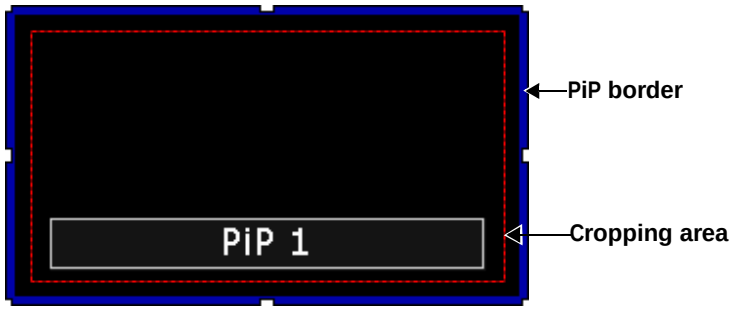



**Figure 8-5** PiP Cropping Area

Be aware of the following:

- Switching video input standards on a PiP may affect how the current cropping values are applied to the input video.
- When publishing default layouts stored on the multiviewer hardware, ensure that the cropping area (indicated by the red dotted lines on the PiP in the window) are properly set.

### To crop a selected PiP:

1. Under **Cropping & Markers**, select **Cropping**.
2. Do one of the following:
   - To set a uniform cropping area around the PiP, under **Cropping**, type or select a cropping width in the **Pixels** box, and then select the **Uniform** check box.
   - To set different values for the top, bottom, left, and right cropping, clear the **Uniform** check box, and then type or select a cropping width in the **Top**, **Bottom**, **Left**, and **Right** boxes.

## Selecting a PiP's Input Source

Use the PiP Properties tab to modify the input source of selected PiPs.

- **Router**—(Not available on HView IP)
- **VNC server**—The PC connected to a VNC PiP can be controlled using multiviewer on-screen controls. When you choose a VNC server as the source for a PiP, many of the PiP controls in the PiP Properties pane are disabled (for example, Cropping & Markers, Scope options, and CCS-P Dynamic Name Reference). See ***Selecting a VNC Source*** on page 128.
- **IP source**—Select an input from the current IP source list. See ***Selecting an IP Source*** on page 129.

### Selecting a VNC Source

1. Under **Source**, click **VNC**.
2. Enter the IP address or host name, port number, and the password for the VNC server.

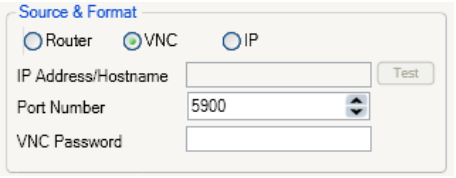



**Figure 8-6** Selecting VNC Input Source

3. Click **Test** to validate the IP address.
   - **Red**—The IP address is invalid.
   - **Grey**—The IP address is valid.

   When choosing VNC PiPs, keep in mind the following:

   - If one or more VNC PiPs have an inaccessible or invalid IP address, the multiviewer will wait for that/those PiPs to time out before loading the rest of the VNC PiPs.
   - Some VNC servers terminate the connection after a period of inactivity.
   - Some VNC servers lose connection when a user access control pops up, or when the computer is locked.
   - The more frequently a VNC server's desktop updates, the worse the appearance will be. A plain web browser will usually look better than a video clip.

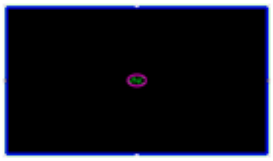


**Figure 8-7** VNC PiP (Icon is Not Clickable)

*For best results, use UltraVNC, or another VNC server that uses server-side scaling.* HView IP *multiviewers do not support NT Logon authentication or VNC encryption.*

For information on controlling VNC PiPs, see ***Controlling a VNC PiP*** on page 192.

### Selecting an IP Source

1 Under **Source**, click **IP**.

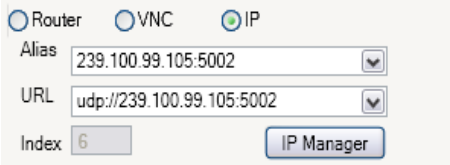



**Figure 8-8** Selecting IP Source

2 Choose an IP source using either the **URL** or the an **Alias** from the drop-down menus.

The **URL**, **Alias**, and **Index** fields update to display the information for the selected URL.

If the item is not on the list, click **IP Manager**. See ***IP Configuration Manager*** on page 70.

**Figure 8-9** IP PiP (Icon is Not Clickable)

## Moving a PiP Using the Properties Pane

You can use the PiP Properties tab to resize/reposition PiP(s) in a layout. Using the **Top Position** and **Left Position** controls, you can position a PiP by setting the number of pixels from the top edge and left edge of the layout.

### To move a PiP using the Properties pane:

1 In the layout, select the PiP you want to modify, and then select the PIPs tab from the **Properties** pane.

2 Under **Position & Size**, in the **Left** and **Top** boxes, type or select a new left and top position for the selected PiP.

You can also use your mouse to modify PiP width, height, left position, and top position. For information, see ***Resizing and Moving Layout Objects Using a Mouse*** on page 106.

# Test and Measurement

Test and Measurement can be used to validate the video signal or to help troubleshoot problems.

After you publish a layout, you can access the Test and Measurement options by right-clicking within the appropriate PiP, and choosing **Display Scope** on the menu that appears. (For more information about on-screen controls, see **Chapter 11, *On-Screen Controls*** on page 189.)

The options are:

- None
- Waveform
- Waveform Parade
- Line
- Line Parade
- Vector
- Quad Display

When you choose an option, the selected PiP changes to that Test and Measurement mode. You can run Test and Measurement on only one PiP at a time per multiviewer. If you select another PiP for testing, the previous PiP reverts back to its original mode. Alternatively, you can test different sources on the same PiP by changing the source value of the PiP.

You can display the results in monochrome or color by right-clicking within the PiP, and then choosing **Color Source**.

- **Monochrome** displays the results in black and white.
- **From Video** displays the results in the color of the pixel that is being sampled. If there are a lot of black or dark pixels in a signal, the results may be difficult to see in color mode.

## Test and Measurement Display Modes

The following describes the Test and Measurement modes that are available under Display Scope. For information about changing how each mode is displayed, see ***Configuring the Test and Measurement Display Modes*** on page 133.

**None:** The Test and Measurement feature is not active.

**Waveform:** Displays a horizontal sweep of the Y luminance channel.

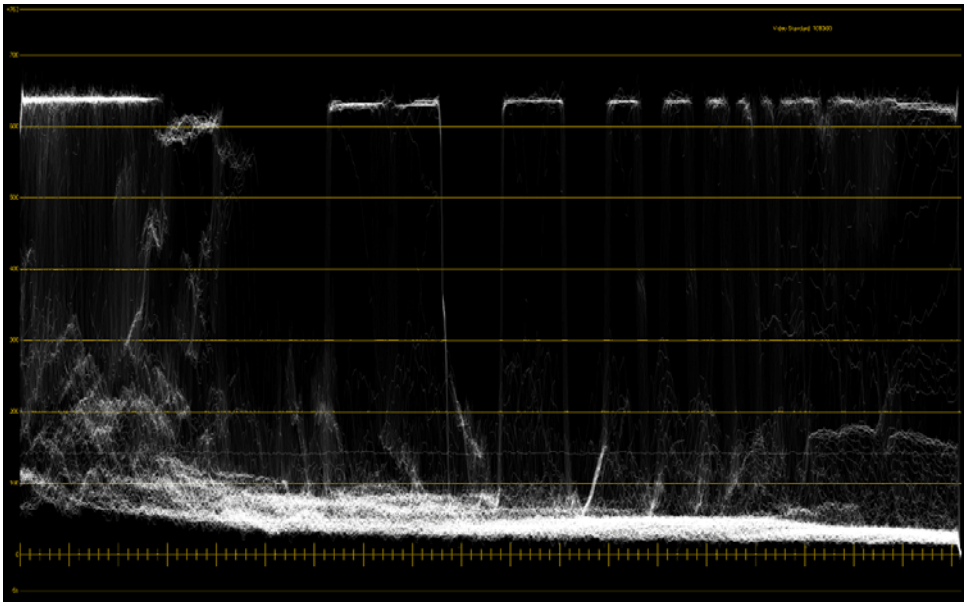


**Figure 8-10** Waveform Mode in Monochrome

**Waveform Parade:** Displays a horizontal sweep of the luminance and color-difference channels next to one another in YCbCr format.

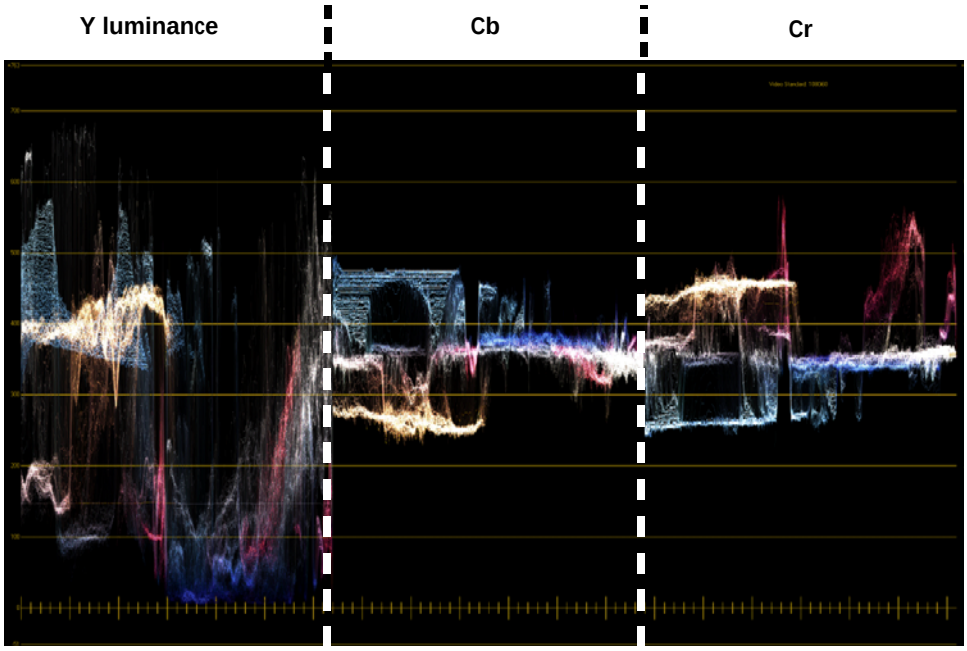



**Figure 8-11** Waveform Parade Mode in Color

**Line:** Displays the Y luminance component of the selected line of video.

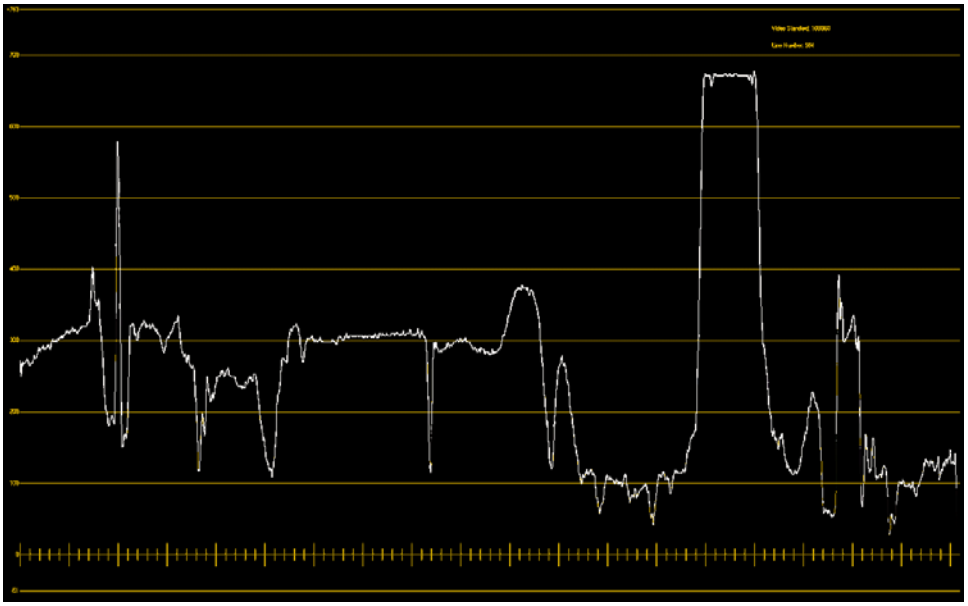


**Figure 8-12** Line Mode

**Line Parade:** Displays the luminance and color-difference channels of the selected line of video next to one another in YCbCr format.

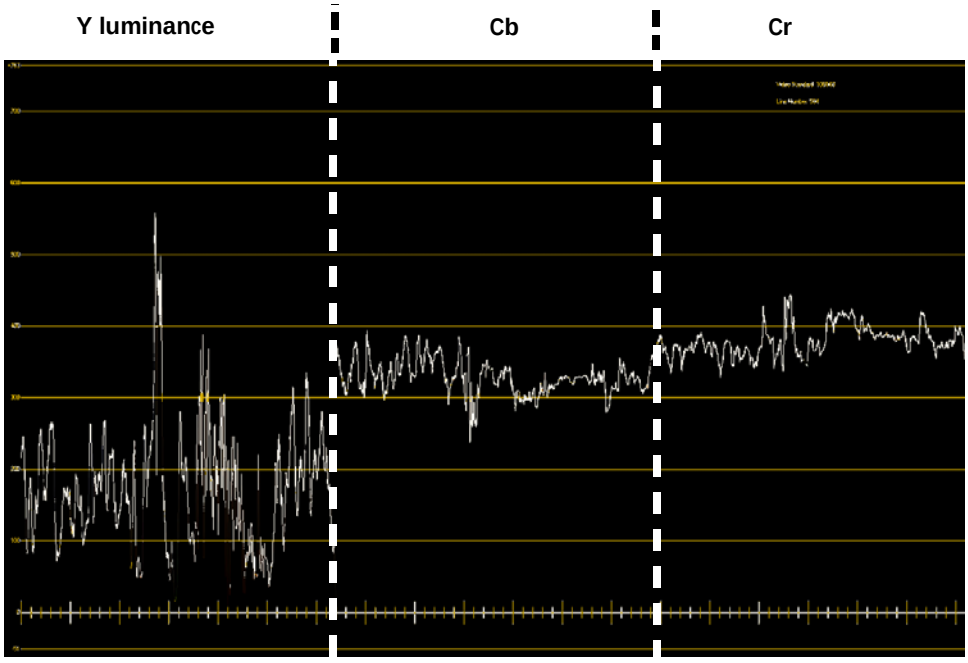



**Figure 8-13** Line Parade Mode

**Vector:** This option is used for calibrating the chroma levels with 75% color bars.

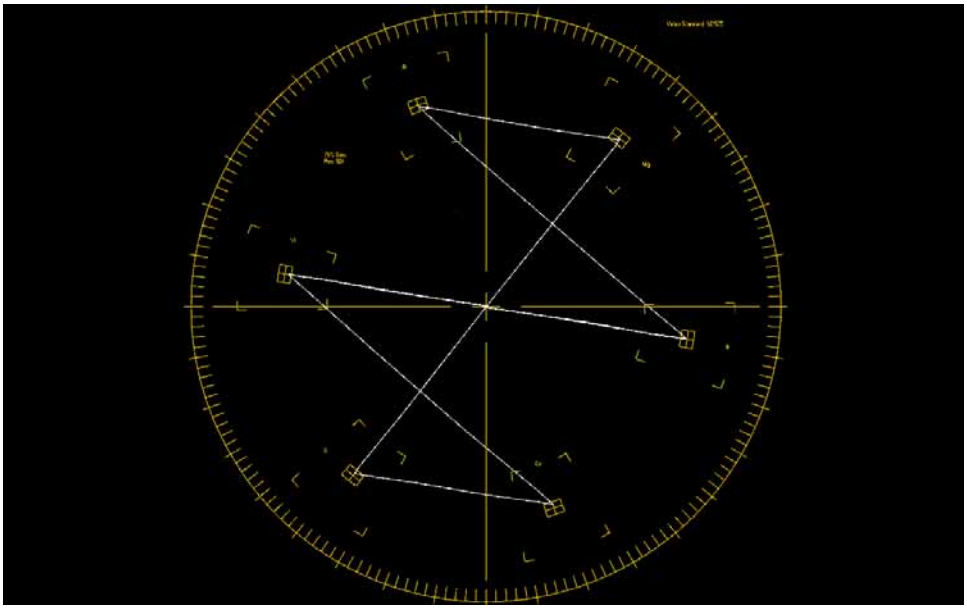


**Figure 8-14** Vector Mode

**Quad Display:** Displays four Test and Measurement screens at one time. The default configuration is waveform and vector on the top, video display and line on the bottom.

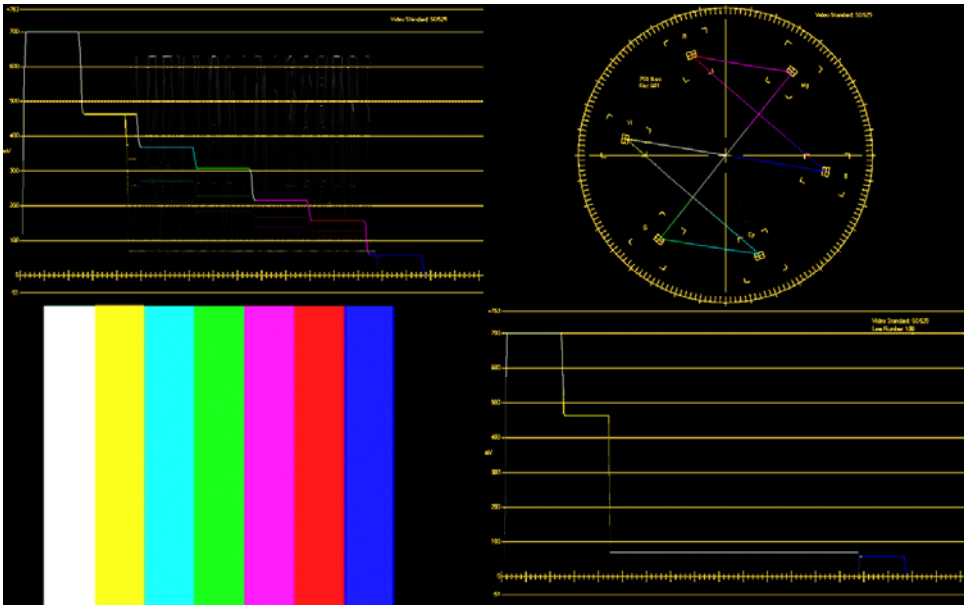
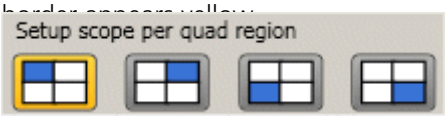


**Figure 8-15** Quad Display Mode

## Configuring the Test and Measurement Display Modes

In Layout Designer, define how the different Test and Measurement display modes will appear on a PiP-by-PiP basis, or globally. Table 8-1 describes the options that can be defined, depending on which mode you selected.

**Table 8-1** Test and Measurement Display Mode Options

| Option | Description |
|---|---|
| **Color** | Set the default color display to **From Video** (color) or **Monochrome** (black and white).<br>If the you find that there are too many dark colors to see the display clearly when you view the results on the output, you can right-click within the PiP and select **Color Source > Monochrome**.<br>Note: If you change the color output when you are in Quad Display mode, all of the quadrants reset to that color output regardless of what default values were defined in Layout Designer. |
| **Line** | Select which line of the active video to display for each video format. For interlacing formats, select a line in the Odd or Even range. |
| **Pixel Range** | Define the range of pixels to display within a line. |
| **Setup scope per quad region** | For Quad Display mode, define what is displayed in each quadrant. The blue rectangle in each sample indicates which quadrant you are defining. When you click on a sample, the border appears yellow.<br>  |

## Defining Display Modes for a PiP

1. Select a PiP.
2. Select the **PiPs** tab of the **Properties Panel**.
3. In the **Scope Configuration** area, select a display mode from the drop-down list, and then click **Scope Configure**.

   The **Scope Configuration** dialog box appears. Certain options are available, depending on which display mode you selected. See **Table 8-1** on page 134.
4. Change all of the appropriate options for that display mode, and then click **OK**.
5. Repeat steps 3 and 4 for each mode.

## Defining Display Modes Globally

When you define the options globally, you set the default values for all PiPs. However, you can redefine the options for individual PiPs when you create a new layout.

1. Select a PiP.
2. Select **Edit > Preferences**.

   The **Layout Designer Preferences** dialog box appears.
3. Select the **Default Properties** tab.
4. In the **PiP** area, select a display mode from the **Scope** drop-down list, and then click **Configure**.

   The **Scope Configuration** dialog box appears. Certain options are available, depending on which display mode you selected. See **Table 8-1** on page 134.

5 Change all of the appropriate options for that display mode, and then click **OK**.

6 Repeat steps 4 and 5 for each mode.

# 9 On-Screen Data Tools

## About On-Screen Data Tools

Layout Designer provides on-screen tools that you can add to layouts to provide data, feedback, and other information. You can create customized audio meters, tally indicators, labels, and clocks for each layout.

Use Layout Designer's on-screen data tools to monitor your system input signals and set up automatic responses to alarm conditions and operational events. The following figure illustrates Layout Designer's on-screen data tools in a layout.

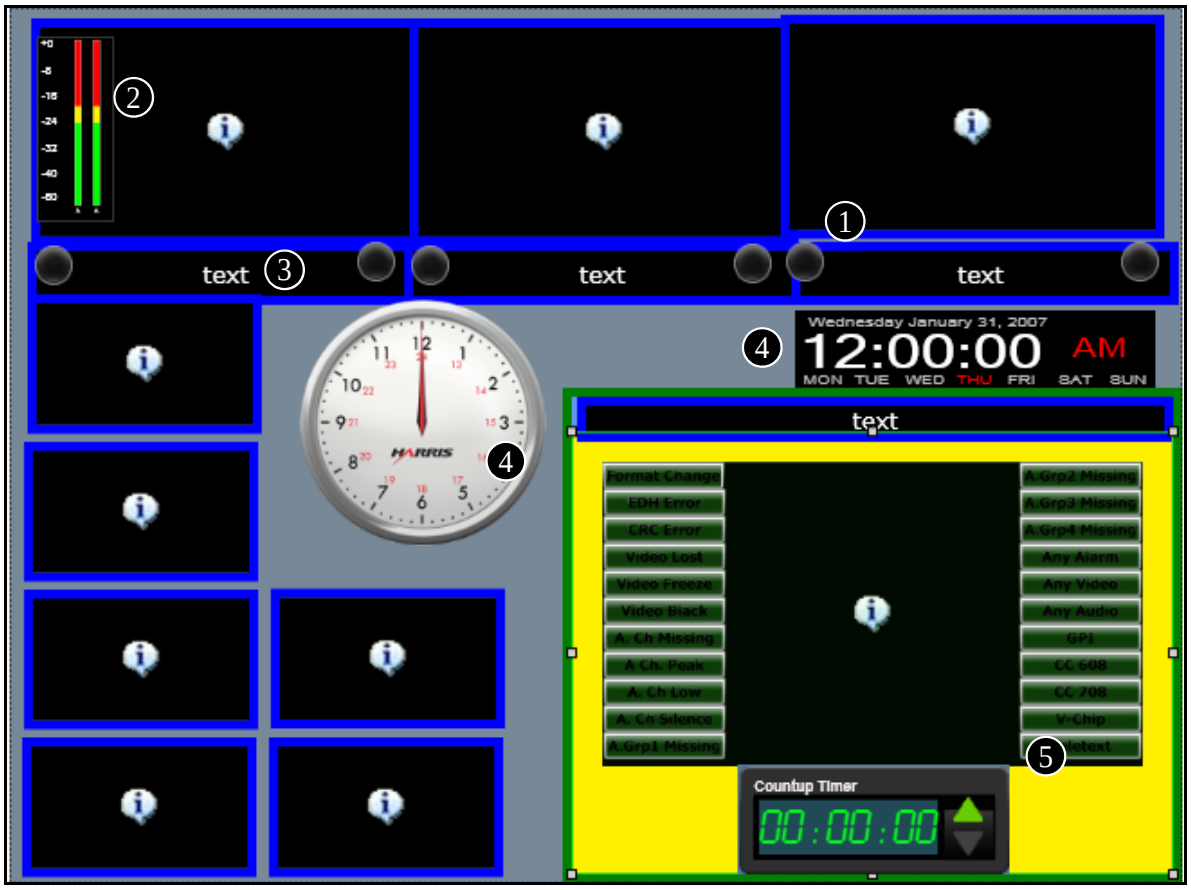



**Figure 9-1** Layout Displaying On-Screen Monitoring Tools

1. **Tally indicators** display the monitoring status from UMD protocol, GPI inputs, or alarms/rules. You can apply various colors and behaviors to each tally indicator individually. See ***Creating Tally Indicators*** on page 141.
2. **Audio meters** display the audio levels from embedded input sources. You can assign up to 16 audio meters to each PiP in a layout. See ***Creating Audio Meters*** on page 138.
3. **Labels** can display static or dynamic information, or display text using alarms/rules. See ***About Labels*** on page 144.
4. **Clocks** can be either analog or digital, and can display various time zones. See ***About Layout Clocks*** on page 148.
5. **Up/down counters** are unidirectional. See ***About Up/Down Counters*** on page 152.

## Creating Audio Meters

You can associate up to 16 individual audio channels (or 8 channel pairs) to each PiP for audio metering purposes. Audio meters for each of these assigned channels can be positioned anywhere in the canvas, including superimposed on their associated PiPs. You can associate one group of audio meters to a PIP with IP source. The number of channels displayed depends on the type of audio service to be monitored (i.e., stereo or Dolby 5.1)

*Your layout must be in an **unlocked** state to add, move, or delete objects. You can adjust properties of objects on a locked layout. See **Locking and Unlocking Layouts** on page 90.*

Audio meters are associated with PiPs by mapping the audio source channels to a source PiP. You can map audio to PiPs, and change other audio meter-related properties using the Audio Meters tab of the Properties pane.

Creating audio meters for layouts can be divided into these tasks:

- Mapping audio meters
- Changing the appearance of audio meters
- Changing the size and position of the audio meters.

The following illustrates the controls available from the **Audio Meter** tab of the Properties pane that are used to perform these tasks.

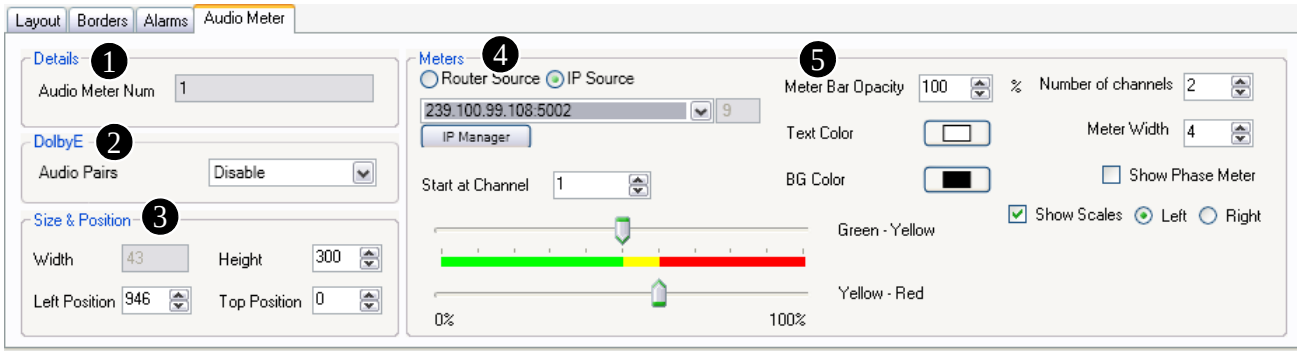



**Figure 9-2** Audio Meter Properties

1. **Audio Meter Number** - Auto-assigns each audio meter an unique number
2. **DolbyE** - (Unavailable with HView IP)
3. **Setting audio meter size and position** - Use these controls to set the width and height of your meter and set the meters position in the layout. See ***Setting Audio Meter Size and Position*** on page 141.
4. **Mapping audio meters** - Use these controls to assign audio source channels to meters as associated meters to source PiPs. See ***Mapping Audio Meters*** on page 139.
5. **Setting audio meter appearance properties** - Use these controls to set the meter scale, color transition points, and number of channels from the audio source you want to meter. You can also set background and text color. See ***Setting Audio Meter Appearance Properties*** on page 139.

You can:

- Resize and move audio meters using your mouse. See ***Formatting Layout Objects in the Canvas*** on page 105.
- Add audio meters to a window. For more information, see ***Creating Layout Windows*** on page 109.

## Adding Audio Meters to a Layout

Audio meters that are added to a layout using the Tool palette appear as the default audio meter type.

### To add an audio meter:

1 Select **Insert** > **Audio Meter** or **Insert** > **5.1 Audio Meter**.

## Mapping Audio Meters

Audio mapping is the process of selecting the audio source and audio channels that you want to see metered on the selected PiP. Use the **Audio Meters** tab of the **Properties** pane to map audio channels to source PiPs.

### To map audio meters:

1 Select the audio meter that you want to map.
2 Select the **Audio Meter** tab on the **Properties** pane.
3 In the **Source** list, select a source that you initially associate with the selected audio meter.
4 In the **Start At Channel** field, select the first audio channel of the audio source that you want to meter.

You can configure info panels to indicate the audio channels that are being monitored. For more information, see ***Configuring Audio Monitoring*** on page 187.

## Setting Audio Meter Appearance Properties

After you have mapped the audio channels that you want to meter, set the audio meter appearance properties.

## Selecting Meter Scale Properties

Choose whether you want to display a scale on your audio meters and select on which side of the meter you want to position the scale.

### To set meter scale properties:

1. Select the **Audio Meter** tab on the **Properties** pane.
2. To show or hide the meter scales, select or clear **Show Scales**.
3. If you selected **Show Scales**, select either **Left** or **Right** as the position of the meter's scales. (This setting is not available on 5.1 audio meters.)
4. To select the number of channels you want to meter, enter a value from the **Number of channels** list. (This setting is not available on 5.1 audio meters.)
5. To show or hide the phase meter, select or clear **Show Phase Meter**.

   Regardless of the type of meter, phase meters appear in the lower portion of the area taken up by the audio meters.

   When a phase meter is enabled, the meter fully to the right side in the green zone indicates a phase difference of 0 degrees. The meter fully to the left side of the red zone indicates a phase difference of 180 degrees. A properly phased stereo pair produces a phase meter that moves within the green zone, and a reversed channel produces a pointer that moves within the red zone.

6. To modify the opacity of the audio meter, beside **Meter Bar Opacity**, type or select a percent opacity value for the selected meter(s).
7. Do either of the following:
   - To select the label text color, click **Text Color**.
   - To select the background color, click **BG Color**.

   The **Select Color** dialog box appears.

8. Select a color value.
9. Use the **Opacity** slider to adjust the color's opacity value.
10. Click **OK** to save your color changes.

## Setting Meter Transition Points

Each audio meter type has default red-yellow and yellow-green transition points. These transition points can be modified to suit your audio sources. For example, you can customize the transition point, in percentage of the overall meter height, of where the yellow portion of the meter turns to red.

### To set meter color transition points:

1. Select the **Audio Meter** tab on the **Properties** pane.
2. On the **Color Transition Point** drop-down list, select the metering transition point style that you want to use.

   Each transition point style in the list corresponds to a standard audio meter type.

3. Use the sliders to do either of the following:
   - Use the **Green-Yellow** slider to adjust the transition point, in percentage of the overall meter height, where the green portion of the meter turns to yellow.

- Use the **Yellow-Red** slider to adjust the transition point, in percentage of the overall meter height, where the yellow portion of the meter turns to red. Typically, the red-yellow transition corresponds with 0 dB on analog audio scales.

## Setting Audio Meter Size and Position

There are four control settings that you can use to specify the size and position of the audio meters:

- Width
- Height
- Left Position
- Top Position

### To set the audio meter size and position:

1. Select the **Audio Meter** tab on the **Properties** pane.
2. In the **Size & Position** area, enter the value for height in the **Height** field.
   The width cannot be changed.
3. To move the selected audio meters, enter the left and top position values (in pixels) in the **Left Position** and **Top Position** fields.
   The **Left Position** value is the number of pixels from the left edge of the layout. The **Top Position** value is the number of pixels from the top edge of the layout.

*You can also use your mouse to resize and move audio meters in the layout canvas. For more information, see* ***Formatting Layout Objects in the Canvas** on page 105.*

# Creating Tally Indicators

Add on-screen tally indicators to your layout to indicate alarm conditions or other operational instances such as rule conditions. Use the Tally tab of the Properties pane to change a tally's shape, color, and behavior during an alarm state so that you can make each tally's appearance unique and easy to identify.

*Your layout must be in an **unlocked** state to add, move, or delete objects. You can adjust properties of objects on a locked layout. See* ***Locking and Unlocking Layouts** on page 90.*

## Adding Tally Indicators to a Layout

Tally indicators that are added to a layout appear in the default tally style. Once you have added a tally, you can change its appearance.

### To add a tally indicator to a your layout:

1. Select **Insert** > **Tally**.

## Modifying Tally Indicator Properties

Each tally that you add to your layout has a set of individual properties that determine its appearance, its behavior, and the alarm or processing rule it indicates in the layout.

To view a tally's properties, in the layout canvas, select the tally indicator that you want to modify, and then select the **Tally** tab of the **Properties** pane.

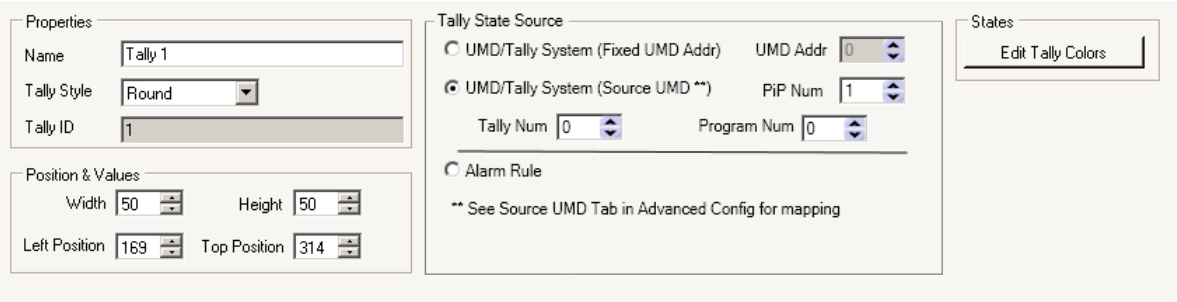



**Figure 9-3** Tally Properties Pane

## Naming the Tally Indicator

You can give your new tally indicator a unique name that identifies it in the layout when it is associated with GPIO devices.

### To name a tally:

1. Select a tally indicator in the layout.
2. Select the **Tally** tab on the **Properties** pane.
3. In the **Properties** area, type a name for the tally indicator in the **Name** field.

## Selecting a Tally Indicator Shape

You can change the shape of a tally indicator at any time by choosing a new shape from the **Tally Style** list.

### To select a new tally indicator shape:

1. Select a tally indicator in the layout.
2. Select the **Tally** tab on the **Properties** pane.
3. In the **Properties** area, select a new shape from the **Tally Style** list.

## Resizing and Moving a Tally Indicator

Use the **Position & Values** controls to resize and move your tally.

### To modify tally size and position:

1. Select a tally indicator in the layout.
2. Select the **Tally** tab on the **Properties** pane.
3. In the **Position & Value**, do either of the following:
   - To resize the selected tally indicator, enter the width and height values (in pixels) in the **Width** and **Height** fields.
   - To move the selected tally, enter the left and top position values (in pixels) in the **Left Position** and **Top Position** fields.

     The **Left Position** value is the number of pixels from the left edge of the layout. The **Top Position** value is the number of pixels from the top edge of the layout.

*You can also use your mouse to resize and move tally indicators in the layout canvas. For more information, see* ***Formatting Layout Objects in the Canvas*** *on page 105.*

## Setting Tally States

You can assign different colors, behaviors, and alarm conditions to each tally indicator. There is one Normal state, three Alarm states (Normal, Alarm Low, Alarm Medium, and Alarm High), and the Tally state. You create the following settings for each state:

| | |
|---|---|
| Primary color | The primary color represents the tally color in its primary/initial state. You can set the primary color to Off, Green, Yellow, Amber, or Red. The primary color of the Low level alarm is the tally color On state from an external UMD tally protocol. |
| Secondary color | The secondary color represents the tally color in its secondary state, when it is flashing in animation mode. You can select from Off, Green, Yellow, Amber, and Red for secondary color. |
| Animation | Apply animations to create the tally behavior. You can select None (solid color indicator) or Flashing. |

### To set a tally indicator state:

1. Select a tally indicator in the layout.
2. Select the **Tally** tab on the **Properties** pane.
3. In the **States** area, click **Edit Tally Colors**.
   The **Layout Editor - Tally States** dialog box appears.

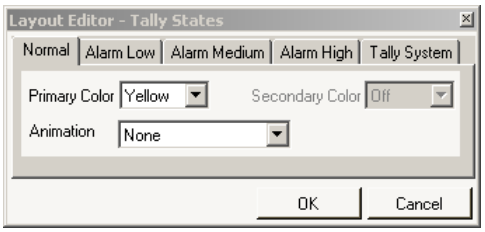



**Figure 9-4** Tally States Dialog Box

4. For each state that you want to create for the selected tally indicator, do the following:
   a. From the **Primary Color** list, select a color for the tally indicator's initial state.
   b. From the **Secondary Color** list, select a color or the tally indicator's secondary state.
   c. From the **Animation** list, select a behavior for the tally.

## Setting the Tally State Source

In the Tally State Source area, there are three options:

**Table 9-1** Tally State Source Options

| Tally State Source Option | Configuration Options | |
|---|---|---|
| UMD/Tally System (Fixed UMD Addr) | Select the **UMD address** that will be the input source for the tally. | When you use a either of the **UMD/Tally System** options, you must set the following items:<br>■ **Tally Number–**the number of the tally within the UMD address that is monitored<br>■ **Program Number**–Enter the correct number in this field if you are using Ross Protocol. If you are using another protocol, the data in this field will be ignored. |
| UMD/Tally System (Under Monitor Display) | Select the **PiP Number** that will be the input source for the tally. | |
| Alarm Rule | Select this option if you want the tally indicator to be the target for an alarm, and then follow these steps to define the alarm source:<br>1. With the tally selected in the layout, select the **Alarms** tab in the **Properties** pane.<br>2. Following the instructions in ***Defining Alarms for a Layout Object*** on page 161, configure the **Detectors** and **Actions** pages of the **Rules** dialog box.<br>On the **Actions** page, choose **Set Tally Alarm State**, and complete the **Action Parameters** section for that action. | |

# About Labels

Labels can be used to display text on your layout.Labels can be added to a layout using the Tool palette or by using the **Insert > Label** command from the application menu.

*Your layout must be in an **unlocked** state to add, move, or delete objects. You can adjust properties of objects on a locked layout. See **Locking and Unlocking Layouts** on page 90.*

Labels can be static, dynamic, or alarms/rules based, depending on the label's text source.

Scrolling properties can be added to both types of labels. On the Label tab of the Properties pane, you can activate and define the scrolling speed of the label text. Label text is set to scroll from right to left and within the defined label area, which is set using the label width and height properties. You can have multiple labels on a layout, each with unique properties.

Labels are modified on the Labels properties pane.

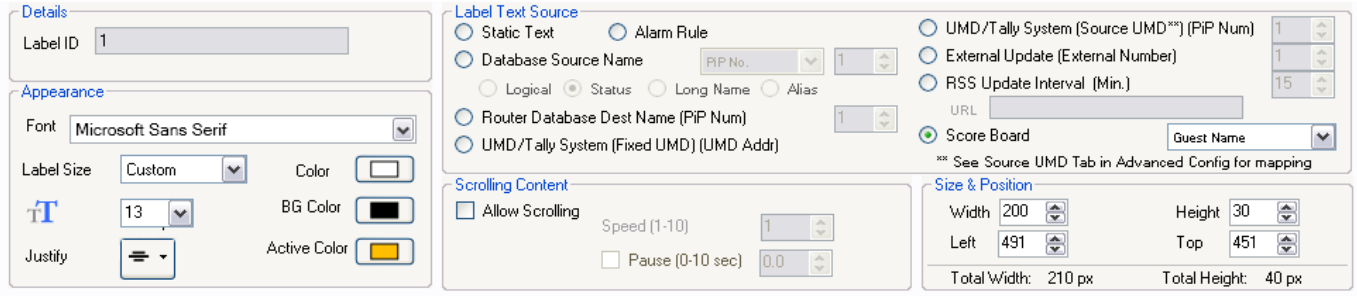



**Figure 9-5** Labels Properties Pane

Each label has a unique identifier for the layout, its Label ID. The label ID cannot be modified. All other controls on the Labels properties pane can be edited.

When you modify label properties, the changes only apply to the selected label(s). If you want to make the same property changes to multiple labels, you can use the **Copy** and **Paste** commands from the Layout Designer context menu. For more information, see ***Copying and Pasting Layout Object Properties*** on page 105.

## Setting the Label Text Source

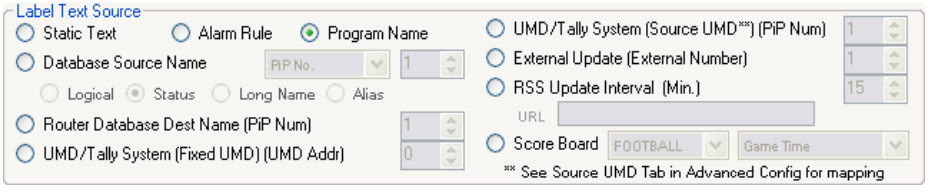



**Figure 9-6** Label Text Source Options

If your label is a dynamic label, do not type text in the label area.

**Table 9-2** Label Text Source Options

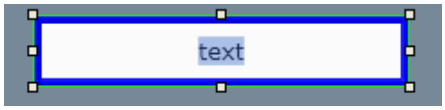
| Label Text Source | Configuration |
|---|---|
| Static Text | When a label's source is static, default text appears in the label area. To edit static label text:<br>1. In the layout canvas, double-click the label you want to modify.<br>2. Hold down your left mouse button, and then select the default (or previously entered) label text.<br>  <br>3. Type your new label text into the label area. |
| Alarm Rule | If your label is connected to an alarm or rule, it will be triggered at a specific event. |
| Program Name | If your label is connected to an IP source, it derives its name from the metadata associated with that sources. |

**Table 9-2** Label Text Source Options *(Continued)*

| Label Text Source | Configuration |
|---|---|
| Database Source Name | ■ With router sources (not available with HView IP), the label updates the source from the router database that is associated with the specified **PiP number** or **Audio Source Number** (as chosen from the drop-down menu). If a switch on the router causes a change in the PiP input source, the label associated with the PiP source will follow. You can track one of the following router source names **Logical**, **Source**, **Long Name**, or **Alias**.<br>■ With IP sources, select **Static** to display the URL Or **Alias** to display the Alias of a IP source. The **Logical** and **Long Name** options will not display a label. |
| UMD/Tally System (Fixed UMD) (UMD addr) | Select a **UMD address** for the label. |
| UMD/Tally System (Source UMD***) (PiP Num) | Select the **PiP number** of the input source for the label. |
| External Update (External Number) | Not available for HView IP. |
| RSS Update Interval (Min.) | Uses an RSS feed as the source for the label text. Enter the URL to receive data from, and the frequency with which you would like the label to check for updates. |
| Scoreboard | Choose **Basketball** or **Football**, and then option from the drop-down menu. Options are described in ***Using the Scoreboard Option*** on page 183. |

## Modifying Label Appearance Properties

Label appearance properties can be applied to static and dynamic labels. You can select multiple labels, and then apply the same appearance properties changes to the selected labels.

### To modify label text properties:

1 In the layout canvas, select label(s) you want to modify.

To select multiple labels, hold down the **CTRL** key as you select each label.

2 On the **Properties** pane, click the **Labels** tab.

3 Under **Appearance**, select a font for your label text from the **Font** drop-down list.

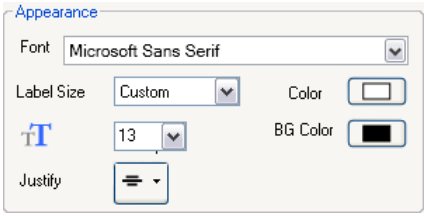



**Figure 9-7** Modifying Label Text Properties

4 Beside the  icon, select a font size from the drop-down list.

5 To select the label text color, click the  icon to open the **Select a Color** dialog box.

6 To select a color, do one of the following:

- Use the slider to select a color.
- Enter the color values you want to use in one of the **ScRGB**, **sRGB**, or **Hexadecimal Notation** fields.

Your selected color is previewed below **Selected Color**. If required, use the **Opacity** slider to adjust the color's opacity value.

For more information on completing the Color Selector dialog box, see ***Setting Default Window Properties*** on page 55.

7 Beside **Justify**, select the justification style for your label text from the drop-down list.

8 (Optional) Click **Fit to Text** to set the label size to the total width of the text contained in the label area.

9 To select the label background color, click the  icon to open the **Select a Color** dialog box. For more information on completing the Color Selector dialog box, see ***Setting Default Window Properties*** on page 55.

## Modifying Label Size and Position Properties

You can select multiple labels, and apply the same size and position properties to the selected labels. You can also use your mouse to move and re-size labels in the layout canvas. For more information, see ***Resizing and Moving Layout Objects Using a Mouse*** on page 106.

To modify the label size and position properties

1 Under **Size & Position**, select or type values for label width and height in the **Width** and **Height** fields.

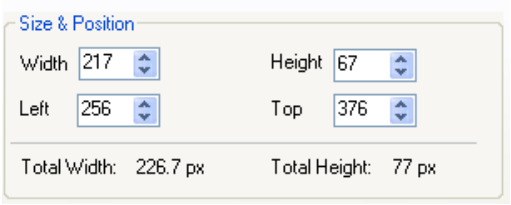



**Figure 9-8** Modifying Label Size and Position Properties

The displayed **Total Width** and **Total Height** values include the label width and height as well as the label's border width.

2 To set the label position, select or type values in the **Left** and **Top** fields.

The **Left** value is the number of pixels from the left edge of the canvas, and **Top** is the value is the number of pixels from the top edge of the canvas.

You can also drag and move the label on the canvas. The position indicators will update as you do this.

## Activating and Modifying Scrolling Properties

You can activate scrolling properties on static and dynamic labels. You can set the speed the label text scrolls from left to right in the area defined by the label **Width** property. You can select multiple labels, and then apply the same scrolling properties to the selected labels.

### To enable and set label scrolling properties:

1 Under **Scrolling Content**, to enabling scrolling of label text, select **Allow Scrolling**.

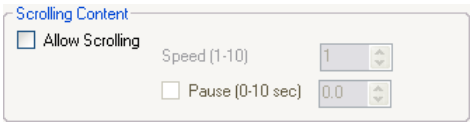



**Figure 9-9** Setting Label Scrolling Properties

2 Beside **Speed** select or type a speed value (in seconds) for scrolling speed.
A value of **1** provides the slowest and **10** the fastest scrolling speed.

3 If you want the label text to pause during scrolling, select the **Pause** check box, and then select or type the duration of the pause (in seconds).
The pause will occur before the scroll repeats itself.

# About Layout Clocks

You can add clocks to a layout as layout objects, and then define how the time and date information is displayed. Clocks are driven by an internal software time source. There are several styles and formats of digital and analog clocks. There is no restriction on the number of clocks that you can add to a layout, but clocks have minimum size properties (135×135 pixels for analog and 160×40 for digital).

*Your layout must be in an **unlocked** state to add, move, or delete objects. You can adjust properties of objects on a locked layout. See **Locking and Unlocking Layouts** on page 90.*

Clock properties, such as time zone settings, size, and position, are modified on the Clock tab of the Properties pane. You can also use your mouse to resize and move clocks in the layout canvas. For more information, see ***Formatting Layout Objects in the Canvas*** on page 105.

## Adding Clocks to a Layout

### To add a clock to your layout:

1 Do one of the following:

- To add an analog clock, from the Tool palette, click the icon.
- To add a digital clock, from the Tool palette, click the 12:00 icon.

Use the **Analog Clock** and **Digital Clock** tabs of the **Properties** pane to change the clock style, resize and move the clock, and set clock time properties. For more information see ***Modifying Clock Properties*** on page 149.

## Modifying Clock Properties

Each clock in a layout has a set of individual properties that determine the appearance, size and position, and time properties such as its time reference source and time zone settings. You can display clocks that show time from different time zones in the same layout. Some clock properties, such as **Time and Offset** and **Size & Position** properties, are set the same way for both analog and digital clocks.

To view a clock's properties, select the clock you want to modify, and then click the **Analog Clock** or **Digital Clock** tab of the **Properties** pane.

### Setting Analog Clock Format

After you have added an analog clock to a layout, you can change the clock's appearance and motion type by selecting a new clock style from the Format section of the **Analog Clock** properties tab.

Table 9-3 displays the different clock style types that you can choose from the **Format** list.

**Table 9-3** Analog Clock Formats

| Clock Format | Style | Clock Format | Style |
|---|---|---|---|
| Format 1 (default format) |  | Format 6 |  |
| Format 2 |  | Format 7 |  |
| Format 3 |  | Format 8 |  |
| Format 4 |  | Format 9 |  |
| Format 5 |  | Format 10 |  |

### To set the selected clock's format:

1 Under **Format**, select a clock style.

2 Under **Type**, select **Analog** or **Hybrid**.
Hybrid adds a digital clock on the analog clock's face.

3 To change the clock's motion setting, from the **Motion** list, select one of the following:
- **Sweep**—Select this option for a sweep clock hand motion.
- **Quartz**—Select this option for a clock hand motion that pulses in one-second intervals.
- **Rolex**—Select this option for a smooth clock hand motion
- **Harris**—Select this option for a sweep-stop (in one second intervals) clock hand motion

## Setting Digital Clock Format

1 Under **Format**, select a clock layout from the list.


**Figure 9-10** Digital Clock Options

2 To customize your selected clock format, make the following selections:
- **12** or **24** - Sets the clock display to 12 hour format
- **AM/PM** - Indicates PM or AM in the clock display (does not apply to 24-hour clocks)
- **Show Seconds** - Displays the second count in the clock display
- **Show Date** - Displays the date in the clock display (select a date format from the drop-down list)
- **Show Week** - Displays the days of the week in the clock display

## Customizing Digital Clock Appearance Properties

You can change a digital clock's text font and color. Analog clock appearances cannot be customized.

### To customize the appearance of your digital clock:

1 Under **Time Font**, select a font that will be used for the time (mostly number) text.

2 Under **Date Font**, select a font that will be used for the date (mostly alphabet, usually smaller) text.

3 Choose the colors for each of the following areas on the digital clock:
- **Time Color** - The numeric time text in the clock display
- **Date Color** - The rest of the text on the screen, excluding the day of the week if you have chosen the Show Week display

- **Active Date** - The current day if you have chosen the Show Week display
- **Background** - The area inside the border of the digital clock display

## Setting Clock Time Reference Source and Time Zone

You can use either an internal or an external time reference source, such as NTP, to drive your on-screen clocks. The controls and method used to set the time reference source is the same for analog and digital clocks. Each clock in a layout can be configured with a different time reference source.

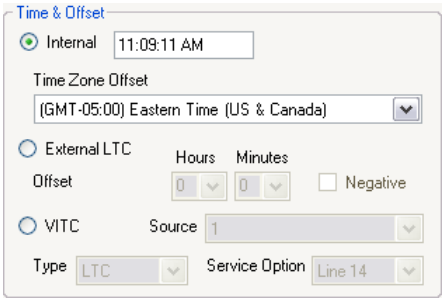



**Figure 9-11** Time and Reference Portion of Clock Property Pane

### To set the clock time reference source:

1 Do either of the following:

- Configure NTP - See ***Configuring Network Time Protocol (NTP)*** on page 68.
- Under **Time and Offset**, select one of the following:
  - **Internal** - Select this option to use the multiviewer's internal time as a reference source for the selected clock.

    Select an appropriate time zone from the **Time Zone Offset** drop-down list.

    To configure Network Time Protocol, see ***Configuring Network Time Protocol (NTP)*** on page 68.
  - **External LTC** - (Not available for HView IP) See ***HView IP Hardware*** on page 5 for more information on setting up the type of external LTC format WITH HView IP.
  - **VITC** - (Not available for HView IP)

## Resizing and Moving Clocks

The controls for resizing and moving analog and digital clocks are the same.

### To resize and move the selected clock:

1 Under **Size & Position**, type or select values for the width and height in the **Width** and **Height** fields.

2 To move the selected clock, type or select left and top position values (in pixels) in the **Left Position** and **Top Position** fields.

The **Left Position** value is the number of pixels from the left edge of the layout. The **Top Position** value is the number of pixels from the top edge of the layout.

You can also use your mouse to resize and move clocks in the layout canvas. For more information, see ***Formatting Layout Objects in the Canvas*** on page 105.

## About Up/Down Counters

The up/down counter displays time on your Layout, with accuracy down to a second. You can use a counter as an alarm detector to trigger other events when it completes its count down or count up, or when the counter hits a blink or alert point (see ***Defining Alarms for a Layout Object*** on page 161 for more information). When the end time is reached on that particular counter, an event is triggered. The counter can be the recipient of an alarm action, which can reset, start, or stop the counter.

During normal operation the timer behaves as follows:

1. The counter starts, counting up or down with green font.
2. When it reaches a pre-defined alert time, the counter's font turns red.
3. When it reaches a pre-defined blink time, the font remains red but then the red down arrow (or up arrow for a count down timer) turns off and on at .5s intervals for the remainder of the count time.
4. When the counter reaches a pre-defined end time (time has expired), the timer remains at the last time value (00:00:00 for a down timer) with a red font until it is reset or a new timer session is started.

## Adding Counters to a Layout

**To add a Counter to your layout:**

1. Do one of the following:

   - From the Tool palette, click the  icon.
   - From the main menu, select **Insert** > **Up/Down Counter**.

   Use the **Up/Down Counter** tab of the **Properties** pane to change the properties. For more information see ***Modifying Counter Properties*** on page 152.

## Modifying Counter Properties

Each counter in a layout has a set of individual properties that determine the appearance, size, position, and time properties. Each counter has a unique counter number. You can configure four different times per counter.


**Figure 9-12** Up/Down Counter Properties Pane

### Naming the Counter

A counter's unique name identifies it in the layout. This is the name the counter is identified by when creating alarm detectors and actions.

### To name a counter:

1 Select a counter in the layout.
2 Select the **Counter** tab on the **Properties** pane.
3 In the **Properties** area, type a name for the counter in the **Name** field.

## Modifying Counter Size and Position Properties

You can select multiple counters, and apply the same size and position properties to the selected counters. You can also use your mouse to move and re-size counters in the layout canvas. For more information, see ***Resizing and Moving Layout Objects Using a Mouse*** on page 106.

### To modify the counter size and position properties

1 Under **Size, Position & Opacity**, select or type values for counter width and height in the **Width** and **Height** fields.

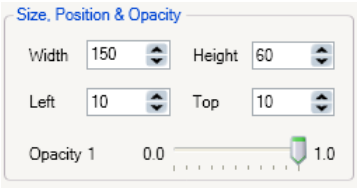



**Figure 9-13** Modifying Counter Size, Position, and Opacity Properties

The displayed **Total Width** and **Total Height** values include the counter width and height as well as the counter's border width.

2 To set the counter position, select or type values in the **Left** and **Top** fields.
The **Left** value is the number of pixels from the left edge of the canvas, and **Top** is the value is the number of pixels from the top edge of the canvas.

You can also drag and move the counter on the canvas. The position indicators will update as you do this.

3 Drag the **Opacity** slider to the right to make the counter more transparent, or left to make the counter more solid.

## Choosing a Counter Style

Click an option in the Styles section of the Up/Down Counter Properties pane to choose a counter appearance.

## Configuring Counter Functionality

1 Select the counter's source.
- **Internal** - calibrates the counter rate from the multiviewer's internal time.
- **External LTC** - (Not available for HView IP)
- **External Serial**—calibrates the counter rate from the serial input.

2 Select a counter direction.
- **Up (incremental)** - the counter increases in value as it counts.

- **Down (decremental)** - The counter decreases in value as it counts.

  The counter indicates its direction in the layout with an up arrow or a down arrow.

3 Configure times as follows:

- Beside **Start Time**, enter the initial value that is displayed by the counter.
- Beside **Stop Time**, enter a final value to be displayed by the counter.
- When used as a detector to trigger a rule, the stop time will trigger the rule to fire. After firing the time is displayed as red.
- Beside **Alert Time**, enter the time when the text on the counter will change from green to red (prior to the countdown completing).
- Beside **Blink Time**, enter the time when the direction indicator will begin to blink.

The maximum number of hours is 99, and the maximum number of minutes and seconds are 59.

## Manually Controlling a Counter

When a layout is uploaded to a HView IP multiviewer, you can operate the counter from Layout Designer, an onscreen menu that is accessible via the mouse through onscreen menu interactions.

### To control the counter from Layout Designer

1 If Layout Designer does not have control of the multiviewer, click **Enable Control**.

2 Select a counter in the layout.

3 Select the **Counter** tab on the **Properties** pane.

4 Use the following controls:

**Start** - updates the counter to proceed with the linear countdown

**Stop** - stops and reports the current countdown time until further notice

**Reset** - re-initializes the counter using the original start, stop, blink, and alert times. Any rules that were active in the layout will still trigger the counter the same way as before.

In the Rules engine, the counter can act as an alarm by configuring a rule to fire on a Stop Counter event, when the counter reaches its end time. See ***Defining Alarms for a Layout Object*** on page 161. The counter can act as a target through the Reset Counter, Start Counter, and Stop Counter actions. See ***Setting Alarm Actions*** on page 166.

## Controlling a Counter Using SNMP or CCS (Navigator or NUCLEUS)

The time parameter is global and updates every published timer. Neither CCS nor SNMP is aware of any of the published timers. The only link is through virtual triggers set up with alarms in the layout.

### To start a timer

1 Set the **Initial Counter Time** parameter.

The time does not update the counter until a start is triggered. When you set the duration, there is no visual feedback on the display. It retains the original setting of the published layout.

2 Set the trigger that starts the specific counter.

When you start the countdown timer, the display updates to the value set using SNMP or CCS and starts to decrement or increment.

If the time is not set to zero, any time a start occurs, the counter uses the time as set by CCS Navigator, NUCLEUS, or SNMP.

# 10 Alarms and Info Panels

## About Monitoring Tools

Use Layout Designer's on-screen monitoring tools to monitor your system input signals and set up automatic responses to alarm conditions and operational events. The following figure illustrates Layout Designer's on-screen monitoring tools in a layout.

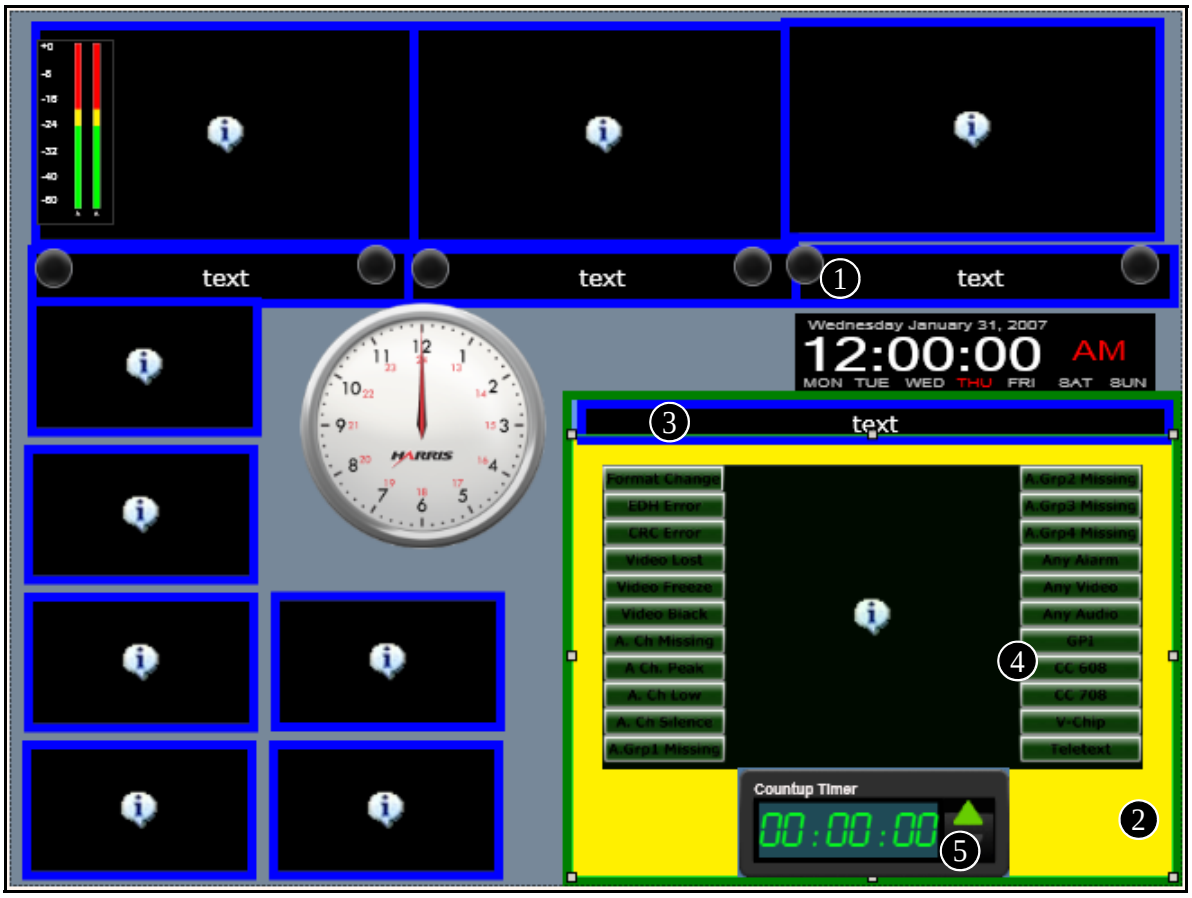



**Figure 10-1** Layout Displaying On-Screen Monitoring Tools

1. **Tally indicators** can display alarm conditions if configured to do so. See ***Creating Tally Indicators*** on page 141.
2. **Borders** (on PiPs and windows) can display three different alarm states and a tally state, in addition to their normal state. See ***Modifying Border Properties*** on page 117.
3. **Dynamic labels** can be configured to display specific text based on various alarm conditions. For more information, see ***About Layout Clocks*** on page 148.
4. **Info Panels** can include alarms. For more information, see ***Creating Info Panels*** on page 177.
5. **Up/Down Counters** can trigger and be the target of alarms. For more information, see ***About Up/Down Counters*** on page 152.

Other alarm monitoring options include:

- E-mails
- Log entries
- Text messages
- Changes to the PiP, such as making it full-screen or switching it to display a waveform

Alarms can be assigned to an item within a layout, to a layout, or globally, to the multiviewer device itself.

## Using the Rules Menu

As part of the Layout Designer application toolbar, the **Rules** menu provides the following options:

- **Global Alarms** -Opens the **Global Alarms Editor** so you can review and configure alarms that are device-specific and will stay active when triggered even when the layout changes. See ***Configuring Global Alarms*** on page 172.
- **Global Events** - Opens the **Events Editor** so you can review and configure events that trigger actions and are device-specific, and will stay active when triggered even when the layout changes. See ***Configuring Layout Events and Global Events*** on page 175.
- **Enable/Disable Global Event** - Lists a sub-menu of all global events, so that you can select a specific event to enable or disable.
- **Enable/Disable All Global Events** - Provides a list of two options that affect all defined global events: **Enable** or **Disable**.
- **Layout Events** - Opens the **Events Editor** so you can review and configure events for a specific layout.
- **Clear Layout Alarms** - Deletes all alarms for a specific layout.
- **Component [Component's name] Alarms** - Opens the **Rules Editor** so you can review and configure alarms assigned to the selected item. ***Defining Alarms for a Layout Object*** on page 161.
- **Clear Component [Component's name] Alarms** - Deletes all alarms assigned to the selected item.

*Global and Layout alarms and events are only available when Layout Designer is connected to an* HView IP *Multiviewer.*

## Using the Alarms Property Pane

If you can assign alarm detectors to an object in a layout, when you select that object and then go to the alarms tab of the Properties panel, you can view the alarms assigned to that object. Each alarm consists of two parts:

- Detectors - Conditions that trigger the alarm
- Actions - Notifications that an alarm condition exists

Alarms are defined on the Alarms tab of the Properties pane.


**Figure 10-2** Alarms Properties

1. **Alarms** lists each sub-item that make up the selected object (including PiPs, counters, info panels, etc.). Sub-entries list the alarms applied to each specific object. See ***Defining Alarms for a Layout Object*** on page 161.
2. Data field updates when you select an item in the **Alarms** field, so you can edit thresholds and conditions for the selected alarm or alarm detector. See ***Setting Alarm Detector Threshold Values*** on page 164.
3. **Actions List** displays the actions that will occur when the selected alarm is triggered.
   - Roll the mouse over an action to view tooltips showing details of action parameters.
   - Right click for **Edit/Add Action**, **Remove Action**, and **Remove All Actions** options.

   For more information, see ***Setting Alarm Actions*** on page 166.
4. **Available Alarm Templates** allows you to manage your alarm templates and apply them to the selected layout object. See ***Alarm Templates*** on page 168.

There are default alarms that you can activate and modify. Each alarm condition has detectors. When the input signals meet or exceed threshold values of the detector, the alarm actions are triggered.

Each alarm is described below in Table 10-1.

**Table 10-1** Alarm Detectors

| Detector | Description |
|---|---|
| **Video** | |
| Format Change | (Not available for HView IP) |
| SD EDH Error | (Not available for HView IP) |
| HD CRC Error | (Not available for HView IP) |

**Table 10-1** Alarm Detectors *(Continued)*

| Detector | Description |
|---|---|
| Loss of Video | Indicates that the multiviewer hardware can no longer detect a video signal from the video channel |
| Video Freeze | Indicates that the input video image is frozen (static) according to user-defined frozen picture delay (duration), percent of frozen video in the frame, and amount difference between pixels percent tolerance |
| Video Black | Indicates that the input video image is considered a black picture according to user-defined percentage non-black picture, delay (duration), and black level threshold values |
| **Audio** | |
| Audio Channel Missing | Indicates that the audio channel is not present in the signal |
| Audio Channel Peak | Indicates that the input audio level of the audio channel is at or above the set upper threshold dB values for the user-defined period of time |
| Audio Channel Low | Indicates that the input audio level of the audio channel is at or below the set lower threshold dB values for the user-defined period of time |
| Audio Channel Silence | Indicates that the input audio level of the audio channel is at or below the set silence threshold dB value for the user-defined period of time |
| Audio Group (1–4) Missing | (Not available for HView IP) |
| Audio Format Change | (Not available for HView IP) |
| Dolby E Program Change | (Not available for HView IP) |
| **Timelines** | |
| Counter Alert | Indicates that the specified counter has achieved its predefined alert time |
| Counter Blink | Indicates that the specified counter has achieved its predefined blink time |
| Counter End | Indicates that the specified counter has achieved its end time (this is when the counter stops) |
| **Miscellaneous** | |
| GPI | Indicates that a GPI input has been triggered |
| Specific Crosspoint | (Not available for HView IP) |
| Specific Source | (Not available for HView IP) |
| SNMP Virtual GPI | Indicates that a GPI trigger has been received through SNMP |

**Table 10-1** Alarm Detectors *(Continued)*

| Detector | Description |
|---|---|
| **Global** | |
| Any Alarm Triggered | Indicates that any alarm connected to any other alarm has been triggered |
| Any Audio Alarm Triggered | Indicates that any of the alarms in the Audio section of the list (above) have been triggered |
| Any Video Alarm Triggered | Indicates that any of the alarms in the Video section of the list (above) have been triggered |

For information about setting alarm threshold values, see ***Setting Alarm Detector Threshold Values*** on page 164.

For information about setting video alarms, see ***Defining Alarms for a Layout Object*** on page 161.

*Any changes you make to an alarm setup will not appear on the multiviewer until the layout is published.*

## Defining Alarms for a Layout Object

1 Select the appropriate layout object.

Objects that can take alarms include:

- Info panels
- PiPs
- Tallies
- Windows
- Up/Down Counters

2 In the toolbar, click **Rules**, and then click **[Component] Alarms** (where [Component] is the selected object).

The **Rules Editor** dialog box opens with the **Select Detectors** panel displayed.

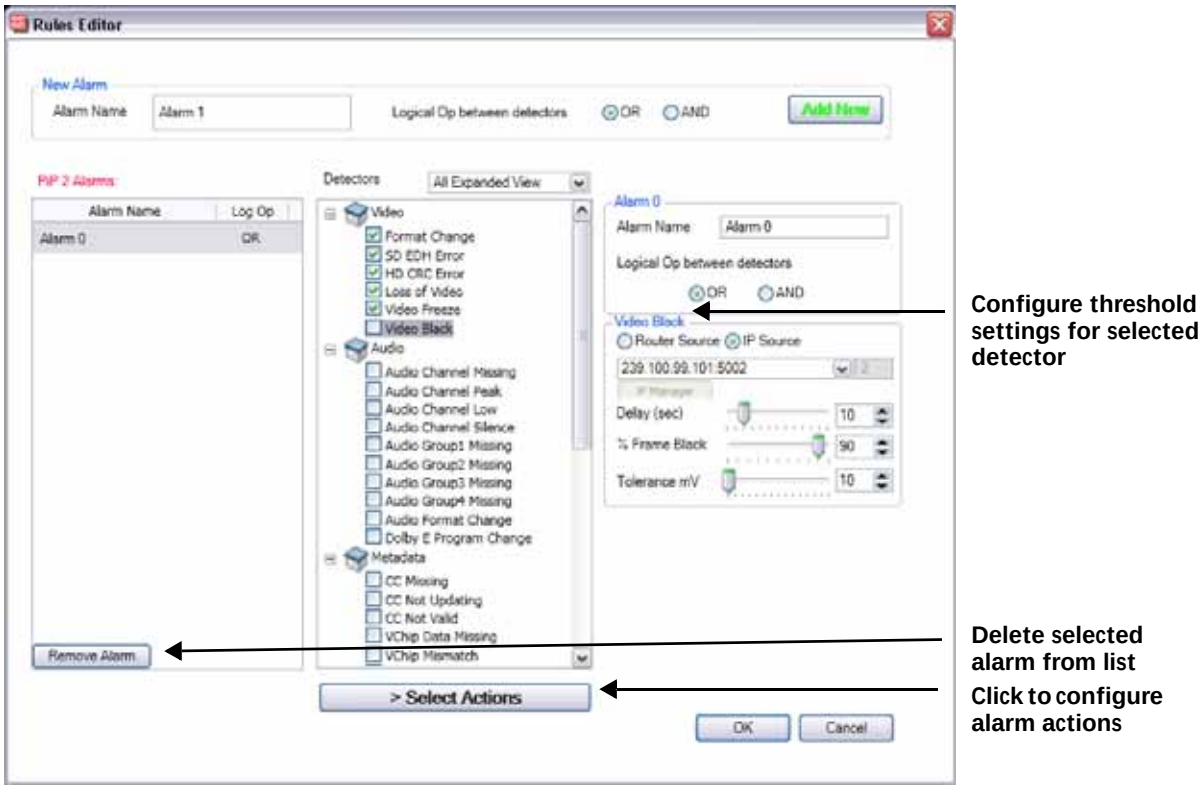



**Figure 10-3** Selecting Alarm Detectors on the Rules Dialog Box

3 In the **Alarm Name** field, enter a meaningful name that describes the alarm condition.

4 Select an operator, either **And** or **Or**, and then click **Add**.

- When **And** is selected, all conditions must be met to trigger an alarm.
- When **Or** is selected, only one of the conditions must be met to trigger the alarm.

The alarm appears in the alarms table.

5 In the **Detectors** list, place a check beside each alarm detector you want to have on this layout object.

*The drop-down menu at the top of the Detectors list has three viewing options. **All expanded view** shows all available alarms. **All collapsed view** shows only the folders that the alarms are nested in. **Selected view** shows only the alarms that have been selected. You cannot view unselected alarms in this view, so you can remove alarms but not add them to the rule.*

Each detector is added with default thresholds and settings. Click on the text of a detector to view its threshold values.

6 To adjust the threshold values for a detector, do one of the following:

- Click in the value column and then type the new value for the threshold.
- Drag the slider right and left to increase and decrease the threshold value.
- Click the incremental step buttons to increase or decrease the threshold value.

See ***Setting Alarm Detector Threshold Values*** on page 164 for more information.

7 Click **Select Actions**.

The **Rules Editor** dialog box displays its **Select Actions** panel.

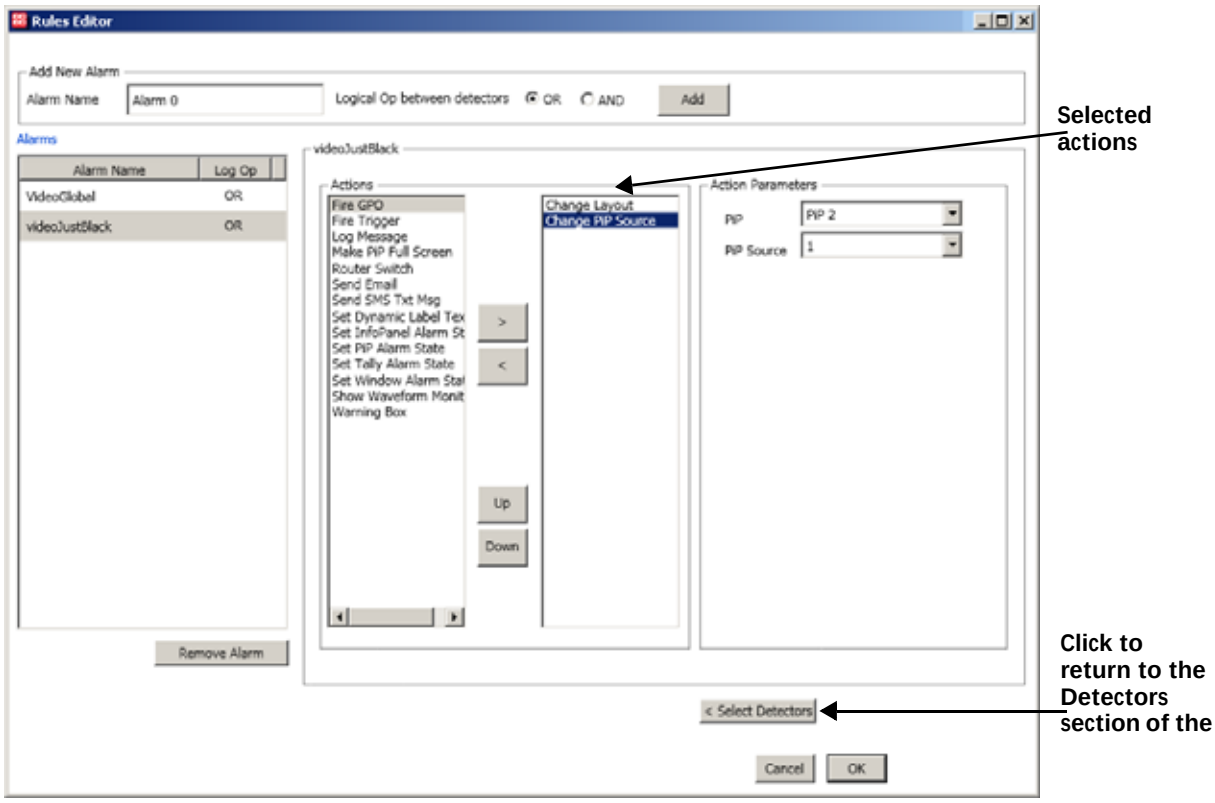



**Figure 10-4** Select Actions Panel of Rules Editor Dialog Box

**8** Click on an alarm in the **Alarms** column.

**9** From the **Actions** list, choose one or more actions from the left panel and click **>** to move it to the right panel.

If a target is not available for the alarm action (for example, if you have chosen **Counter Reset** as your action and there is not a counter in the layout), you will see an error message.

To remove an item from the **Select Actions** list, click **<**.

You can move the selected item up in the list by clicking **Up**, or down in the list by clicking **Down**. Alarm actions will be executed in the order they appear on the list.

When an item is highlighted in the **Selected Actions** list, you can configure it by completing the **Action Parameters** specific to that action.

**10** Click **OK** to close the **Rules Editor** dialog box.

The **Alarms** field of the **Alarms** properties tab lists the alarms you have created. You can view the individual detectors that make up an alarm by clicking +, or hide them by clicking -.

Click on an alarm in the **Alarms** field to view and/or edit that alarm's name and operator in the space directly to the right of the **Alarms** list, and to view a list of actions for that alarm in the **Actions** field.

Click a detector in the **Alarms** field to adjust the thresholds and settings for that detector.

## Setting Alarm Detector Threshold Values

Alarm threshold values determine the point at which an input is in error and an alarm is triggered. On the **Alarms** tab of the **Properties** pane, you can set the threshold values for each detector used by the multiviewer to determine when an alarm condition exists.

The following describes each threshold value. The threshold value varies for each detector.

**Table 10-2** Alarm Threshold Values

| Threshold value | Definition | Range | Default |
|---|---|---|---|
| Source | Source number or PiP ID of the monitored source signal | Range is 0–512 if Source number was selected; text otherwise | (string) |
| HD Source | The HD CC source | Service (1-7)<br>CC (1-4)<br>T (1-4) | |
| SD Source | The SD CC source | CC (1-4)<br>T (1-4) | |
| Service Option | The SD CC, V-Chip, VITC, WSS, AFD, or Teletext line | Line (6-23) | |
| Channel | Audio stream that is monitored for this alarm | Channel 1–Channel 16 | 1 - 4 enabled |
| Delay (sec) | Duration (in seconds) that the threshold(s) on an alarm can be met or exceeded in order to trigger the alarm condition | 0–60 | 10 |
| % Frame Frozen | Percent of frozen video within a video frame that will trigger an alarm | 0–100 | 97 |
| % Frame Black | Percentage of the video picture that must be black for the picture to be considered a black frame | 0–100 | 10 |
| Tolerance (%) | Amount of difference between pixels at which a picture is considered to be frozen | 0–25 | 10 |
| Tolerance mV | Level at which a picture is considered a black picture | 0–700 | 10 |
| Level (dBFS) | Depending on the alarm, the level (peak, low, or silence) at which an alarm condition is triggered | -100–0 | Peak: -3<br>Low: -40<br>Silence: 60 |

**Table 10-2** Alarm Threshold Values *(Continued)*

| Threshold value | Definition | Range | Default |
|---|---|---|---|
| Expected Format | The expected format of the input signal | | |
| | Video | ■ 1080i60 ■ 1080i50 ■ 1080psf24 ■ 720p60 ■ 720p50 ■ SD525 ■ SD625 ■ 1080p24 ■ 1080p25 ■ 1080p30 ■ Any format change | 1080i60 |
| | Audio | ■ Dolby E (Not available for HView IP) ■ Dolby D ■ PCM ■ Any format change | PCM |
| | WSS | ■ Full Frame 4:3 ■ 14:9 Center ■ 14:9 Top ■ 16:9 Center ■ 16:9 Top ■ > 16:9 ■ Full Alt 14:9 ■ 16:9 Anamorphic ■ Any Format Change | Full Frame 4:3 |
| | AFD | ■ > 16:9 ■ Full Frame ■ 4:3 Center ■ 16:9 Protected ■ 14:9 Center ■ 4:3 Alt 14:9 ■ 16:9 Alt 14:9 ■ 16:9 Alt 4:3 ■ Any Format Change | Full Frame |
| DolbyE Pairs | (Not available for HView IP) | ■ | |
| Audio Pairs | Selects the audio pair to be monitored | ■ 1/2 ■ 3/4 ■ 5/6 ■ 7/8 ■ 9/10 ■ 11/12 ■ 13/14 ■ 15/16 | 1/2 |
| Expected Program | (Not available for HView IP) | ■ ■ | |

**Table 10-2** Alarm Threshold Values *(Continued)*

| Threshold value | Definition | Range | Default |
|---|---|---|---|
| Rating | Determines the VChip option that is expected | ■ G<br>■ PG<br>■ PG-13<br>■ R<br>■ NC-17<br>■ X<br>■ TV-Y<br>■ TV-Y7<br>■ TV-G<br>■ TV-PG<br>■ TV-14<br>■ TV-MA<br>■ E<br>■ C<br>■ C8+<br>■ 14+<br>■ 18+<br>■ 8 ans +<br>■ 13 ans +<br>■ 16 ans +<br>■ 18 ans + | |
| Page | Determines the Teletext page that is expected to be displayed<br>Note: the default is for OP-47 closed captioning. | ■ 0 to 999 | 801 |
| Counter Name | Lists all the available counters in the layout | ■ Auto<br>■ <all counters in layout | Auto |

## Setting Alarm Actions

Alarm actions are used in the **Rules Editor** and the **Trigger Configuration** dialog box.

**Table 10-3** Alarm Actions

| Alarm Action | Purpose |
|---|---|
| Change Layout | Loads a layout. |
| Change PiP Source | Changes the input source of the PiP to the selected source. There must be a PiP in the current layout to choose this option. |
| Change Salvo | (Not available for HView IP) |
| Counter Reset | Sets the selected counter back to its start time. |
| Counter Start | Triggers the counter to start. |
| Counter Stop | Stops the counter. |
| Fire Global Event | Activates a global event. There must be a global event in the multiviewer system to choose this action. See ***Configuring Layout Events and Global Events*** on page 175 for more information. |
| Fire GPO | Activates a GPO. |
| Fire Layout Event | Activates a layout event (see ***Configuring Layout Events and Global Events*** on page 175 for more information). There must be a layout event in the current layout to choose this action. |

**Table 10-3** Alarm Actions *(Continued)*

| Alarm Action | Purpose |
|---|---|
| Log Message | Adds a predefined message to the system log, which is located in the alarm section of the logging server. See ***Enabling Alarm Logging*** on page 69 to configure alarm logging. |
| Make PiP Full Screen | Expands the selected PiP to full-screen. There must be a PiP in the current layout to choose this action. |
| Send Email | Sends an email with pre-written text to a specific recipient. |
| Send SMS Txt Msg | Sends a text message to a phone. |
| Set InfoPanel Alarm State | Changes an background color of alarm indicators on an info panel. There must be an info panel in the current layout to choose this action. |
| Set Label Text | Changes the text of a label in the layout to pre-configured text. There must be an Alarm/Rule dynamic label in the current layout (a static label in the layout is not sufficient). |
| Set PiP Alarm State | Changes a PiP's alarm state. There must be a PiP in the current layout to choose this action. |
| Set Tally Alarm State | Changes a tally's alarm state. There must be a tally in the current layout to choose this action. |
| Set Window Alarm State | Sets the window border to a pre-defined state. There must be a Window in the current layout to choose this action. |
| Show Message Box | Displays a warning or an error on the screen (depending on your settings), and puts a pre-defined message in that box. |
| Show Waveform Monitor | Switches the display on the chosen PiP to show a waveform. There must be a PiP in the current layout to choose this action. |

**Table 10-4** Action Parameters

| Parameter | Content |
|---|---|
| 10 Digit Phone Number | Type the phone number to be dialed to send the text message. |
| Counter | Selects the specific counter to use as a trigger or target of the action. |
| Dynamic Label ID | Choose the ID number of the label to send text. |
| GPO Number | Type the number of the GPO to activate. |
| InfoPanel | Choose the info panel that will display the alarm state |
| Layout name | Type the name of the layout to load. |
| Logging Priority | Determines the urgency of the message; choose from Info, Warning, Performance, Error, Critical, or Fatal. |
| Message | Enter the text of the message to be sent. |

**Table 10-4** Action Parameters *(Continued)*

| Parameter | Content |
|---|---|
| Message Body | Enter the text of the message to be sent. |
| PiP | Choose the PiP that will be the recipient of the action to from the drop-down menu. All PiPs in the current layout are available by name. |
| PiP Source | Choose the specific source from the drop-down menu.<br><br>If the source is an IP source, you can further configure the source using the IP source Manager. See ***IP Configuration Manager*** on page 70 for more information. |
| Priority | Choose Low, Medium, or High. This affects the display color of tallies and info panels, and PiP and window alarm borders. |
| Recipient Address | Enter an email address to send alarm notifications to. |
| Show PiP Information | Displays a PiP information menu on a full-screen PiP. |
| Sticky | Choose Yes or No. Actions that are sticky must be acknowledged before they disappear. |
| Subject | Enter a subject for the email. |
| Tally | Choose the tally to apply the alarm to. |
| Text | Enter the content the label will be updated with. |
| Trigger | Type the number of the trigger to activate. |
| Txt Msg Body | Enter the text of the message to be sent. |
| Type | Choose from Warning or Error. When the alarm is triggered, the pre-determined type of box will appear on the screen |
| Window Number | Choose the window to apply the alarm to. |
| Wireless Carrier | Choose your carrier from the drop-down menu.<br>If your carrier does not appear on the list, you can enter a custom carrier. Choose **Add custom** from the bottom of the list. A window opens where you can type in your cell phone carrier's email suffix. Click **OK**. Your cell phone carrier appears at the top of the list. |

# Alarm Templates

Alarm templates are a fast way to apply the same group of alarms and detectors multiple times within the same layout, or within multiple layouts, without having to configure it each time. Once a template has been applied to a layout object, you can adjust the threshold values on that object specifically.

## Creating an Alarm Template

When you create an alarm template, note the following:

- Each object in a layout can have only one template applied to it.
- A template may consist of many alarms, with many detectors.

- Alarms must have unique names. If you give an alarm an existing name, it will overwrite the previous condition.
- The source that is defined in an object overrides the source that is defined in an alarm.
- You can set default threshold settings for each detector within the template, and adjust those thresholds on an item-by-item basis throughout a layout. Making changes to the threshold values for each layout object does not change the threshold values in the template itself.

### To create an alarm template:

1. Select the **Alarms** tab of the **Properties** pane.
2. Under **Available Alarm Templates**, click **New**.
   The **Alarm Template Editor** dialog box appears.

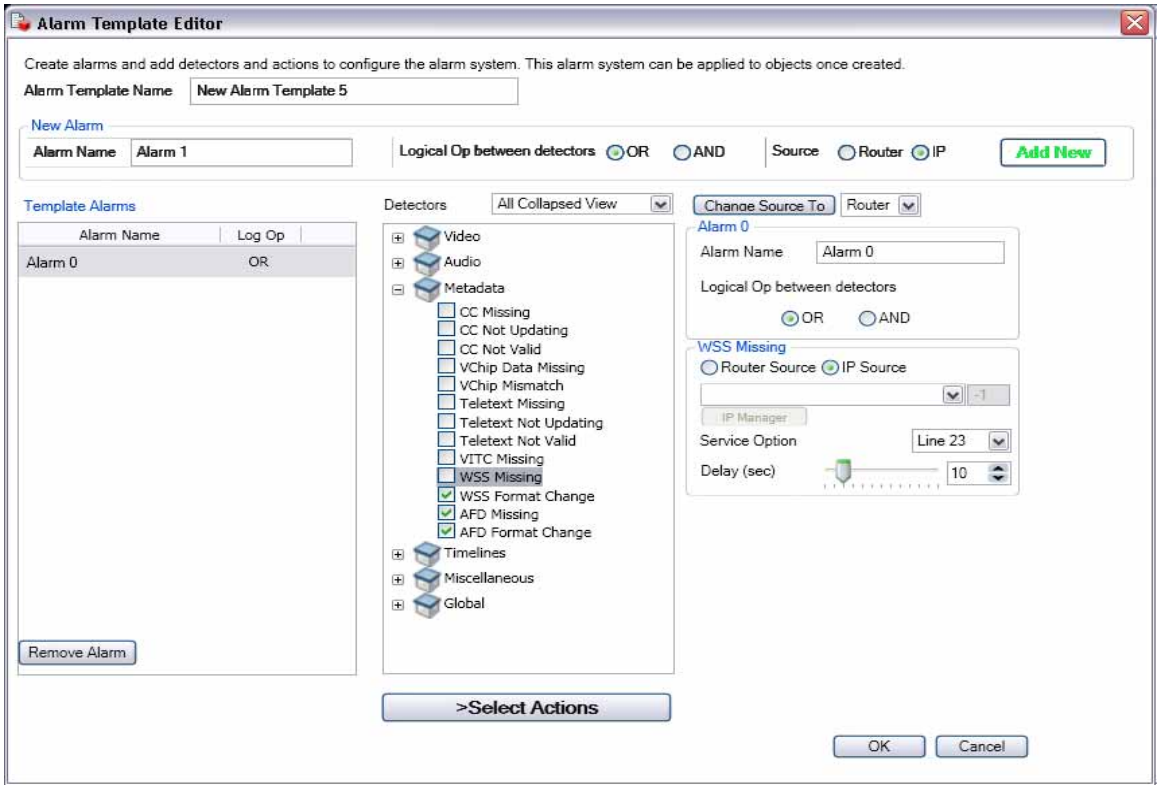



**Figure 10-5** Alarm Template Editor Dialog Box

3. In the **Alarm Template Name** field, enter a descriptive name for your template.
4. In the **Alarm Name** field, enter a meaningful name that describes the alarm condition.
5. Select an operator, either **And** or **Or**, and then click **Add**.
   - When **And** is selected, all conditions must be met to trigger an alarm.
   - When **Or** is selected, only one of the conditions must be met to trigger the alarm.

   The alarm appears in the alarms table.
6. In the **Detectors** list, choose each alarm detector you want to have on this layout object.

*The drop-down menu at the top of the Detectors list has three viewing options. **All expanded view** shows all available alarms. **All collapsed view** shows only the folders that the alarms are nested in. **Selected view** shows only the alarms that have been selected. You cannot view unselected alarms in this view, so you can remove alarms but not add them to the rule.*

Each detector is added with its default thresholds and settings.

*With HView IP, the **Change Source To** menu should always change the source to IP. Router sources are not available with HView IP.*

7 Click on the text of each detector to view its threshold values, and then, to adjust its threshold values, select in the value column and type a new value.
See ***Setting Alarm Detector Threshold Values*** on page 164 for more information.

8 Repeat steps 4–7 to add other alarms to the alarm template.

9 Click **Select Actions**.
The **Alarm Template Editor** dialog box displays its **Select Actions** panel.

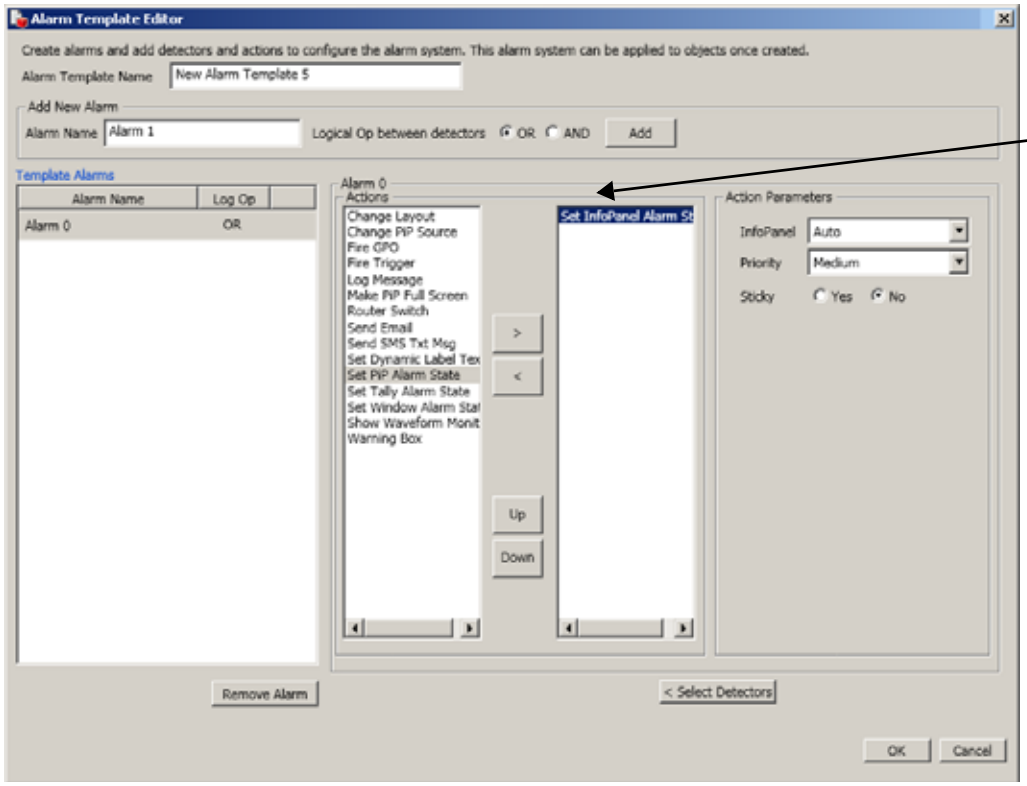



**Figure 10-6** Select Actions Panel of Rules Editor Dialog Box

10 Click on an alarm in the **Alarms** column.

11 From the **Actions** list, choose one or more actions from the left panel and click **>** to move it to the right panel.
To remove an item from the Select Actions list, click **<**.

You can move the selected item up in the list by clicking **Up**, or down in the list by clicking **Down**. Alarm actions are executed in the order they appear on the list.

When an item is highlighted in the **Selected Actions** list, you can configure it by completing the **Action Parameters** specific to that action.

12 Click **OK** to close the **Rules Editor** dialog box.

13 Click **OK** to save the new template.

The Alarm Template Editor dialog box closes. The new alarm template appears in the **Available Alarm Templates** list.

## Editing Alarm Templates

1 To edit an alarm template, select it in the **Available Alarm Templates** list, and then click **Edit**.

The **Alarm Template Editor** dialog box appears.

2 Do any of the following:

- Change the name of the template.
- Select an existing detector in the **Template Alarms** list, and then change any attribute of that detector.
- Add or remove detectors.
- Select an existing action in the **Template Actions** list, and then change any attribute of that action.
- Add or remove actions on the Actions page.

3 Click **OK** to save your changes.

## Applying an Alarm Template to a Layout Object

1 Select the layout object to which you want to apply alarm template.

You can select more than one object by holding down the CTRL key on the keyboard and clicking on each object that you want to include.

2 Select the **Alarms** tab on the **Properties** pane.

3 Select the appropriate template from the **Available Alarm Templates** list.

Click the **+** to expand each template to view the specific alarm conditions that are included in the template.

4 Do either of the following:

- If you selected one layout object, click **Apply to Selected**.
- If you selected more than one layout object, click **Apply to All**.

If objects already have alarms assigned to them when you apply an alarm template, the previously assigned alarm template is replaced.

*You can only apply entire templates to an object; however, you can remove any conditions once the template is applied.*

5 In the **Alarms** list, you can:

- Select an alarm to view the specific detectors that are included. In the area to the right of the Alarms list, you can change the alarm name and operator between detectors.
- Select a detector and view or change its threshold values.
- Add conditions and detectors.
- Remove conditions and detectors (right click and choose **Remove** or **Remove All**).
- View alarm actions.
- Test alarm actions.
- Add the alarm to the **Available Alarm Templates** list (this is a right-click option).

For more information about alarms and detectors, see ***Defining Alarms for a Layout Object*** on page 161.

### Testing an Alarm

After a layout is published, you can test alarms by simulating a failed alarm.

1. Select the alarm that you want to test.

*Make sure that you select the alarm and not the detector.*

2. Click and hold down the **Test Alarm** button.

   The alarm response appears on the published layout object as long as you hold the **Test Alarm** button down.

### Testing an Action

After a layout is published, you can test alarm actions.

1. Select the alarm that you want to test.
2. Select the action you want to test.

*Make sure that you select the alarm and not the detector.*

3. Click and hold down the **Test Action** button.

   The alarm response appears on the published layout object as long as you hold the **Test Action** button down.

## Configuring Global Alarms

Global alarms allow a GPI or periodic trigger to cause an action that is not specific to any particular layout, and therefore stays present even when the multiviewer's layout is changed. Layout Designer must be connected to a multiviewer to configure and view global alarms.

*Global alarms are only available when Layout Designer is connected to* an HView IP *Multiviewer.*

To configure global alarms, from the toolbar select **Rules** > **Global Alarms**.

This dialog box opens:

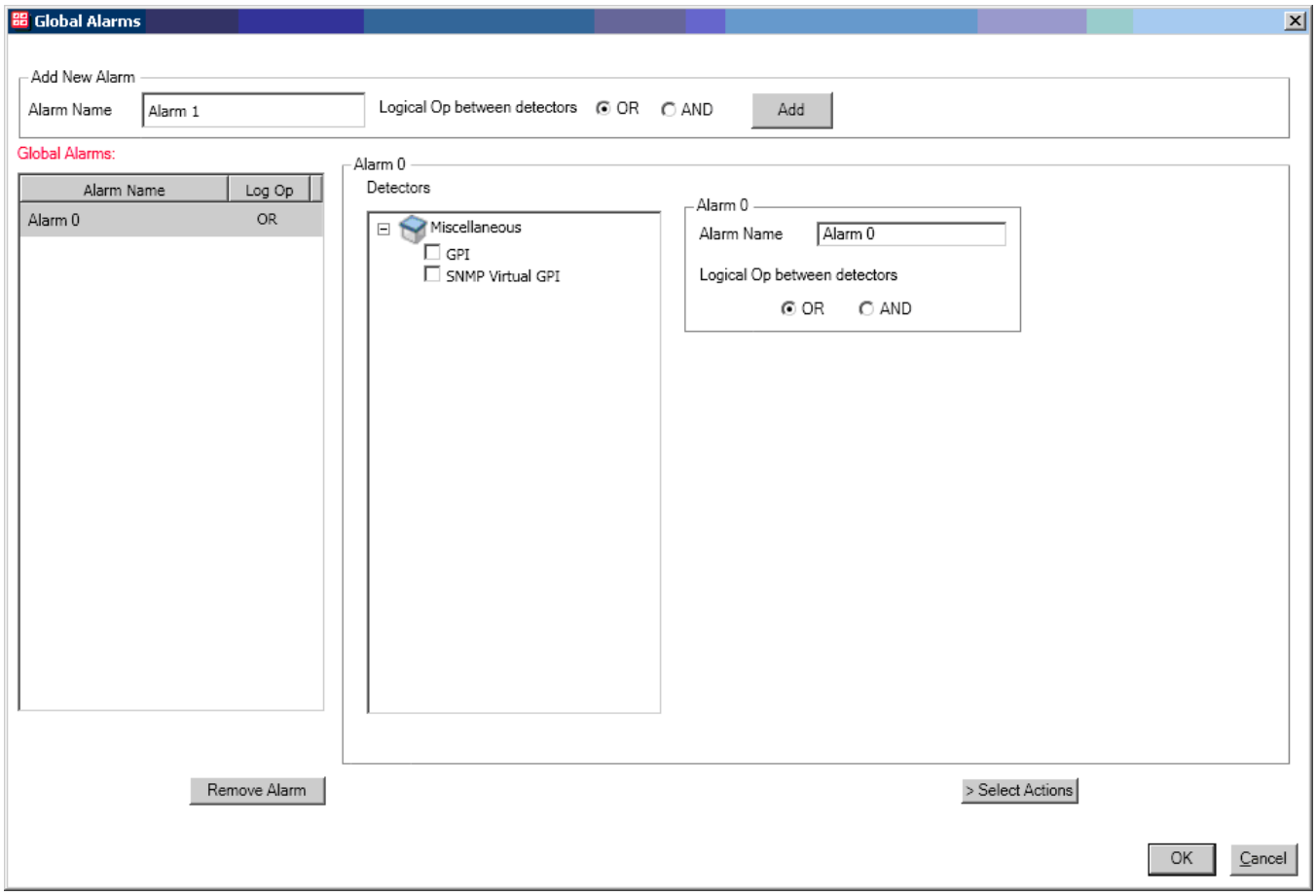



**Figure 10-7** Global Alarm Detectors Dialog box

At any time, you can disable or enable an alarm, or delete the alarm from the system, using the buttons in the bottom left corner of the screen.

### To create an alarm:

1 Enter a name in the **Alarm Name** field, and then choose **Or** or **And**, and click **Add**.
The alarm name appears in the **Alarm Name** listing.

2 Choose at least one alarm detector, and define the settings for that detector.

**Table 10-5** Available Detectors for Global Alarms

| Detector | Configurable Settings |
|---|---|
| GPI | **Input number** – The input on which the GPI is connected<br>**Delay** – Time between the GPI data being received and the action being triggered |
| SNMP Virtual GPI | |

**3** Click **Select Actions**.

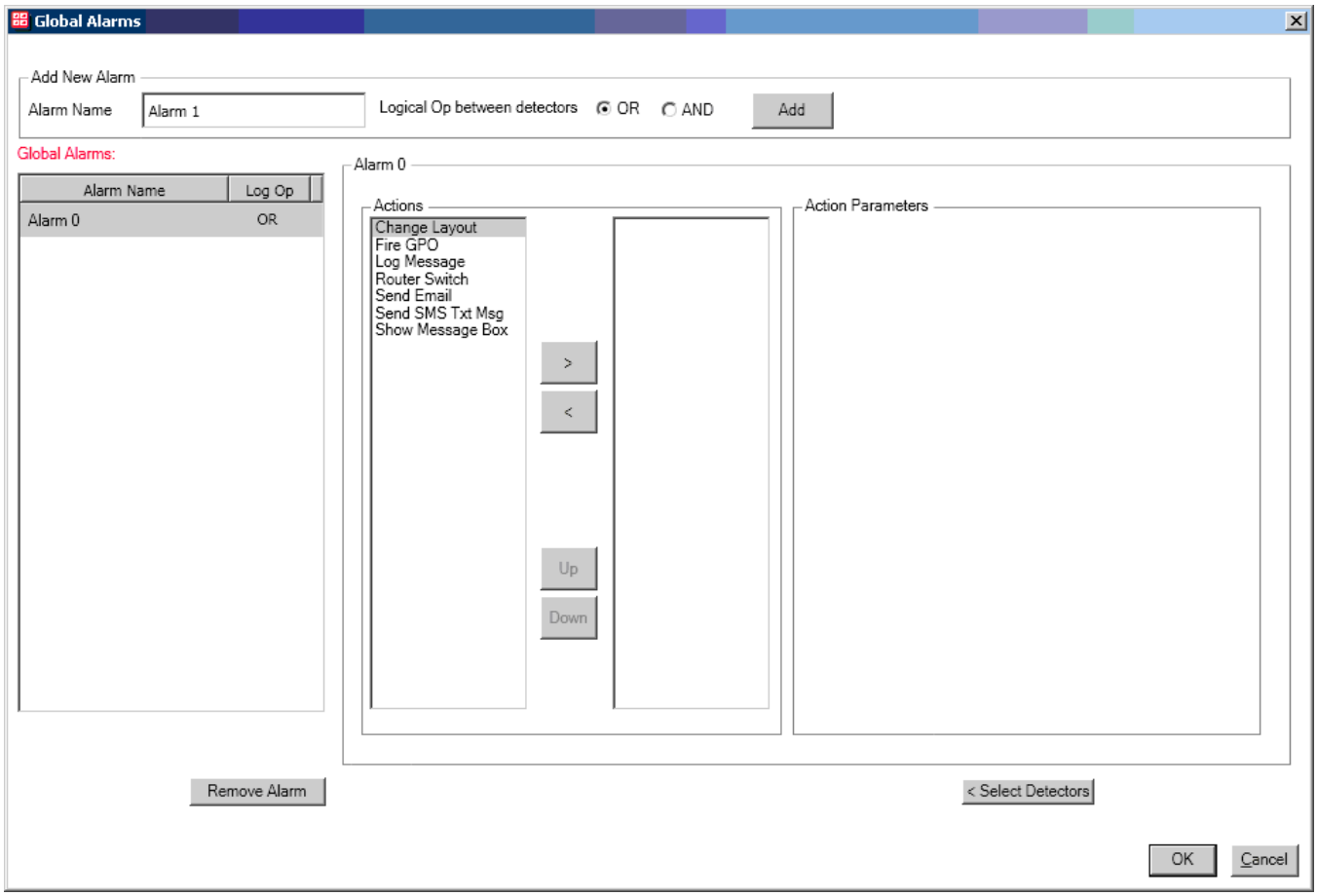



**Figure 10-8** Global Alarm Actions Dialog Box

**4** Select at least one action to be triggered on this detector.

**Table 10-6** Global Alarm Actions

| Action | Description | Setting Options |
|---|---|---|
| Change layout | Switches the active layout on the multiviewer, while keeping any other alarms active. | **Layout Name** - Select the layout to change to. |
| Change Salvo | (Not available for HView IP) | |
| Fire GPO | Activates a GPO. | **GPO number** - Choose the GPO that is activated |
| Log Message | Adds a predefined message to the system log, which is located in the alarm section of the logging server.<br>See ***Enabling Alarm Logging*** on page 69 to configure alarm logging. | **Message** - a predefined message that is sent to the system log in the alarm section of the logging server<br>**Logging Priority** - the level of the alarm -- info, warning, performance, error, critical, or fatal |

**Table 10-6** Global Alarm Actions *(Continued)*

| Action | Description | Setting Options |
|---|---|---|
| Send email | Sends an Email with pre-written text to a specific recipient. | **Recipient Address** - email address that will receive a pre-defined email at this trigger<br>**Subject** - Title of the mail to be sent<br>**Message Body** - contents of the email to be sent |
| Send SMS Txt Msg | Sends a text message to a phone. | **10 digit phone number** - Phone that will receive automated text message at this trigger<br>**Wireless Carrier** - Cell phone carrier's email address suffix<br>**Txt Msg Body** - Contents of the text message to be sent |
| Show Message Box | Displays a warning or an error on the screen (depending on your settings), and puts a pre-defined message in that box. This message remains on the screen regardless of whether the layout changes. | **Message** - Contents of the message that will appear on a display at this trigger<br>**Type** - Error or warning<br>**Display Number** - The display that will receive the error or warning message |

5 Click **OK** to save the alarm and close the **Global Alarms** dialog box.

By default all global alarms are activated.

# Configuring Layout Events and Global Events

Layout events and global events are not necessarily associated with an alarm action.

- A layout event is configured per layout. When it is created, it is available to the current layout only.
- A global event is configured per multiviewer. It is available to all layouts on the multiviewer.

*Global and layout events are only available when Layout Designer is connected to an* HView IP *Multiviewer.*

### Creating an event:

1 From the toolbar, choose **Rules** > **Layout Events** or **Rules** > **Global Events**.

An **Event Configuration** dialog box opens.

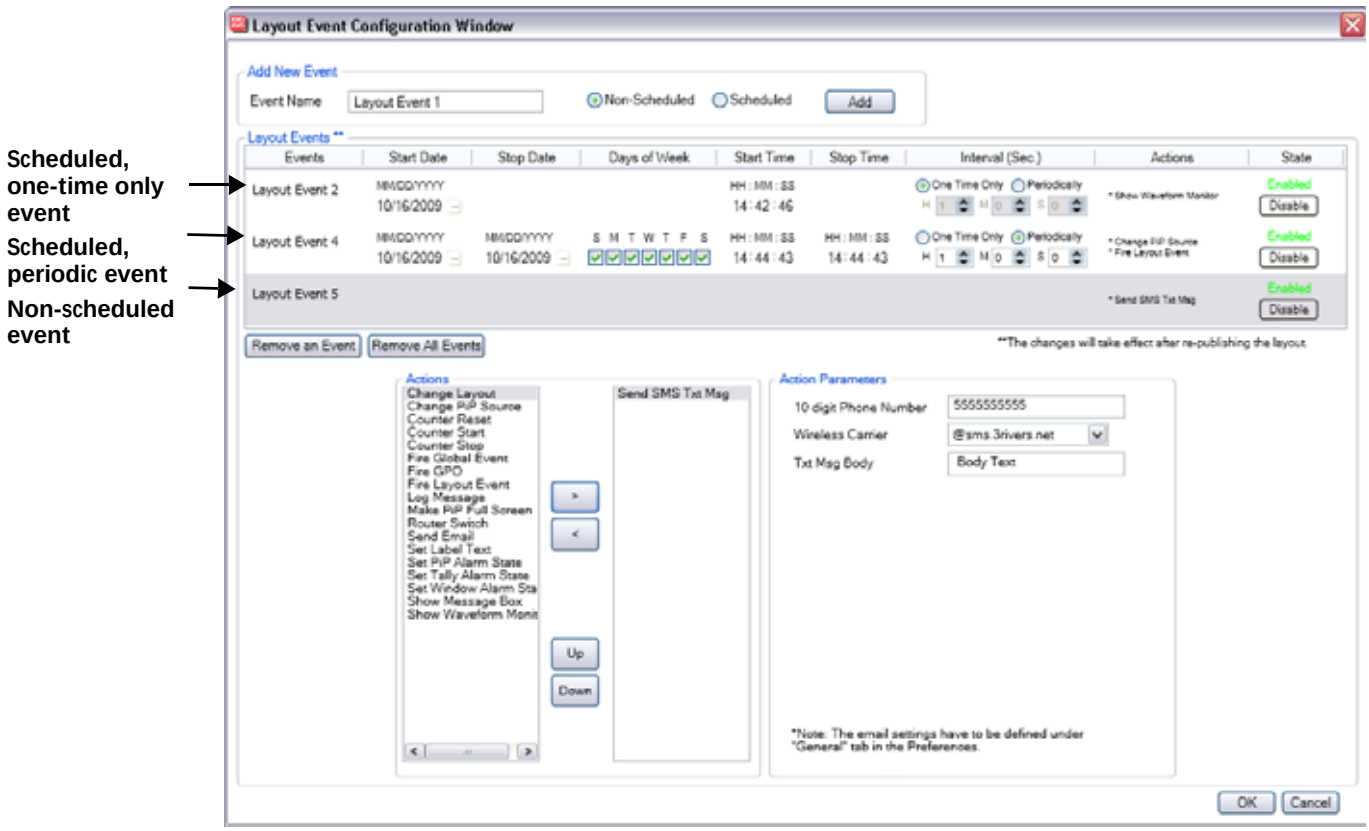



**Figure 10-9** Events Configuration Dialog Box

*You can also open the **Layout Event Configuration** dialog box from the Layout property pane.*

2 Enter a descriptive title for the event in the **Event Name** field, and then choose either **Non-Scheduled** or **Scheduled**.

You can use a **Non-scheduled** event as an action triggered by an event in an alarm.

**Scheduled** events can be configured to fire one time only or on a periodic basis.

3 Click **Add**.

The new event is added as a new row in the **Layout Events** or **Global Events** table.

4 Add the remaining necessary data in the new event's row in the **Layout Events** or **Global Events** table.

Depending on the type of event, the following data may be necessary:

- If your event is *non-scheduled*, no more data is necessary in the **Layout Events** section of the screen.
- If your event is *scheduled and one-time*, enter a date and time for the event to commence in the **Layout Events** table.
- If your event is *scheduled and periodic*, in addition to a start date and start time, enter an end date and an end time, and choose the days of the week for the event to take place on.

For *scheduled* events, beside **Time Zone Offset**, choose the time zone the change will take place in.

5 To add actions that will be triggered by the selected event, click on an action in the left field, and then click **>** to add actions to the event.

You can remove actions from the list on the right by clicking **<**.

If your event is a global event, in addition to the actions listed in ***Global Alarm Actions*** on page 174, the **Cycling Layouts** action is available. For this action, select the names of the layouts you want to include in the cycle. Select these layouts in the order you want them to appear. Selected items in the sequence display a number to indicate their position in the sequence. Also select the number of the display the layout will be cycled on.

If your event is a layout event, the action list contains all the alarms in ***Alarm Actions*** on page 166, except for the **Set InfoPanel Alarm State** action.

6 Complete the **Action Parameters** section for each action added.

See ***Setting Alarm Actions*** on page 166 for information on all the actions and their parameters.

7 Click **OK** to save the events and close the **Layout Event Configuration** dialog box.

## Deleting Events

### Deleting a Single Event

1 In the **Events Configuration** screen, select the row in the Layout Events table that represents the event you want to delete.

2 Click **Remove an Event**.

### Deleting All Events from a Layout

1 In the **Events Configuration** screen, click **Remove all Events**.

# Creating Info Panels

Add info panels to your layout to display data and/or alarms. Use the **Info Panel** tab of the **Properties** pane to define the data and the data source that will be provided on the info panel.

*Your layout must be in an **unlocked** state to add, move, or delete info panels. You can adjust properties of an info panel in a locked layout. See **Locking and Unlocking Layouts** on page 90.*

Info panels can be added to the Info Panels tab of the Library panel if they are free-standing. If an info panel is attached to a PiP or a window and that PiP or window is added to the Library panel, the info panel is added as part of that layout object.

## Adding Info Panels to a Layout

Info panels that are added from the toolbar to a layout appear initially with no data. Once you have added an info panel, you can define the specific data to be included.

### To add an info panel to a your layout:

1 Select **Insert** > **Info Panel**.

If a PiP is selected, the info panel will appear attached to the PiP. If no PiP is selected, the panel will float free. if the info panel is an independent layout object (not attached to a PiP), you can drag it on top of a PiP.

A **Snap to PiP x** message will appear if the info panel can be attached to the PiP. Each PiP can have one info panel. The **Snap to PiP x** message will not appear if a PiP already has an info panel attached to it. Nor will it appear if the info panel is not hovered over a PiP.

You can also add an info panel by dragging and dropping from the **Info Panels** library, or by dragging and dropping a window or PiP that contains an info panel from the **Windows** or **PiPs** library. Info panels added to a layout in this way bring any configuration with them.

## Modifying Info Panel Properties

Each info panel has a set of individual properties that define its appearance and behavior, and which PiP it applies to in the layout.

To view an info panel's properties, select the info panel in the layout canvas, and then select the **Info Panel** tab of the **Properties** pane.

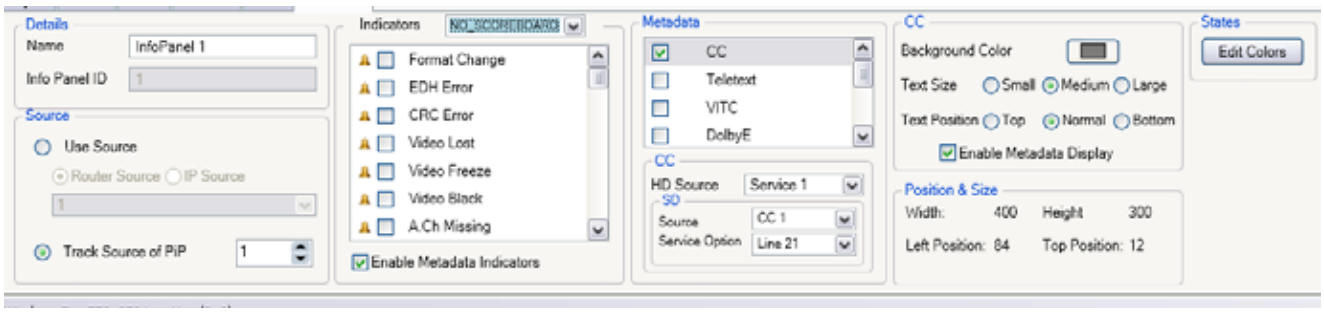



**Figure 10-10** Info Panel Properties

## Naming the Info Panel

Each info panel has a unique name that identifies it in the layout when it is associated with a PiP.

### To name an info panel:

1 Select an info panel indicator in the layout.
2 Select the **Info Panel** tab on the **Properties** pane.
3 In the **Details** area, type a name for the info panel in the **Name** field.

## Resizing and Moving an Info Panel

The **Position & Size** area of the Info Panel Properties is for information only.

### To modify info panel size and position:

1 If the info panel is attached to a PiP or a window, right-click on the info panel and select **Info Panel** > **Enable Resizing Info Panel**.

If the info panel is not attached to a PiP or window, this step is neither available nor necessary.

2 Select and drag the info panel, or a corner or side of the info panel.

Info panels do not have to cover a portion of the PiP to maintain a relationship with the PiP.

***Note:** You can also drag a window or PiP that an info panel is part of. The info panel will move with any object it is attached to.*

The **Left Position** value is the number of pixels from the left edge of the layout. The **Top Position** value is the number of pixels from the top edge of the layout.

If the info panel is free-floating (not connected to a PiP), as you drag it over a PiP a message **Snap to PiP x** will appear.

Only one info panel can be attached to a PiP. If the PiP already has an info panel attached, the **Snap to PiP x** message will not appear.

### To move an info panel off a PiP:

1 Right-click the PiP that contains an info panel.
2 Select **Info Panel** > **Move Out**.
3 Click **Ok**.

You can now drag the info panel away from the PiP and drop it on another PiP, or treat it as an independent layout object.

### To delete an info panel from a layout:

- If the info panel is attached to a PiP, right-click the PiP and select **Info panel** > **Remove**.
- If the info panel is part of a locked window, right click on the window and deselect **Lock Window**. Then right-click on the window again and select **Info panel** > **Remove**. Then right-click on the window again and select **Lock parent window**.
- If the info panel is free-standing, select the info panel and then press the **Delete** key.

## Setting Info Panel States

You can assign different colors, behaviors, and alarm conditions to the indicators that are part of an info panel. The **Presence** info panel state determines the color of an indicator for CC, Teletext, and VChip rating. There are also three alarm states (**Alarm Low**, **Alarm Medium**, and **Alarm High**). You can create the following settings for each info panel state:

| | |
|---|---|
| Primary color | The primary color represents the color of the indicator for the level of the alarm. |

### To set info panel indicator states:

1 Select an info panel indicator in the layout.
2 Select the **Info Panel** tab on the **Properties** pane.
3 In the **States** area, click **Edit Info Panel Colors**.

The **Info Panel States** dialog box appears.

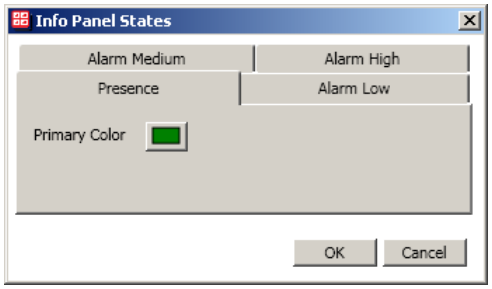



**Figure 10-11** Info Panel States Dialog Box

4 To select the label text color, click the  icon to open the **Select a Color** dialog box.

5 To select a color, do one of the following:

- Use the slider to select a color.
- Enter the color values you want to use in one of the **ScRGB**, **sRGB**, or **Hexadecimal Notation** fields.

Your selected color is previewed below **Selected Color**. If required, use the **Opacity** slider to adjust the color's opacity value.

For more information on completing the Color Selector dialog box, see ***Setting Default Window Properties*** on page 55.

6 Click **OK**.

## Setting the Info Panel Source

In the Info Panel Source area, there are two options:

- **Use Source** Select this option if you want the info panel to always display the same source.
- **Track Source of PiP** Select this option if the info panel is assigned to a PiP, and you want it to provide data for the info panel.

  By default, the PiP to which the info panel is snapped (if it is snapped to a PiP) will be the tracked source. To change the source PiP, enter a number in the field.

***Note:** if you move out an info panel from a PiP and assign it to another PiP, the assigned source will automatically be the PiP the info panel is snapped to.*

## Setting Info Panel Indicators

In order for an alarm to appear for a PiP state, you need to do two things:

- Configure an alarm detector for that PiP in the PiP's **Alarms** Property page
- Configure a "Set InfoPanel Alarm State" action for that alarm

The Info Panel Indicators area contains the following options.

**Table 10-7** Info Panel Indicators

| Indicator | Type | Description |
|---|---|---|
| Format Change | Alarm | (Not available for HView IP) |
| EDH Error | Alarm | (Not available for HView IP) |
| CRC Error | Alarm | (Not available for HView IP) |
| Video Lost | Alarm | Indicates that the multiviewer hardware can no longer detect a video signal from the video channel |
| Video Freeze | Alarm | Indicates that the input video image is frozen (static) according to user-defined frozen picture delay (duration), percent of frozen video in the frame, and amount difference between pixels percent tolerance |
| Video Black | Alarm | Indicates that the input video image is considered a black picture according to user-defined percentage non-black picture, delay (duration), and black level threshold values |
| A. Ch Missing | Alarm | Indicates that the audio channel is not present in the signal |
| A. Ch Peak | Alarm | Indicates that the input audio level of the audio channel is at or above the set upper threshold dB values for the user-defined period of time |
| A. Ch Low | Alarm | Indicates that the input audio level of the audio channel is at or below the set lower threshold dB values for the user-defined period of time |
| A. Ch Silence | Alarm | Indicates that the input audio level of the audio channel is at or below the set silence threshold dB value for the user-defined period of time |
| A. Grp (1–4) Missing | Alarm | (Not available for HView IP) |
| Audio Format | Alarm | (Not available for HView IP) |
| Dolby E Program | Alarm | (Not available for HView IP) |
| CC Missing | Alarm | Indicates that closed captioning (can be HD or SD) is not present in the incoming video stream |
| CC Update | Alarm | Indicates that closed captioning is not updating correctly in the incoming video stream |
| CC Invalid | Alarm | Indicates that the closed captioning data in the incoming video stream is not usable |
| VChip Missing | Alarm | Indicates that there is no V-chip data in the incoming video stream |
| VChip Mismatch | Alarm | Indicates that the V-chip data in the incoming video stream does not match the expected rating |
| Teletext Missing | Alarm | Indicates that there is no teletext in the incoming video stream |
| Teletext Update | Alarm | Indicates that the teletext data in the incoming video stream is frozen |
| Teletext Invalid | Alarm | Indicates that the teletext data in the incoming video stream is not usable |
| VITC Missing | Alarm | Indicates that there is no VITC in the incoming video stream |

**Table 10-7** Info Panel Indicators *(Continued)*

| Indicator | Type | Description |
|---|---|---|
| WSS Missing | Alarm | Indicates that WSS is not present in the incoming video (should be present in SD625 only) |
| WSS Format | Alarm | Indicates that the WSS information has changed from the selected format |
| AFD Missing | Alarm | Indicates that AFD data is not present in the incoming video |
| AFD Format | Alarm | Indicates that the AFD information has changed from the selected format |
| GPI | Alarm | Indicates that a GPI input has been triggered |
| SNMP VGPI | Alarm | Indicates that a GPI trigger has been received through SNMP |
| Any Alarm | Alarm | Indicates that any tally connected to any other alarm has been triggered |
| Any Video | Alarm | Indicates that any of the alarms in the Video section of the list (above) have been triggered |
| Any Audio | Alarm | Indicates that any of the alarms in the Audio section of the list (above) have been triggered |
| CC | Indicator | Indicates that closed captioning is present, indicates whether it is 608 or 708 captioning, and indicates, in the case of 708 closed captioning, the service the closed captioning comes from (service 1–7) |
| VChip | Indicator | Indicates the V Chip rating |
| Teletext | Indicator | Indicates that Teletext data is present |
| Audio Mon | Indicator | Indicates which audio pair is being monitored. (Needs to be enabled in the info panel in order for it to be displayed when the audio monitor is enabled.) |
| Video Format | Indicator | Indicates the video format currently being input to the PiP. |
| Audio Type (not available for HView IP) | Indicator | Shows the type of audio. Options include:<br>■ PCM<br>■ Dolby D<br>■ Dolby E<br>■ No audio |
| Last Alarm | Indicator | Shows the name of the last alarm that was triggered. |
| Alarm Time | Indicator | Shows the date (month/day) and time when the last alarm was triggered. It updates to show a different alarm if a different alarm is triggered, but if the same alarm is triggered more than once in sequence, then it shows the first time that alarm was triggered. |

When you add indicators one at a time, they are added in the order you click them, from the top left corner on down, first filling the left side of the panel, and then starting again at the top right corner.

If the info panel is attached to a PiP when you add indicators, the indicators will always size themselves so that all indicators will fit within the boundaries of the PiP.

If the info panel is free-standing, the indicators will appear at the default size, and will fill first the left side of the info panel, then the right side. If the info panel is too small to fit all the indicators, the extras for which there is no space will pile on top of one another in the middle.


**Figure 10-12** Info Panel Attached to a PiP in a Layout

If the info panel is free-standing, you can move indicators around by clicking on them and dragging within the borders of the info panel. If the info panel is connected to a PiP, right click on the PiP and choose **Info Panel** > **Unlock Info Panel Items**. You can now drag indicators within the boundaries of the info panel. Clicking outside the boundaries of the info panel locks the indicators in their new positions. When an info panel is unlocked, each info panel indicator can be resized individually.

When the layout is published to the multiviewer and an indicator is triggered, that indicator will appear on the layout. When no indicator is triggered, no indicators appear on the layout.

## Using the Scoreboard Option

HView IP  Multiviewers can accept one Daktronics RTD input.

Before you can use the scoreboard option, you need to configure the multiviewer to receive the data. See ***Setting Up External Devices*** on page 67.

To add a scoreboard to your info panel, first choose an option from the drop-down menu at the top of the InfoPanel Indicators list. Options include:

- **No Scoreboard**—The Indicators list shows no scoreboard options.
- **Football**—The Indicators list displays all normal options, plus the football scoreboard options as described in Table 10-8.
- **Basketball**—The Indicators list displays all normal options, plus the basketball scoreboard options as described in Table 10-9.

You can only display one type of scoreboard data per info panel.

**Table 10-8** Scoreboard Info Panel Options (Football)

| **Scoreboard Data** | |
|---|---|
| Game Clock Time | Down |
| Home Team Name | To Go |
| Guest Team Name | Home Possession Indicator |
| Home Team Score | Guest Possession Indicator |

**Table 10-8** Scoreboard Info Panel Options (Football) *(Continued)*

| **Scoreboard Data** | |
|---|---|
| Guest Team Score | Play Clock Time |
| Quarter | Home Time Outs Left |
| Ball On | Guest Time Outs Left |

**Table 10-9** Scoreboard Info Panel Options (Basketball)

| **Scoreboard Data** | |
|---|---|
| Game Clock Time | Home Time Outs Left — Full |
| Game Clock Status | Home Time Outs Left — Partial |
| Shot Clock Time | Home Time Outs Left — Total |
| Home Team Score | Guest Time Outs Left — Full |
| Guest Team Score | Guest Time Outs Left — Partial |
| Home Team Fouls | Guest Time Outs Left — Total |
| Guest Team Fouls | Period |

## Setting Metadata Display Options

To adjust the options of a metadata element, click on that element in the Info Panel Metadata area of the Info Panel Properties pane.

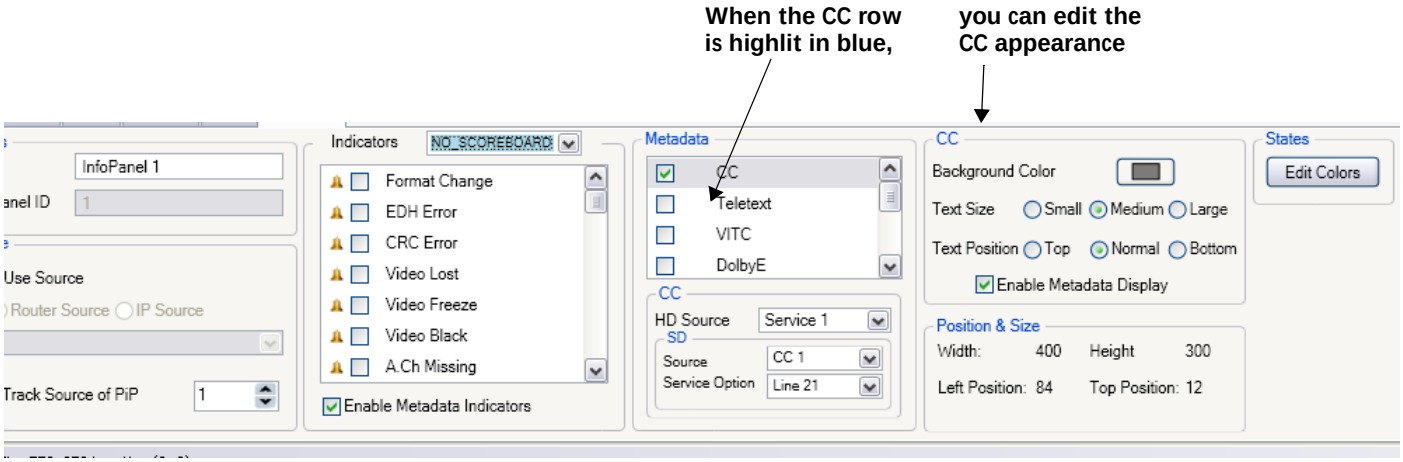



**Figure 10-13** Info Panel Metadata Display Options

You can make the following metadata configurations for each Info Panel.

**Table 10-10** Metadata Appearance Options

| **Control** | **Function** |
|---|---|
| Background Color | The background color for the selected metadata element |
| Text Size | ■ Small<br>■ Medium<br>■ Large |

**Table 10-10** Metadata Appearance Options *(Continued)*

| Control | Function |
|---|---|
| Text Position | ■ **Top** - Places the metadata at the top of the screen, regardless of where it will actually appear when broadcast<br>■ **Normal** - (CC and Teletext only) Places the metadata as defined in the metadata to display it as it appears when broadcast<br>■ Middle - (VITC, DolbyE, WSS, and AFD only) Places the metadata in the middle of the screen, regardless of where it will actually appear when broadcast<br>■ **Bottom** - Places the metadata at the bottom of the screen, regardless of where it will actually appear when broadcast |
| Enable Metadata Display | When enabled, shows the actual metadata on the info panel display |

## Setting Info Panel Metadata Options

In the Info Panel Metadata area, there are several options, as described in Table 10-11. To choose an option, click its check box. To configure the metadata information, click the option's text. Options appear below the Info Panel Metadata.

**Table 10-11** Info Panel Metadata Options

| Metadata Option | Function | Options |
|---|---|---|
| CC | Displays EIA608 and/or EIA708 closed captioning | **HD Source:** Service 1–7, CC 1–4, T 1–4<br>**SD Level:** CC 1–4, T 1–4<br>**SD Service Option**: Line 12, 21–22 |
| Teletext | Displays WST or OP 47 teletext | **Page:** 000–999<br>**Service Option**: Line 6–22 |
| VITC | Displays vertical interval timecode from SD sources and DVITC when embedded in the HD source | **Type:** LTC, VITC 1, VITC 2<br>**Service Option**: Line 6–22 |
| Dolby E | (Not available for HView IP) | |
| WSS | Displays the embedded WSS (Widescreen Signalling) format | **Service Option**: The line (ranges from 6-23) where WSS data should appear on your incoming video |
| AFD | Displays the embedded AFD (active format description) format | None |
| IP Stream Info | Displays the following information:<br>■ Program number<br>■ Audio service<br>■ Video codec<br>■ Video Format<br>■ Audio codec and PID number | None |

Check **Enable Metadata Indicators** when you need to adjust the position of metadata from its default location on the info panel. If the indicator is unchecked, the location of the repositioned indicator is lost since it is removed from the object. When checked, the multiviewer shows the indicators without losing the position of the indicators when they are enabled again.

## Configuring AFD and WSS Monitoring

The following figure explains how HView IP multiviewers display the various AFD and WSS options. WSS is relevant for SD625 only.

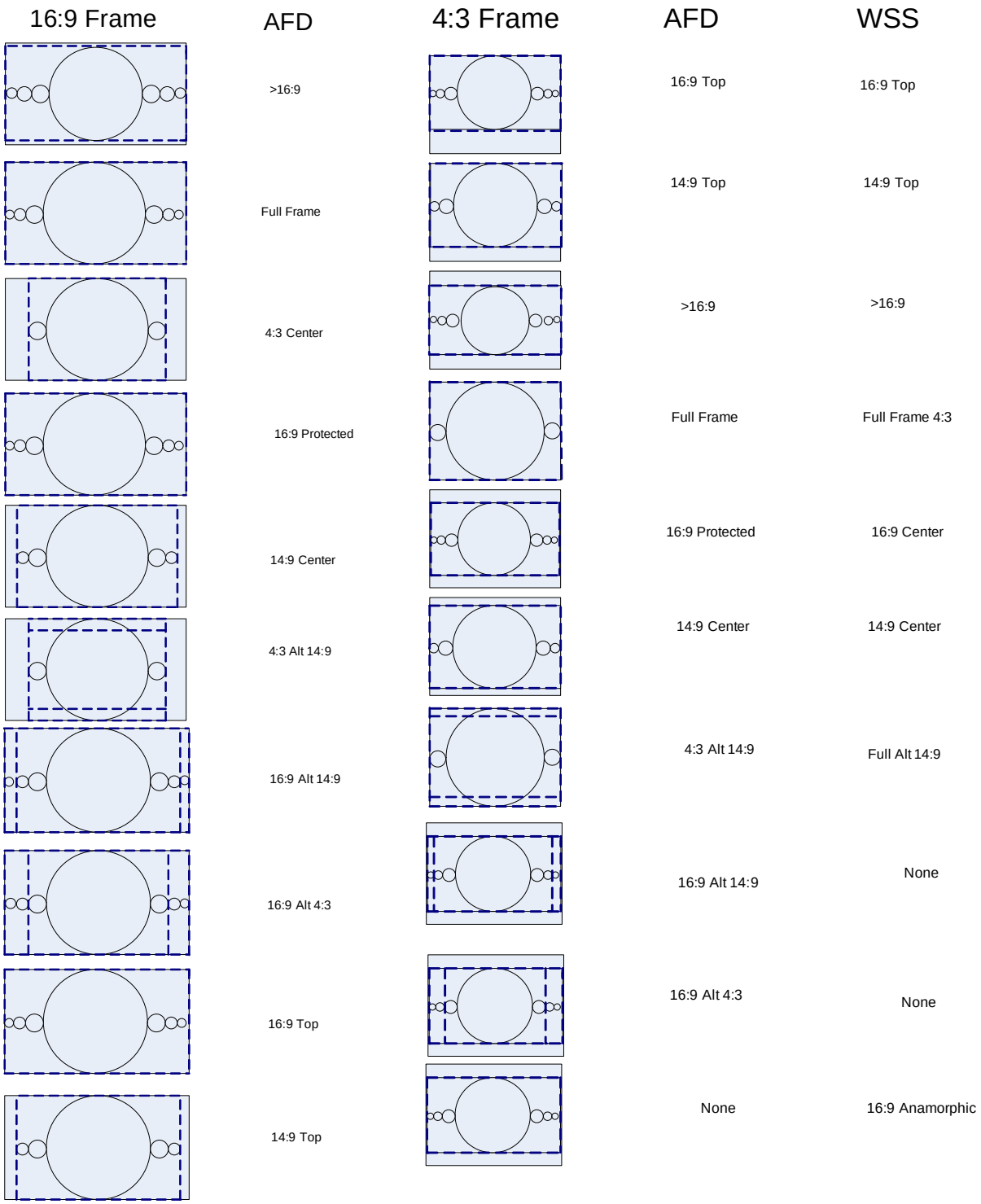



**Figure 10-14** AFD and WSS Display Options for 16:9 and 4:3

## Configuring Audio Monitoring

The audio monitor needs to be enabled in the info panel in order for it to be displayed when the audio monitor is in use.


**Figure 10-15** Audio Monitoring on Info Panel

# 11 On-Screen Controls

## On-Screen Menus

Once you have published your layouts to the multiviewer, each multiviewer provides you with the ability to access on-screen menus.

You can use a mouse connected to your multiviewer to access certain features using control menus. For example, you can make a PiP go full screen, clear an alarm condition, or view PiP information. Alternatively, you can access the same control menus remotely from a computer that is running Layout Designer.

*You must have a mouse connected to your multiviewer to be able to use the on-screen menus. Alternatively, you can activate the remote mouse control from Layout Designer (for more information see* ***Remote Mouse Control*** *on page 192).*

Use your mouse to right-click on an object or the background in the layout. A menu appears with different items, depending on where you have clicked. Table 11-1 lists the various options that might appear.

*When you reach the end of a menu, it will restart again at the beginning.*

**Table 11-1** On-Screen Menu

| Item | PiP | Audio Meters | Tally | Label or Empty Area of Canvas | Description |
|---|---|---|---|---|---|
| **Select Video Source** | X | | | | Lists of all the possible PiP sources. This allows you to assign a different source to the selected PiP. |
| **Full Screen** | X | | | | Causes the PiP to expand to the size of the screen. To turn off the full screen view, right-click the PiP, and then choose **Revert to Layout**. |
| **PiP Information** | X | | | | Lists attributes for the selected PiP, including<br>■ Source<br>■ URL<br>■ Stream width (pixels)<br>■ Stream height (pixels)<br>■ Stream aspect ratio<br>■ Video Format<br>■ On-screen width (pixels)<br>■ On-screen height (pixels)<br>This information can be useful for troubleshooting purposes. |
| Monitor Audio | X | | | | Choose an audio service associated with the IP source to monitor. |
| Disconnect VNC | X | | | | PiP image reverts to a "no signal" picture (VNC PiPs only) |
| Connect VNC | X | | | | Attempts to reconnect a PiP to a VNC server (VNC PiPs only) |
| Send CTRL+ALT+DEL | X | | | | Opens the Windows Security dialog box on the VNC server, so you can lock the computer, restart, etc. (VNC PiPs only) |
| Display Scope | X | | | | When Test and Measurement is available, this item displays a sub-menu that lists all the different modes that available for Test and Measurement. When you choose one, the PiP changes to display that option. If another PiP is currently displaying a scope, that PiP will revert to its previous mode. For more information, see ***Test and Measurement*** on page 129. |
| Color Source | X | | | | This item is appears on the on-screen display menu when Test and Measurement has been activated. Choose **Monochrome** to display the results in black and white, or **From Video** to display the results in the actual colors from the video. |
| Select Audio Source | | X | | | Scroll and select from list of available audio sources |
| Audio Information | | X | | | Displays source number and name, audio format type, and the audio channel that is being mapped to the audio meter |

**Table 11-1** On-Screen Menu *(Continued)*

| Item | | PiP | Audio Meters | Tally | Label or Empty Area of Canvas | Description |
|---|---|---|---|---|---|---|
| **Reset Alarms** | | X | | X | | Clear an alarm state. (You can also clear alarms on the Layout property pane in Layout Designer. See ***Making Layout-Specific Settings*** on page 97.) |
| **Enable Detectors** | | X | | X | | When you choose this item, all of the alarm conditions that you defined for that PiP appear. You can select or clear (deselect) any conditions that appear in the list. If you did not define any alarm conditions for the selected PiP, none is listed.<br>For more information about alarm conditions, see ***Defining Alarms for a Layout Object*** on page 161. |
| **Enable Alarms** | | X | | X | | When you choose this item, all of the alarm detectors that you defined for that PiP appear. You can select or clear (deselect) any detectors that appear in the list. If you did not define any alarm detectors for the selected PiP, none is listed. For more information about alarm detectors, see ***About Monitoring Tools*** on page 157. |
| **Recall Layout** | | X | X | X | X | Lists any layout that was published previously and allows you to select one to display. |
| **Advanced** | Lock Display | | | | X | Disables the display from accidental change of the layout. **Recall Layout** is not available when the display is locked. |
| | Clear Messages | | X | X | X | Acknowledges messages displayed by alarm rule message box. (You can also clear messages on the Layout property pane in Layout Designer. See ***Making Layout-Specific Settings*** on page 97.) |
| | Reset layout | X | X | X | X | Disconnects all PiP sources for all displays and requires the user to recall all layouts |
| | Reset and Recall Layouts | | X | X | X | Disconnects all PiP sources for all displays and recalls all layouts automatically |
| | Run Performance Tests | | | | | Diagnostic tool to run a performance test for debugging purposes. The results of the test are saved to a file named PerformanceLog.txt in the folder c:\Program Files\Harris\Harris Multiviewer. |
| | Send Serial Break | | | | | Diagnostic tool to send a break command when using Sony Tally protocol. |
| | Enable Metadata Debug | | | | | Diagnostic tool to capture metadata for debugging purposes. |
| **Exit Multiviewer** | | X | X | X | X | Exits to the Multiviewer Control Panel. |

## Remote Mouse Control

If you do not have a mouse connected do your multiviewer, but you want to access the on-screen menus, you can activate remote mouse control from the computer that is running Layout Designer. (For more information about on-screen menus, see ***On-Screen Menus*** on page 189.)

When this feature is activated, the mouse appears on the output display currently selected in Layout Designer. You cannot use the other features of Layout Designer until you deactivate the remote mouse control.

### To activate remote mouse control:

1 In Layout Designer, click **Enable Control**.

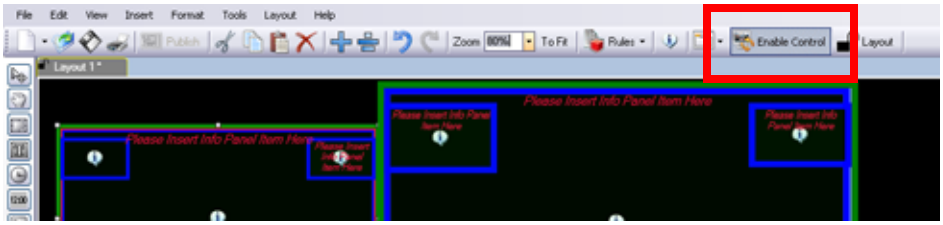



**Figure 11-1** Location of the Enable Control Button

The mouse appears on the corresponding multiviewer. The other features of Layout Designer are unavailable.

### To deactivate remote mouse control:

1 On the keyboard, press **ALT** + **F7**.

## Controlling a VNC PiP

For information on creating VNC PiPs, see ***Selecting a PiP's Input Source*** on page 128.

### To take control of a VNC PiP:

1 Left-click inside the PiP.

To control a VNC clip from the multiviewer, your keyboard must be US English 101 key. Some special key sequences may not work.

### To release control of a VNC PiP:

1 Do one of the following:

- Hold down the left mouse button and then double-click the right mouse button.
- On the keyboard, Press ALT+F7.

## Controlling a Counter

To control a counter using on-screen controls on the HView IP multiviewer, follow these steps:

1 Right-click on a counter.

2 Use the following controls:

**Start** - updates the counter to proceed with the linear countdown

**Stop** - stops and reports the current countdown time until further notice

**Reset** - re-initializes the counter using the original start, stop, blink, and alert times. Any rules that were active in the layout will still trigger the counter the same way as before.

To control the counter from Layout Designer, see ***Manually Controlling a Counter*** on page 154.

# Using the Multiviewer Control Panel

Administrator users of the multiviewer may need to use the Multiviewer Control Panel to perform maintenance operations. To access the Multiviewer Control Panel, you must exit the multiviewer from the On-Screen menu.

## Accessing the Multiviewer Control Panel

1 Select **Exit** Multiviewer from the On-Screen menu, and then click **Yes** to confirm.

A dialog box similar to the following appears.

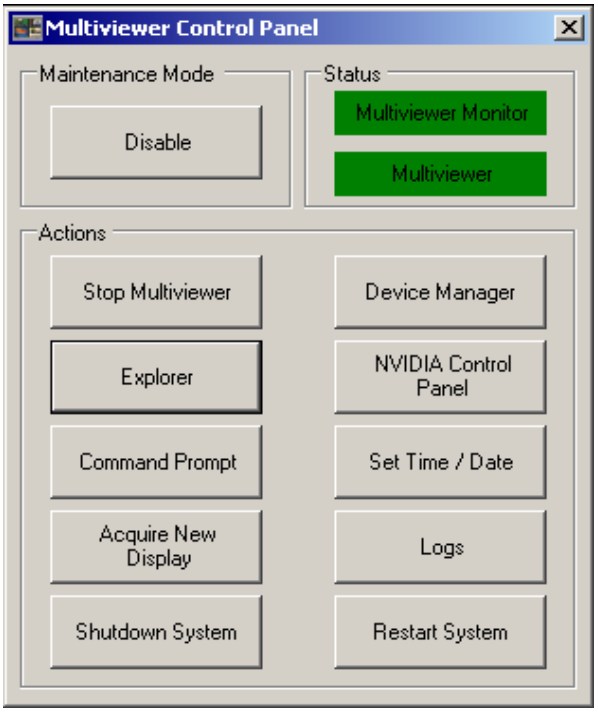



**Figure 11-2** Multiviewer Control Panel

2 Click **Enable** to enter Maintenance mode.

The **Disable** becomes **Enable**, and all the buttons in the Actions section of the screen will be unavailable.

With Maintenance mode enabled, the following actions will be available:

Table 11-2. Multiviewer Control Panel Options

| Button | Function |
|---|---|
| Maintenance Mode | ■ Enable—Sets the Control Panel to maintenance mode<br>■ Disable—Sets the Control Panel to normal operation mode (from maintenance mode) |
| Status | Indicate green when **Multiviewer Monitor** and **Multiviewer** are functioning, red when they are not. |
| Stop/Start Multiviewer | Opens a dialog box that contains startup options, and also contains buttons to relaunch the Multiviewer On-Screen Application; see ***Configuring Start/Stop Options*** on page 194 |
| Device Manager | Loads the Windows Device Manager application (this is the same device manager that you could launch by selecting Start > Control Panel > System > Hardware > Device manager). Administrators might use this screen to manually configure devices. |
| Explorer | Starts the standard Windows file system explorer application, opened to the Harris Multiviewer folder where HView IP stores layouts, etc. |
| NVIDIA Control Panel | Starts the NVIDIA application to configure the NVIDIA graphics drivers settings, including color temperature, screen alignment, etc. See your NVIDIA documentation for information on the various panels and wizards involved in this tool. |
| Command Prompt | Starts the command prompt application, from which you can ping other devices on the network to troubleshoot communications issues, etc. |
| Set Time/Date | Opens a standard Windows Date and Time Properties dialog box (also accessible by right-clicking on the time and date that are normally present in the bottom right corner of a PC). |
| Acquire New Display | (Not applicable to HView IP) |
| Logs | Opens Internet Explorer and displays the Harris Logging Server; see ***Using Multiviewer Logs*** on page 196 |
| Shutdown System | Shuts down the PC and does not restart |
| Restart System | Shuts down and restarts the PC |

## Configuring Start/Stop Options

Once you have the Multiviewer application open, you can control options for the Multiviewer OnScreen Application. The same dialog box has a button to restart the onscreen application, as well.

1 On the Multiviewer Control Panel, click **Enable**.

2 Click **Start** Multiviewer.

The **Configuration** dialog box appears.

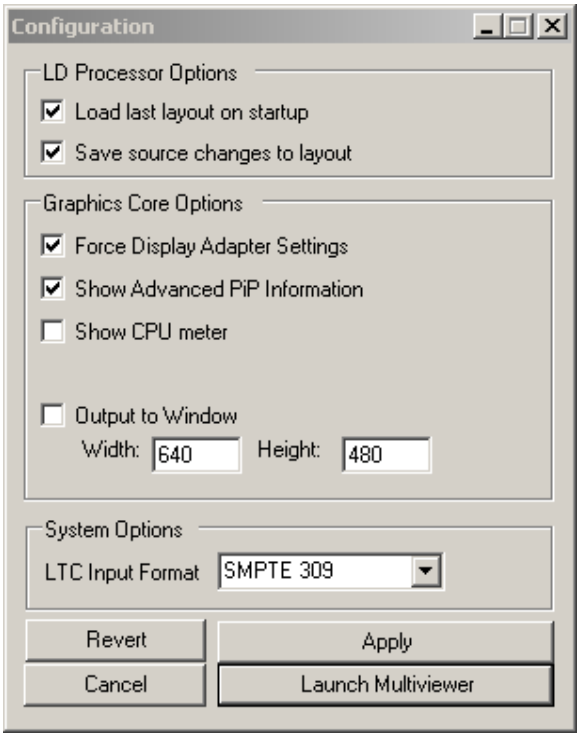



**Figure 11-3** Configuration Dialog Box

**Table 11-3** Configuration Dialog Box Options

| Option | Function |
|---|---|
| Load last layout on startup | When this is checked and the multiviewer starts up, it will reload the layout that was displayed when you last exited |
| Save source changes to layout | When this is checked, after you change inputs to the PiPs (for example using CCS controls or NUCLEUS), these changes are saved to the layout, and are reloaded if the layout is loaded again. When this is not checked and you make changes to the layout, when the layout is reloaded, it will revert to its original inputs. |
| Force Display Adapter Settings | This option should always be checked during normal operation. When it is not checked, the display settings may not be respected by the display device. |
| Show Advanced PiP Information | (Not applicable to HView IP) |
| Show CPU Meter | Shows the percentage of the CPU power that is currently in use; this option is normally not checked |
| Output to Window | Outputs the layout configuration to a window (as defined by the Height and Width fields) on your screen; this option is normally not checked |
| LTC Input Format | (Not applicable to HView IP) |

3 Click **Launch** Multiviewer to start the Multiviewer application and its On-Screen menu.

Click **Apply** to save your System Startup settings, **Revert** to reset the content of the **Configuration** dialog box, or **Cancel** to cancel launching the Multiviewer application.

## Restarting the Multiviewer Control Panel

If you accidentally closed the Multiviewer Control Panel, you can reopen it.

1. Simultaneously press the CTRL, ALT, and DEL keys on your keyboard.
   The Windows Security dialog box opens.
2. Select **Task Manager**.
3. The Windows Task Manager dialog box opens.
4. From the application menu, select **File** > **New Task (Run)...**
   A Create New Task dialog box opens.
5. Click **Browse**, and navigate to **C:** > **Program Files** > **Harris** > **Harris Multiviewer**.
6. Double-click on **XenaShell.exe**, and then click **OK**.
   The Multiviewer Control Panel appears.

## Unlocking the Multiviewer Display

If you accidentally locked the Multiviewer display, you can unlock it.

1. In the **Unlock Computer** dialog box, enter the following settings:
   - **User Name**: Administrator
   - **Password**: (your Multiviewer Administrator user password)

   By default, this password is set to Centrio. Note that these fields are case sensitive.
2. Click **OK**.

*Changing the password is not recommended. If you change the password, you will be prompted to enter it every time the multiviewer is restarted.*

## Using Multiviewer Logs

When you click the Logs button on the Multiviewer Control app, Internet Explorer opens and displays a screen similar to the following:

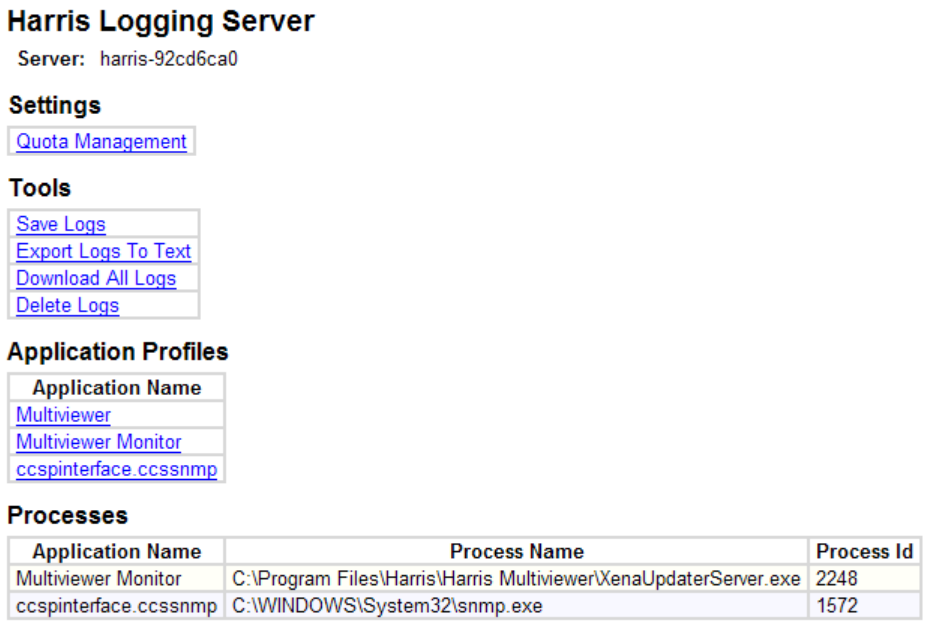



**Figure 11-4** Logging Server (as Viewed in Internet Explorer 8)

Separate logs are created for the following items:

- **Multiviewer**—Logs hardware faults.
- **Multiviewer Monitor**—Logs display and software faults.
- **ccspinterface.ccssnmp**—Logs alarms and traps sent to CCS and SNMP devices.

**Table 11-4** Logging Server Options

| Option | | Function |
|---|---|---|
| **Settings** | Quota Management | This screen indicates the current and maximum size of the log file, and offers the opportunity to change the maximum size. When a log reaches its maximum size, a new log file is created on the server. |
| **Tools** | Save Logs | Place a check beside each log type you want to save, enter a location to save the logs to, and then click **Save Logs**. By default, logs are saved locally to c:\LogFiles on the multiviewer. THe log file name is Logs.harrislog. A Harris Log explorer software is used to view these logs. |
| | Export Logs to Text | Place a check beside each log type you want to export, enter a location to save the logs to, and then click **Export Logs**. Logs are exported as TXT files for debugging purposes. |
| | Download all Logs | Downloads all the logs from all application profiles. |
| | Delete Logs | Place a check beside each log type you want to delete, and then click **delete Logs**. |

**Table 11-4** Logging Server Options

| Option | | Function |
|---|---|---|
| **Application Profiles** | Multiviewer | Each of these three screens offers a list of log files saved for that item.<br>The Assert Verbosity menu contains several levels:<br>■ Assert<br>■ Fatal<br>■ Critical<br>■ Error<br>■ Performance<br>■ Warning (default)<br>■ Info<br>■ Debug<br>The verbosity setting determines the number of alarms you will receive and therefore the size of the log file. You can also filter on these options within the Log file viewer. |
| | Multiviewer Monitor | |
| | ccspinterface.ccssnmp | |
| **Processes** | | |

# A Frequently Asked Questions

## How Do I Access the Components Within my PiP?

If you cannot edit or alter the components within a PiP, this is usually because the components are locked.

To unlock the window, do one of the following:

- Right-click on the window and clear **Lock Window**.
- In the **Windows** tab of the **Properties** pane, clear **Lock Objects in Window**.

## Can I Store and Recall PiP Properties?

If you spend a lot of time creating a PiP, you can use it for other PiP windows.

1. After you have created a window, right-click on the window, and then select **Add Window to Library**.

   It will appear at the bottom of the **Library** panel under the Windows section.

2. Rename a window in the Library by double-clicking on the label under its preview image.
3. To populate more of these windows onto your layout, simply drag and drop them onto the layout page.
4. Set the input source by clicking on the "I" icon in the middle of the window.

## Why Can't I Close All the Layouts?

You cannot close the first layout that opens when Layout Designer starts; it always stays open in Layout Designer.

## What is the Behavior of the Undo Feature?

You cannot undo the following functions:

- Saving a layout

- Publishing a layout
- Downloading a layout
- Closing a layout
- Deleting a layout
- Unlocking a window
- Locking and restoring factory default for PiPs, windows, borders, and border styles

All other functions can be undone.

# B Specifications

Specifications and designs are subject to change without notice

## Inputs

| Item | Specification |
|---|---|
| Input | ■ Stream inputs via Gigabit Ethernet<br>■ Control inputs via Ethernet |
| Video Compression Formats | ■ MPEG-2/H.262<br>■ MPEG-4/H.264 AVC |

## DVI Output Resolutions

| Item | Specification |
|---|---|
| Output | 2 digital displays (DVI or display port) |

**Table B-1** lists the output display resolutions supported by the HView IP's DVI outputs.

**Table B-1** Supported Output Resolutions

| DVI Output Resolution[1] | | |
|---|---|---|
| **When Redundant DVI, spanned DVI, Dual DVI, or Spanned Vertical DVI is chosen** | | |
| ■ 1024 × 768 | ■ 1280 ×1024 | ■ 1600 × 1200 |
| ■ 1024 × 800 | ■ 1344 × 840 | ■ 1680 × 1050 |
| ■ 1152 × 864 | ■ 1440 × 1050 | ■ 1792 × 1344 |
| ■ 1280 × 720 | ■ 1440 × 900 | ■ 1856 × 1392 |
| ■ 1280 × 768 | ■ 1440 × 1080 | ■ 1920 × 1080 |
| ■ 1280 × 800 | ■ 1600 × 900 | ■ 1920 × 1200 |
| ■ 1280 × 960 | ■ 1600 × 1024 | ■ 1400 × 1050 |

[1]For these resolutions, the multiviewer hardware supports both 50 Hz and 60 Hz output.

## Audio Compression Formats

- MPEG-1 Layer 2 (Musicam) audio
- Dolby AC-3 audio
- AAC and HE-ACC audio

## Power Consumption

The power consumption of the HView IP is 400 W, maximum.

# Index

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## F



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## I



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## K



## L

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