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A **BELDEN** BRAND

KALEIDO SOFTWARE V11.1.0

UNMATCHED PICTURE QUALITY AND LAYOUT FLEXIBILITY

User's Manual

M770-2800-145

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www.grassvalley.com

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toc

Table of Contents

1	Introduction	11
	Introduction.....	11
	About this Document.....	11
	Related Documentation	11
	Software and Firmware Updates	12
	Feature Availability and Multiviewer Specifications	12
	XEdit Application Shortcuts.....	13
2	Getting Started.....	15
	Introduction.....	15
	Multiviewer Signal Flow Overview	16
	Multiviewer Sources	17
	Logical Sources.....	18
	Monitors	18
	Layouts	19
	Rooms and Displays	19
3	Managing Kaleido Multiviewer Systems.....	21
	Introduction.....	21
	Key Concepts.....	21
	Representation of Multiviewer Models in Kaleido Software.....	23
	Opening XEdit Software	24
	Difference between Online and Offline Modes	27
	Using XEdit in Online Mode.....	28
	Connecting to a Multiviewer.....	28
	Disconnecting from a Multiviewer	29
	Enabling Access Control in XEdit	29
	Disabling Access Control in XEdit	30
	Importing a Database.....	31
	Exporting a Database.....	32
	Exporting a Single-Multiviewer Database.....	32
	Creating a Backup	33
	Backing Up the Current Database.....	33
	Backing Up Resolutions.....	33
	Backing Up Audio Scales.....	33
	Restoring a Backup	34
	Restoring a Database from a Backup	34
	Restoring Resolutions or Audio Scales from a Backup	34
	Creating a Single Multiviewer System	35
	Configuring the System Representation	38

Restoring the Factory-Default Configuration	39
To restore the XEdit factory defaults for a multiviewer model	39
Managing Multiple Databases Efficiently	41
Working online.....	41
Working offline.....	41
Applying a backup database to the multiviewer	42
4 Managing Sources in a Kaleido-IP System	43
Introduction.....	43
Input Types - Network Sources Versus Virtual Inputs Explained.....	43
Kaleido-IP Multiviewer Ethernet Port Usage	45
Default Kaleido-IP Network Source Configuration in XEdit	45
Configuration Prerequisites.....	45
Configuring Network Sources.....	46
Adding Any-Source Multicast Transport Stream Sources	46
Adding Source-Specific or Source-Filtered Multicast Transport Stream Sources	48
Adding Unicast Transport Stream Sources.....	50
Adding HLS Playlist Sources	51
Adding RTSP Transport Stream Sources	53
Adding RTMP Transport Stream Sources	54
Modifying transport streams and HLS playlists.....	55
Removing transport streams and HLS playlists.....	57
Importing an Input Configuration from a Spreadsheet.....	58
Configuring Virtual Inputs	64
Adding Virtual Inputs.....	64
Modifying Virtual Inputs	67
Removing Virtual Inputs	70
5 Logical Sources.....	71
Introduction.....	71
Key Concepts.....	71
Creating and Configuring Logical Sources.....	72
Automatically Adding Logical Sources	72
Managing Logical Sources Associated with Programs in a Transport Stream.....	74
Adding logical sources for new programs in a transport stream	74
Manually adding a Logical Source.....	75
Managing Levels	77
Defining Physical Assignments.....	79
Making Further Assignments by Incremental Copy	83
Sorting the Sources Table.....	85
Filtering the Sources Table.....	85
Resizing the Sources Table's Columns.....	86
Monitoring Internal-Router Outputs on the Monitor Wall (Sample Scenario).....	87
6 Calibrating the Kaleido Software	89
Introduction.....	89

Key Concepts	89
Profiles	89
Multiviewer Input Calibrations	90
Alarm Debouncing	90
Managing Calibration Profiles	93
Creating Calibration Profiles	93
Deleting Calibration Profiles	93
Configuring Calibration Profiles	93
Assigning Calibration Profiles	94
Configuring Alarm Thresholds	96
Configuring Alarm Debouncing	101
Multiviewer Input Calibrations	103
Calibrating Loudness Measurement	103
Calibrating Zero VU Reference Levels for Embedded Audio Sources	104
Calibrating Aspect Ratio Decoding	105
Calibrating Subtitling/Closed Captioning	107
Calibrating Metadata Holding Time	107
Calibrating DTMF Tone Sequences	110
Calibrating SCTE 35 Event Reporting Duration	111
Multiviewer Output Calibrations	113
Calibrating the Audio Monitoring Color	113

7 Configuring Alarms..... 115

Introduction	115
Key Concepts	115
Alarm	115
General Status Manager (GSM)	115
Alarm Logging	116
Alarm Browser	116
Alarm Status	116
External Alarm Provider	118
Lookup Service	118
Alarm Suppression	118
Global Alarms	118
Virtual Alarm	119
Sub-Alarm	120
Alarm Monitor	120
Simple Network Management Protocol (SNMP)	120
Teletext, Subtitles, and Closed Captions	122
Dolby E/AC-3 Metadata	123
SCTE 35 Digital Program Insertion (DPI) Signaling	124
Bit Rate Measurement	125
Transport Stream Monitoring	125
Managing Alarm Providers	126
Managing Virtual Alarms	128
Creating Virtual Alarms	128
Modifying Virtual Alarms	133
Deleting Virtual Alarms	134
Managing Alarm Logging	136

Adding a GSM log plug-in	136
Specifying your multiviewer as a lookup server for iControl	137
Enabling logging for a native alarm	139
Disabling logging for a virtual alarm	140
Publishing Alarms to SNMP Managers.....	141
Identifying Target SNMP Managers	141
Enabling SNMP Traps.....	142
8 Setting Up Rooms	145
Introduction.....	145
Key Concepts.....	145
Managing Rooms.....	146
Creating a Room	146
Opening Rooms.....	147
Closing Rooms	148
Deleting Rooms	148
Adding Displays.....	148
Removing Displays.....	151
Adding Full Screen Zones.....	151
Removing Full Screen Zones	152
Configuring Displays	153
Viewing Room Display Properties	153
Configuring Custom Resolutions from the Tools Menu.....	153
Configuring a Custom Resolution from a Specific Display in a Room.....	155
Changing Room Display Resolutions	157
Scan Format.....	157
\Disabling the Dashboard	157
Changing a Display's Aspect Ratio	158
Changing a Display's Diagonal Size	158
Changing a Display's Height	159
Changing a Display's Width.....	159
Changing a Display's Rotation	159
Changing a Display's Position.....	160
Managing Display Libraries	161
Creating Custom Display Libraries	161
Adding Displays to Custom Libraries.....	162
Removing Displays from Custom Libraries.....	162
Closing Display Libraries.....	163
Opening Display Libraries	163
9 Creating Layouts	165
Introduction.....	165
Key Concepts.....	165
Layouts and Layout Elements.....	165
Aspect Ratio.....	167
Cropping Mode	168
Spanning	170
Managing Layouts	172

Opening Layouts	172
Loading a Layout on the Monitor Wall.....	174
Closing Layouts	174
Creating Room Layouts.....	174
Creating Full Screen Layouts.....	175
Deleting Layouts	176
Copying Layouts	179
Rearranging Layouts Across Displays.....	180
Exporting Layouts	182
Importing Layouts.....	182
Adding Monitors to a Layout.....	183
Removing Monitors	184
Duplicating Monitors	184
Assigning Logical Sources or Monitor Wall Destinations to Monitors	185
Automatically Populating a Grid-Type Layout	186
Selecting a Background Image for a Layout.....	187
Zooming and Panning a View.....	189
Showing and Hiding the Layout Navigator	189
Configuring Video Monitors	191
Setting Monitored Levels for a Video Monitor	191
Resizing a Video Monitor	192
Setting a Video Monitor's Aspect Ratio	192
Adding Safe Area Markers	193
Adding a Custom Safe Area Image	193
Video Cropping/Zooming	196
Configuring Automatic Aspect Ratios	197
Configuring a Video Monitor's Alarm Reporting Behavior	199
Configuring a Video Monitor's Source Reporting Behavior	200
Setting a Video Monitor's Text Mode.....	201
Configuring Audio Monitors	207
Configuring Loudness Monitors.....	210
Configuring Audio Scales	212
Configuring Audio Scales from the Tools Menu.....	212
Configuring Time Code Monitors	216
Configuring Timers	218
Adding Timers to the System	218
Adding a Timer Monitor to a Layout.....	221
Configuring UMDs	224
Setting Monitored Alarm and Text Levels for a UMD	224
Configuring a UMD's Alarm Reporting Behavior	225
Configuring a UMD's Source Reporting Behavior	227
Configuring Static UMD Text.....	228
Configuring Dynamic UMD Text	229
Setting the Text Font	230
Configuring Alarm Monitors	231
Configuring an Alarm Monitor's Source Reporting Behavior.....	232
Configuring Subtitling Monitors	235
Configuring Metadata Monitors.....	240
Configuring V-Chip Monitors	242
Configuring Clocks	244

Inserting a Clock Logo	247
Working with Composite Monitors	249
Creating a Composite Monitor	249
Resizing a Composite Monitor	253
Unlocking a Composite Monitor	254
Using the Region Editor	255
Opening the Region Editor	255
Configuring a Monitor's Position Using the Region Editor	255
Configuring a Monitor's Dimensions Using the Region Editor	256
Format Painting	257
Copying Properties from one Monitor to Another	257
Copying Size from one Monitor to Another	257
Copying Actions from one Monitor to Another	258
Managing Monitor Libraries	259
Creating Monitor Libraries	259
Closing a Monitor Library	259
Opening a Monitor Library	259
10 Creating Actions	261
Introduction	261
Overview	261
Key Concepts	261
Creating Monitor Wall Actions	264
Assigning a monitor wall action to a monitor	264
Assigning a monitor wall action to a layout	265
Creating Background Actions	267
Creating a Background Action from the Actions Tab	267
Creating a Background Action from the System List	269
Creating an Action that can be Triggered through a Gateway Command	270
Editing an Action	271
Removing Action Items from an Action	271
Deleting an Action	272
11 Managing RCP Users	273
Introduction	273
XEdit Quick Start Task List	273
Key Concepts	273
Managing RCP Users	274
Adding RCP Users	274
Removing RCP Users from the System	274
Managing Room Access	276
Granting Room Access to RCP Users	276
Removing RCP Users from Rooms	276
Setting Room Preferences	277
Assigning Room Layouts to the Kaleido-RCP2 Preset buttons	277
Assigning an Audio Output to the Remote Control Panel's AUDIO MONITORING Button	278
Enabling the Large Mouse Pointer for a Room	278
Assigning a Timer to a Room	279

Setting RCP User Preferences	279
Assigning Room Layouts to a Kaleido-RCP2 User's Presets	281
Assigning a Full Screen Layout to an RCP User	281
Assigning Audio Output to an RCP User	282
Setting the Keyboard Language	283
Assigning a Timer to an RCP User	284
Changing an RCP User's Name or Password	285

12 Tally Interface Devices & Timer Systems.....287

Introduction.....	287
Overview.....	287
Key Concepts.....	287
Drivers for Controlling Tally Interface Devices from the Multiviewer.....	287
Drivers for Timers	288
Plura (Alpermann+Velte) Studio Production Timer.....	289
Adding a Timer System to your Multiviewer Configuration.....	289
Assigning Timer System Information to Logical Sources	290
Configuring Layout Elements	292
GPI-1501 General Purpose Interface I/O Module	294
Adding a GPI-1501 Module to your Multiviewer Configuration	294
Configuring Layout Elements	298
TSL IP UMD Controller	300
K-Frame Switchers.....	301
Configuring the K-Frame Switcher	301
Configuring the Multiviewer	301

13 Operation of the Monitor Wall.....309

Introduction.....	309
Key Concepts.....	309
Logging on to the Monitor Wall Using a Remote Control Panel.....	314
Logging on to the Monitor Wall Using the Kaleido-RCP2	314
Logging on to the Monitor Wall Using the RCP-200	315
Using On-Screen Wall Control.....	317
Locating the Mouse Pointer on the Monitor Wall	317
Using On-Screen Wall Control from the RCP-200.....	317
Synchronizing the RCP-200's Head View with the Monitor Wall	317
Displaying the Dashboard	318
Hiding the Dashboard	319
Loading Layouts.....	320
Loading a Layout by Using the Mouse.....	320
Loading a Layout by Using the Kaleido-RCP2	320
Using Layouts Presets	321
Loading a Layout by Using the RCP-200	321
Refreshing a Layout	321
Displaying a Source in Full Screen Mode	323
Changing a Source's Aspect Ratio	324
Toggling Safe Area Markers.....	325
Displaying Subtitles and Closed Caption Text.....	326

Setting the Text Mode	326
Switching Closed Captioning On/Off	327
Setting the DVB Subtitling Language from the Monitor Wall	328
Setting the SCTE 27 Subtitling Language from the Monitor Wall	329
Selecting a Teletext/Subtitling Page from the Monitor Wall	329
Editing UMD Text	330
Selecting an Input Method	331
Assigning Sources to Monitors	332
Assigning a Logical Source to a Monitor by Using the Kaleido-RCP2	332
Assigning a Logical Source to a Monitor by Using the RCP-200	332
Assigning a Logical Source to a Monitor by Using the Mouse	334
Using Timers	336
Controlling a Timer by Using the Timer Monitor’s Buttons and the Menu	336
Controlling a Timer by Using an External Numeric Keypad	338
Triggering Actions	339
Triggering an Action from the RCP-200	339
Acknowledging Alarms	340
Acknowledging Alarms on the Monitor Wall	340
Acknowledging Alarms by Using an Action	341
Monitoring Audio	342
Triggering Audio Monitoring by Using the mouse, the RCP-200, or the Kaleido-RCP2	342
Controlling the Volume at the Audio Monitoring Output	343
14 Maintenance & Troubleshooting	345
Introduction	345
Troubleshooting Common Issues	345
15 Acronyms Used in this Document	347
Index	353
Contact Us	360

1 Introduction

Introduction

This chapter provides an overview of the different Kaleido multiviewer models.

About this Document

The *Kaleido Software User's Manual* is intended to help you leverage the full working potential of the Kaleido Software and XEdit application for controlling and monitoring audio, and video broadcast signal paths for interfacing, routing distribution and other peripheral devices.

For specific installation instructions for your multiviewer model, refer to the multiviewer's *Installation & Service Manual*. The *Installation & Service Manual* document lists all related documentation for the multiviewer model. This document presumes that you have made the multiviewer functional according to the *Installation & Service Manual* document. Then use this document to complete your system configuration until it meets your monitoring requirements.

Related Documentation

Use the following related documentation to configure the multiviewer and to better understand the features available with this multiviewer. You can obtain the latest product documentation from the Documentation Library section of Grass Valley's website (www.grassvalley.com/docs/multiviewers). The multiviewer's *Installation & Service Manual* lists the specific documentation set for a given multiviewer model. The *Kaleido Multiviewers Documentation Resource Guide* (part number M770-9905) provides an overview of available documentation and explains how to access it from the Grass Valley website.

Document Number / Documentation Library	Title
M770-2800	Kaleido Software User's Manual
M770-2103	Kaleido Software Release Notes
M770-9904	Kaleido Software Product Comparison Charts
See www.grassvalley.com/docs/multiviewers	Kaleido multiviewer Documentation Library
M735-9902	Kaleido-RCP2 Guide to Installation and Operation
M876-9900	RCP-200 Guide to Installation and Operation
M770-0900	Kaleido Remote Control Protocol (Gateway) User's Guide

Document Number / Documentation Library	Title
M796-9902	Audio Bridge Terminal Guide to Installation and Operation
M407-9900	iControl Router User Guide
Published online	iControl Online Help iControl Solo Online Help
See https://www.grassvalley.com/products/nv9000/	NV9000 Control System Documentation Library

Software and Firmware Updates

You can obtain the latest software, drivers, and sample databases from the *Downloads* section of the Grass Valley's website (www.grassvalley.com/dl/multiviewers).

Feature Availability and Multiviewer Specifications

This user manual shows features and capacities that are not supported by all multiviewer models. To better understand the features that are available for your multiviewer, see the *Kaleido Multiviewer Product Comparison Guide* (part number M770-9904). The multiviewer's Installation & Service Manual has the full specifications for a given multiviewer model.

XEdit Application Shortcuts

The following is a list of shortcut keys available in XEdit to execute specific actions.

Action	Shortcut key
Save	Ctrl+S
Import sources from spreadsheet ^a	Ctrl+I
Toggle the status bar	Ctrl+Shift+B
Toggle the layout navigator	Ctrl+Shift+N
Toggle the grid	Ctrl+Shift+G
Toggle the Tools pane	Ctrl+Shift+T
Toggle the Properties pane	Ctrl+Shift+P
Toggle the Tips pane	Ctrl+Shift+H
Undo last operation	Ctrl+Z
Redo last operation	Ctrl+Y
Cut	Ctrl+X
Copy	Ctrl+C
Paste	Ctrl+V
Delete selection	Delete
Duplicate	Ctrl+D
New	Ctrl+N
Open	Ctrl+O
Save as	Ctrl+Shift+S
Close	Ctrl+W
Create grid-type layout based on selection (Auto-layout)	Ctrl+M
Select all	Ctrl+A
Send to back	Ctrl+B
Send to front	Ctrl+R
Unlock composite	F2
Zoom in	Ctrl+plus sign
Zoom out	Ctrl+minus sign

a. Available for Kaleido-IP only (see [Importing an Input Configuration from a Spreadsheet](#) on page 58).

2 Getting Started

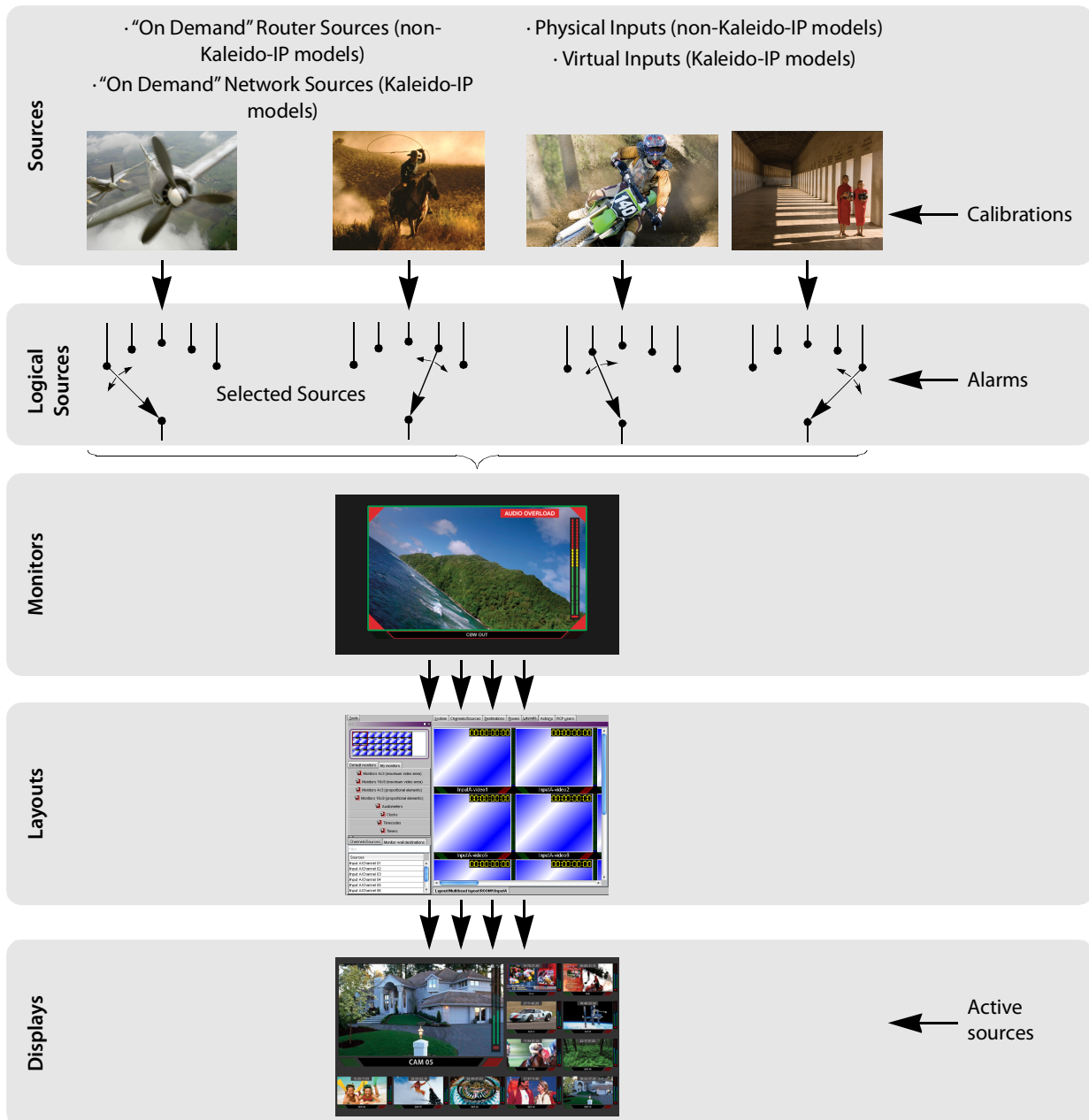
Introduction

This chapter provides an overview of how to configure a Kaleido multiviewer.

Once the multiviewer has been connected and powered up, according to the multiviewer's Installation & Service Manual, you must use XEdit to configure the multiviewer to make the monitoring output functional. To start XEdit, refer to the multiviewer's Installation & Service Manual.

Multiviewer Signal Flow Overview

The following diagrams shows how a signal proceeds through the multiviewer. However, note that the order in which you configure the multiviewer is different from the way the signal flows through the multiviewer.



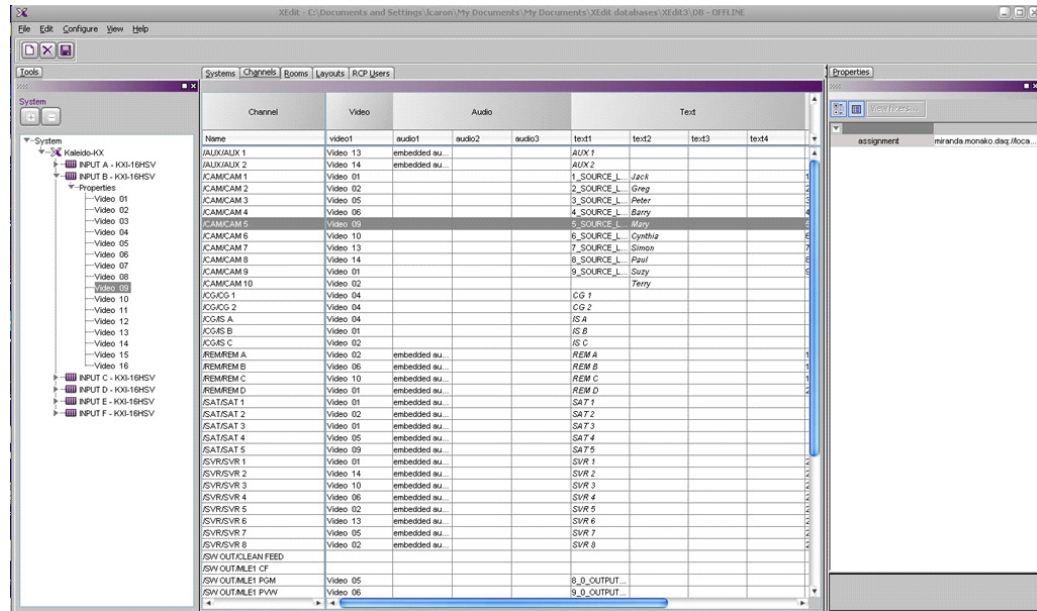
Multiviewer Sources

Depending on the multiviewer model, the source signal type and how it arrives at the multiviewer varies.

Source	Multiviewer Models	Description
"On Demand" Network Sources	Kaleido-IP series	These sources represent streams that are available to the multiviewer but are only used when they are displayed through a logical source. When these streams are not currently being displayed, the multiviewer will still periodically inspect these sources to determine their content.
Virtual Inputs	Kaleido-IP series	Virtual inputs aren't actual sources but instead represent multiviewer resources that are actively receiving streams from the moment they are configured with a valid stream IP address or URL. As a result, these streams will continuously use network bandwidth, and your network link must be scaled appropriately to handle the number of simultaneous streams you want to make available to the multiviewer.
"On Demand" Router Sources	Non-Kaleido-IP	These sources represent Router Sources available to the multiviewer through the available cabling between the multiviewer and the router (See Router Connections , on page 355). These sources are routed to the multiviewer only when they are put on a display through a logical source. Even if they are not currently used, the multiviewer will periodically poll the router control system to determine the source names (if the protocol allows it).
Physical Inputs	Non-Kaleido-IP	These sources represent physical inputs that are actively receiving SDI or analog signals.

Logical Sources

A *logical source* organizes a group of audio, video, or metadata sources, as well as alarms generated by these sources, into a series of levels. See [Logical Sources](#), on page 71.

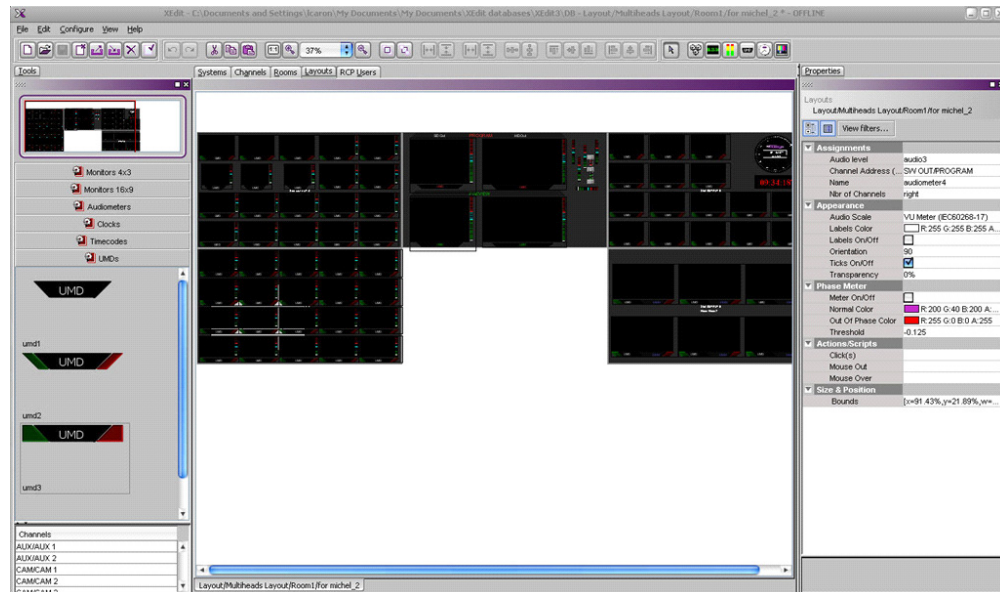


Monitors

A *monitor* is an element that is part of a layout and displays a level from a logical source. The Kaleido Software supports several types of layout elements (for example, clocks, video monitors, audio monitors, UMDs, time code monitors, etc.), as well as composite monitors. See [Adding Monitors to a Layout](#), on page 183.

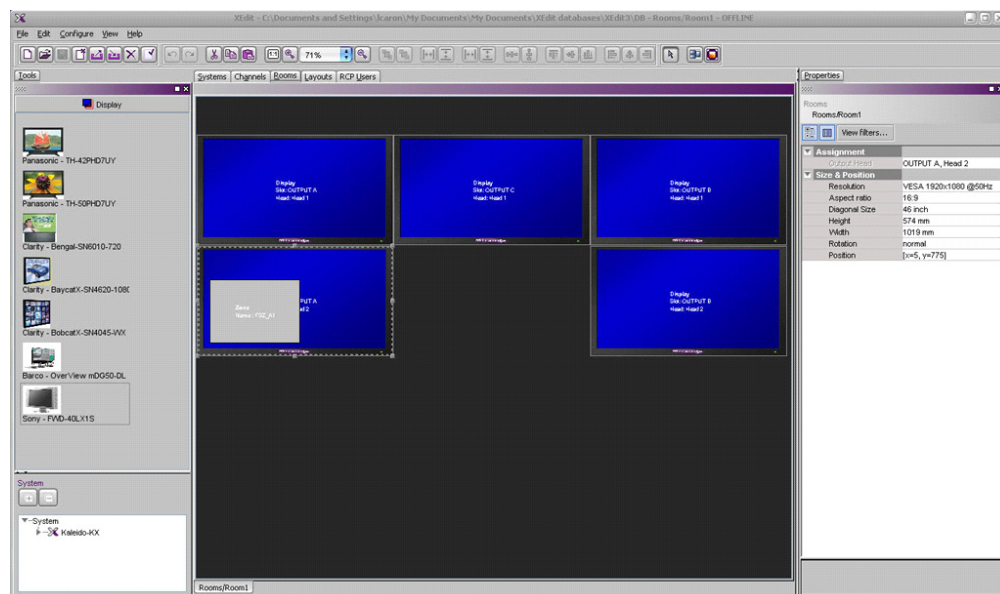
Layouts

A *layout* is a visual grouping of monitors that appear on displays within a room. A layout includes different types of monitors in a variety of placements and sizes. There are two types of layouts: *room layouts*, and *full screen layouts*. See [Managing Layouts](#), on page 172.



Rooms and Displays

Each *Display* forms one of the multiviewer's monitoring outputs. Add two or more *Displays* to a *Room*, to represent a physical display monitor's orientation (portrait / landscape), to establish the display's location with respect to other displays, to integrate mouse cursor movement between the displays, and so on. See [Setting Up Rooms](#), on page 145.



Room Configuration

3

Managing Kaleido Multiviewer Systems

Introduction

This section explains what constitutes a Kaleido multiviewer system, and the related workflow.

Creating and maintaining a Kaleido multiviewer system involves a number of file management tasks, including backup and restore operations. The XEdit software is used to perform these tasks. Some tasks are done in online mode, others in offline mode. Most are available in both modes.

A local database is used as a workspace to save layouts and related configuration data temporarily while you are building your Kaleido multiviewer system in offline mode. If you need to build more than one system, you can keep working with the same database, and use the backup tool to save the data for each system separately. To further work on a specific system you would then use the restore backup tool. See [Managing Multiple Databases Efficiently](#) on page 41 for an overview of the recommended workflow.

Key Concepts

The name used in the Kaleido Software to represent a multiviewer model is shown in [Representation of Multiviewer Models in Kaleido Software](#), on page 23. See the *Kaleido Multiviewer Product Comparison Guide* for detailed information about the capacities of each multiviewer model. See the multiviewer's Installation & Service Guide for the multiviewer's specifications. See [Related Documentation](#), on page 11.

Term	Description
System	A <i>Kaleido system</i> represents a grouping of equipment, including one or more multiviewers that use the <i>Kaleido Software</i> , and a number of peripheral devices such as automation systems. In XEdit, you work on one multiviewer at a time. Each multiviewer is stored as a separate database.
Kaleido-IP	The Kaleido-IP can monitor and display UHD, HD and SD television programs distributed over IP, across two UHD or HDTV displays—or, in the case of a Kaleido-IP VM, through one streaming output. It supports a variety of compressed and uncompressed video and audio formats over IP.

Term	Description
XEdit	XEdit is the Kaleido Software's layout editor, a software that is run on a remote computer. Its purpose is to define your Kaleido multiviewer system components, including external devices, create rooms, logical sources, layouts, and RCP user definitions, and perform all the configurations required for successful operation of the multiviewer. XEdit has two modes of operation: you can work <i>offline</i> in a local workspace and then apply your changes by exporting them to the multiviewer, or you can connect to a multiviewer and work in online mode, directly on the system. Changes made in online mode take effect immediately on the monitor wall.
Database	Layouts and related configurations for your Kaleido multiviewer system are created in XEdit. All this information is stored in a database. When you work in offline mode, you load the appropriate database in a local workspace on the PC where XEdit is used. XEdit can export this database to a multiviewer, or import the current layouts and configurations from a multiviewer into the local workspace on your PC. For changes you make in offline mode to take effect on the monitor wall, you must export the database to a multiviewer. Conversely, any configuration change you make in online mode must be imported from the multiviewer into your local workspace if you want to be able to make further changes in offline mode.
Logical source	A <i>logical source</i> (called a <i>channel</i> , in earlier versions of the software and documentation) refers to a group of physical audio, video, or metadata sources, and text attributes. A logical source can be used as a whole, and assigned to a virtual monitor. See Logical Sources on page 71, for details.
Calibration	Calibration refers to the configuration of different card attributes. For example, an output card's <i>Brightness</i> and <i>Contrast</i> attributes can be calibrated, or an input card's <i>Silence threshold</i> attribute. See Calibrating the Kaleido Software on page 89, for details.
Peripheral devices	A peripheral device is an external piece of equipment, such as a router or production switcher, that can be connected to the multiviewer.

Representation of Multiviewer Models in Kaleido Software

The name used in Kaleido Software to represent a multiviewer model is shown in the table below.

In XEdit Select	In XAdmin Select	To represent
Kaleido-IP-2	Kaleido-IP-2	A Kaleido-IP X300, or X100 frame with two LAN connections
Kaleido-IP-4	Kaleido-IP-4	A Kaleido-IP X120, X110, X320, X310, or X300 frame with four LAN connections
Kaleido-IP-6	Kaleido-IP-6	A Kaleido-IP X320, X310, or X300 frame with six LAN connections

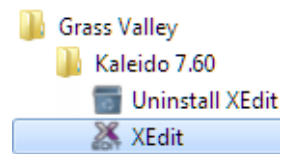
Opening XEdit Software

When using XEdit offline, you work inside a workspace located on your client PC. When you first open XEdit, a window will prompt you for the location for this workspace. It is recommended to consider this workspace as a sandbox into which you will always first import the database you want to work on during the current session, and from which you will export the database at the end of the session.

To open XEdit

- 1 Double-click the XEdit icon on your desktop: .

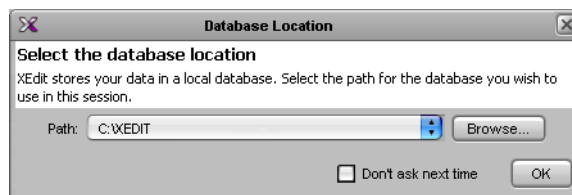
Note: If you have installed multiple versions of XEdit, the launcher icon on your desktop opens the last version you installed. To open a specific version of XEdit, use the launcher icon on the Start menu (under **All Programs**).



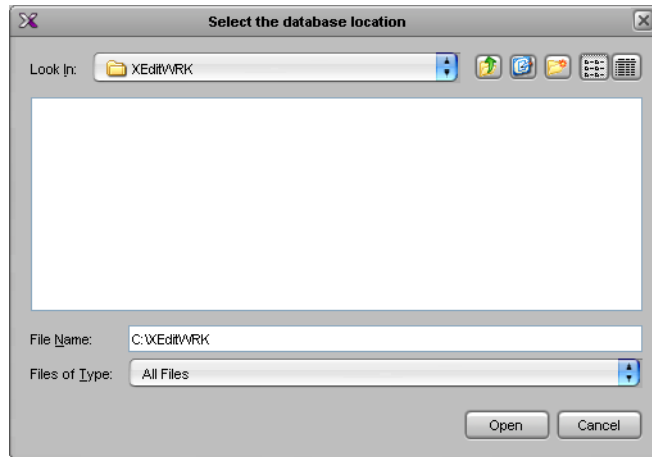
A startup screen appears, followed by the **Database Location** window.



- 2 When prompted to specify the database location, click **Browse**.



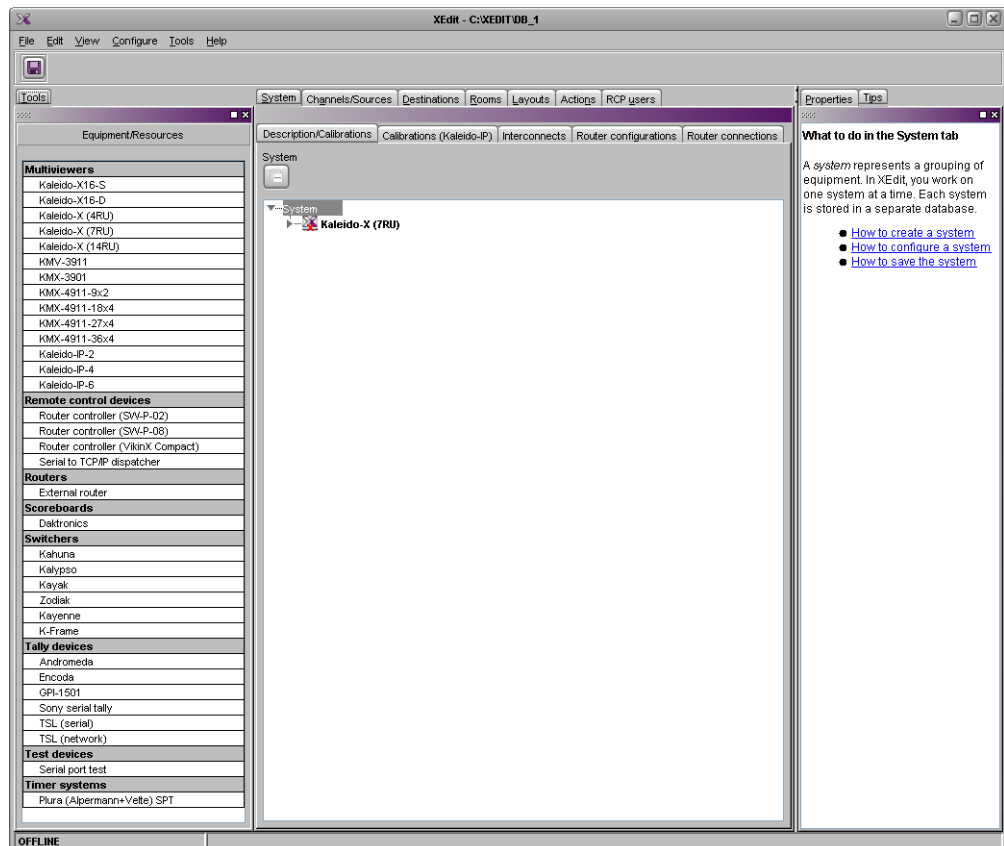
- 3 In **Select the database location**, locate an appropriate directory for your workspace, and then click **Open**.



If this is not the first time you open XEdit, and you are satisfied with the location of your local workspace, then select the **Don't ask next time** check box, to avoid being prompted every time you open XEdit.

- 4 Click **OK** to close the **Database Location** window.

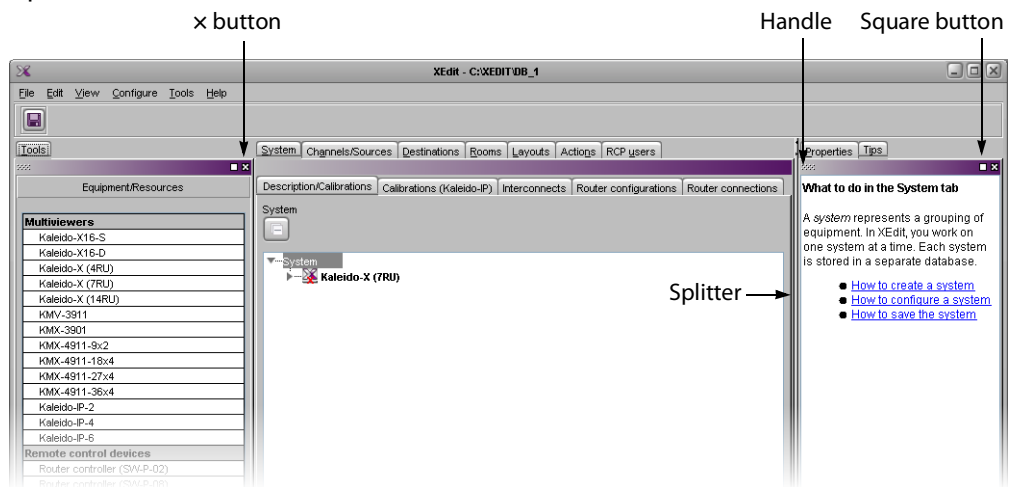
XEdit's main application window appears. This may take a few seconds.



When first opening XEdit in offline mode, the database contains the default configuration for a Kaleido-X (7RU) system, including a fully-populated frame (all cards present) and a set of predefined logical sources.

To customize the layout of the XEdit application window

- Resize the window, and its three panes, by dragging the window's borders, corners, and pane splitters.
- Move the **Tips**, **Tools**, and **Properties** panes between the left and right panes, and reorder them, by clicking their handle and dragging them to their final location.
- Close the **Tips**, **Tools**, and **Properties** panes by clicking their x button.
- Undock the **Tips**, **Tools**, and **Properties** panes from the main window, by clicking their square button.



To restore the default application layout

- 1 Dock the **Tips**, **Tools**, and **Properties** panes, if they are undocked, by clicking their x button.
- 2 On the **View** menu, point to **Panes and tabs**, and then click **Restore default window settings**.

To close XEdit

- On the **File** menu, click **Exit**. Alternatively, click the x button in the upper right corner of the main application window.

Difference between Online and Offline Modes

When using XEdit in *online* mode, any changes made are applied and stored directly on the multiviewer and any change you make to your multiviewer's configuration takes effect immediately *on the multiviewer* itself; your local database is not involved. The online mode is not limited to basic system configuration; changes can also be made to existing logical sources, rooms, layouts, RCP users, etc.

Note: In the case of a Kaleido-IP, you must work in online mode at least once, to obtain the list of programs and elementary streams under each transport stream.

When using XEdit in *offline* mode, all changes are stored locally on your PC, and the database must be exported to the multiviewer for the changes to take effect.

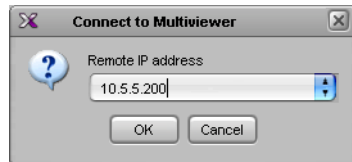
Using XEdit in Online Mode

Once XEdit is open, proceed as follows.

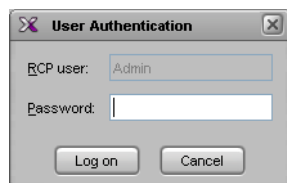
Connecting to a Multiviewer

To connect to a multiviewer

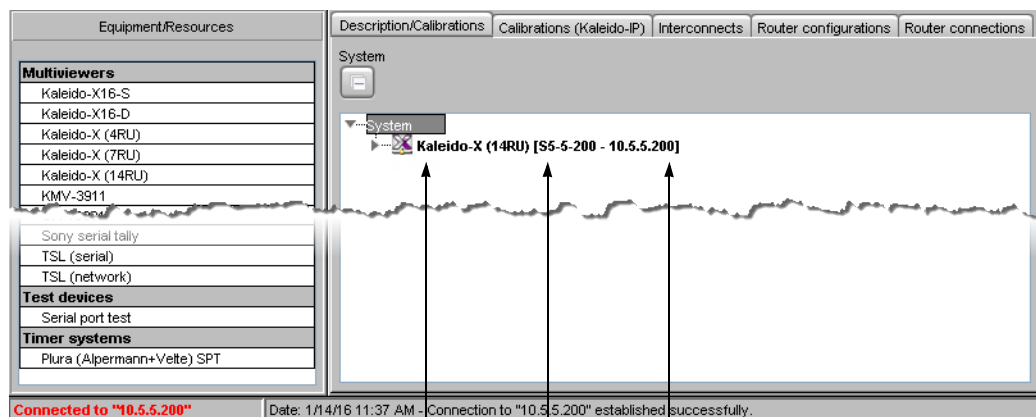
- 1 On the **Configure** menu, click **Connect**.



- 2 In **Connect to Multiviewer**, Enter the *management* IP address for the multiviewer you want to configure or select a multiviewer from the drop-down list, and then click **OK**. Your recent connections, and all the multiviewers that are on the same subnet as your PC are automatically included in the list.
- 3 If access control is enabled for this multiviewer, then XEdit prompts you for a password. Type the password associated with the RCP user "Admin", and then click **Log on**.



The selected system's hierarchical list appears in XEdit's main pane, showing the multiviewer model, system name and IP address, and the status bar shows the connection status.



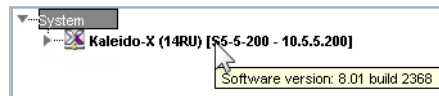
↑
Connection status

↑
Multiviewer model

↑
System name

↑
System IP address

It is also possible to verify which version of the Kaleido Software is installed on this multiviewer, by moving the pointer to the system name in the System list. A tip appears, showing this information.



Notes

- When using XEdit in online mode, some database functions, such as **Export**, **Import**, and **Restore backup**, are not available. Any changes made by the user are not kept locally on the user's PC, but applied directly on the multiviewer. To retrieve the data set from the multiviewer, either disconnect from the multiviewer, and then use the **Import** function, or use the **Create backup** function to save a copy of the database. A database can be restored from a backup repository to your local workspace later. See [Managing Multiple Databases Efficiently](#) on page 41 for a description of the recommended workflow.
- It is not recommended to have two or more users simultaneously connected online to the same multiviewer system for editing.

Disconnecting from a Multiviewer

To disconnect from a multiviewer

- On the **Configure** menu, click **Disconnect**.

XEdit switches to its local workspace, and displays the **OFFLINE** status on the status bar.



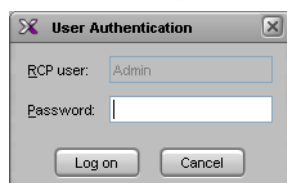
Enabling Access Control in XEdit

XEdit supports a simple authentication mechanism to prevent unauthorized users from connecting or exporting to a multiviewer. When access control is enabled, the password associated with the RCP user *Admin* (see [Changing an RCP User's Name or Password](#) on page 285) is enforced.

To enable access control in XEdit

- 1 Connect to the multiviewer you want to protect (see [Connecting to a Multiviewer](#) on page 28).
- 2 On the **Configure** menu, select the **Access control** check box.

XEdit prompts you for a password.



- 3 Type the password associated with the RCP user *Admin*, and then click **Log on**. Access control is now enabled for this multiviewer.

Disabling Access Control in XEdit

To disable access control in XEdit

- 1 Connect to the multiviewer you want to unprotect (see [Connecting to a Multiviewer](#) on page 28).

XEdit prompts you for a password.



- 2 Type the password associated with the RCP user *Admin*, and then click **Log on**.
- 3 On the **Configure** menu, clear the **Access control** check box.
Access control is now disabled for this multiviewer.

Importing a Database

XEdit must be offline from the multiviewer to import a database. See [Working offline](#), on page 41 for more information about the offline mode. See [Disconnecting from a Multiviewer](#), on page 29 to set the offline mode.

To import a database

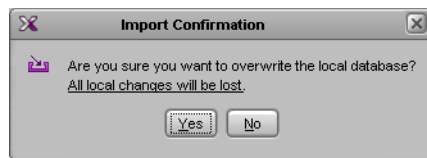
- 1 On the **Configure** menu, point to **Database**, and then click **Import**.

The **Import from Multiviewer** window appears, prompting you for the IP address of the multiviewer whose database you want to import.

Your recent connections, and all the multiviewers that are on the same subnet as your PC are automatically included in the list.

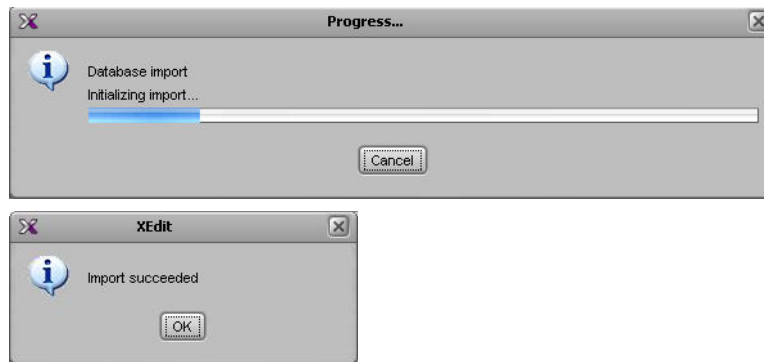
- 2 Select the multiviewer from the list (if present), or type the appropriate IP address in the box, and then click **OK**.

A window appears, prompting you to confirm that you really want to import the database from the multiviewer.



- 3 Click **Yes**.

A progress window appears, followed by a message stating whether the import succeeded or not.



- 4 Click **OK**.

The imported data has replaced the former content in your local workspace. The originating system's multiviewer model and IP address now appear in the System list.



Exporting a Database

XEdit must be offline from the multiviewer to export a database. See [Working offline](#), on page 41 for more information about the offline mode. See [Disconnecting from a Multiviewer](#), on page 29 to set the offline mode.

Exporting a Single-Multiviewer Database

To export a single-multiviewer database

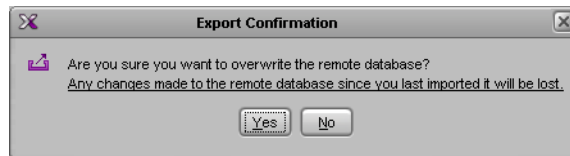
- 1 On the **Configure** menu, point to **Database**, and then click **Export**.

The **Export to Multiviewer** window appears, prompting you for the IP address of the multiviewer to which you want to transfer the database.

Your recent connections, and all the multiviewers that are on the same subnet as your PC are automatically included in the list.

- 2 Select the multiviewer from the list (if present), or type the appropriate IP address in the box, and then click **OK**.

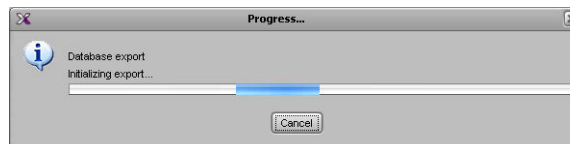
A window appears, prompting you to confirm that you really want to export data to the multiviewer.



- 3 Click **Yes**.
- 4 If access control is enabled for this multiviewer, then XEdit prompts you for a password. Type the password associated with the RCP user "Admin", and then click **Log on**.



A progress window appears, followed by a message stating whether the export succeeded or not.



- 5 Click **OK**.
All data on the remote system is now replaced with content from the local workspace.

Creating a Backup

Use the **Create backup** and **Restore backup** functions to manage copies of your system database on your PC. This is equivalent to the usual **Save as** and **Open** functions, and is useful not only for data recovery purposes but also on sites where more than one system must be maintained.

Backing Up the Current Database

To back up the current system database

- 1 On the **Configure** menu, point to **Database**, then to **Create backup** and click **All**.
The **Create Backup** window appears.
- 2 In **Create Backup**, select the location on your PC where you want to save a backup copy of the current database content, and then click **Save**.
The database is saved as a ZIP file.

Backing Up Resolutions

To back up resolutions from the current system

- 1 On the **Configure** menu, point to **Database**, then to **Create backup** and click **Resolutions**.
The **Create Backup** window appears.
- 2 In **Create Backup**, select the location on your PC where you want to save a backup copy of the resolutions from the current database, and then click **Save**.
The resolutions are saved as an XEdit collection file, with a `.xcol` extension.

Backing Up Audio Scales

To back up audio scales from the current system

- 1 On the **Configure** menu, point to **Database**, then to **Create backup** and click **Audio scales**.
The **Create Backup** window appears.
- 2 In **Create Backup**, select the location on your PC where you want to save a backup copy of the audio scales from the current database, and then click **Save**.
The audio scales are saved as an XEdit collection file, with a `.xcol` extension.

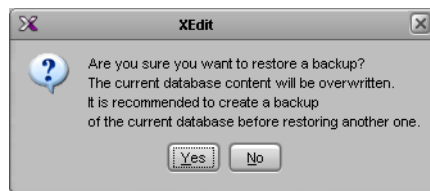
Restoring a Backup

Restoring a Database from a Backup

Note: When XEdit restores a *database backup*, it replaces the content of the local workspace with data from the backup (saved as a file on your PC). This cannot be undone. Always create a backup of the current data before restoring data from a different source. See [Managing Multiple Databases Efficiently](#) on page 41 for an overview of the recommended workflow.

To restore a backup database

- 1 On the **Configure** menu, point to **Database**, and then click **Restore backup**.
The **Select Backup** window appears.
- 2 In **Select Backup**, navigate to the appropriate backup file on your PC (a ZIP archive, in the case of a full database backup), select it, and then click **Open**.
A message appears prompting you to confirm your choice.



- 3 Click **Yes**.
- 4 Once the operation has completed, click **OK** to continue.
The former content of the local workspace is entirely replaced with data from the backup.

Restoring Resolutions or Audio Scales from a Backup

To restore resolutions or audio scales from a backup

- 1 On the **Configure** menu, point to **Database**, and then click **Restore backup**.
The **Select Backup** window appears.
- 2 In **Select Backup**, navigate to the appropriate backup file on your PC (an XEdit collection file, with a `.xcol` extension), select it, and then click **Open**.
The content of the local workspace is updated with data from the backup.

Note: XEdit will *not* prompt for confirmation.

Creating a Single Multiviewer System

When first opening XEdit in offline mode, the database contains the default configuration for a Kaleido-X (7RU) system, including a fully-populated frame (all cards present) as a starting point. If you have a different multiviewer model that is not a Kaleido-X (7RU) system, then you must replace this initial configuration with one that matches your actual system with the following procedure.

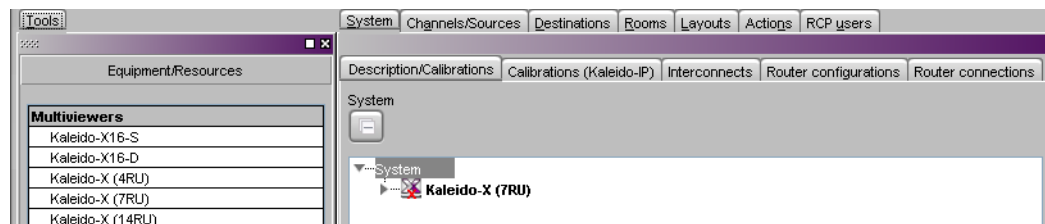
Notes

- The name used in Kaleido Software to represent a multiviewer model is shown in [Representation of Multiviewer Models in Kaleido Software](#), on page 23.

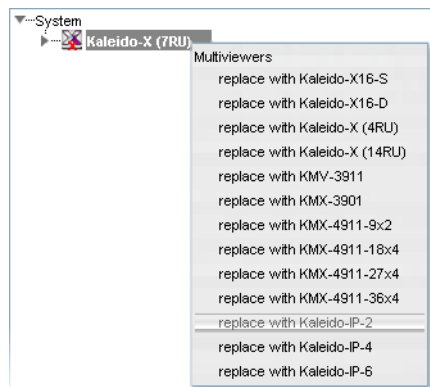
To create a system with a single multiviewer

- 1 Open XEdit.
- 2 In the main window, click the **System** tab, and then click **Description/Calibrations** on the second-level tab bar.

The main pane displays the System hierarchical list, and the **Tools** pane displays the equipment library when the root of the System list is selected.



- 3 Right-click the current multiviewer in the System list, and then select the appropriate multiviewer model, from the **replace with** options on the menu.

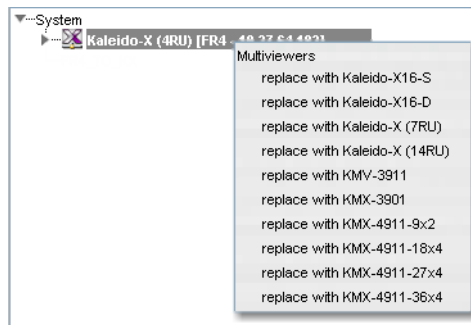


Notes

If you are working in the online mode, the available multiviewer models shown in the menu varies according to the current model. If the current model is a Kaleido-IP, then only other Kaleido-IP models can be selected.



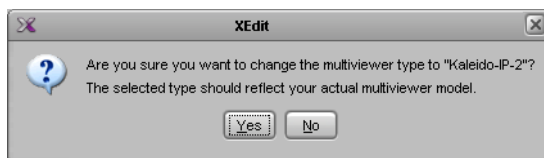
Conversely, if the current model is *not* a Kaleido-IP, then *none* of the Kaleido-IP models can be selected.



See [Using XEdit in Online Mode](#), on page 28 and [Managing Multiple Databases Efficiently](#), on page 41 for more information about the online and offline modes.

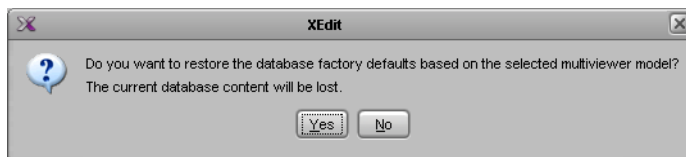
The name used in Kaleido Software to represent a multiviewer model is shown in [Representation of Multiviewer Models in Kaleido Software](#), on page 23.

A message appears, prompting you to confirm your choice.



4 Click **Yes**.

The next message prompts you about populating the database with a factory-default configuration for the selected multiviewer model.



5 Click **Yes** to have the system populated with factory defaults for the selected multiviewer model. See [Restoring the Factory-Default Configuration](#) on page 39 for more information.

Click **No**, if you want to reuse the current room and layout configuration with the new multiviewer model.

IMPORTANT

Databases created for different multiviewer models are incompatible with each other. It is important to select the proper model at this stage for the actual hardware you are using.

- 6 Select the relevant peripheral devices in the equipment library and drag them onto the root of the System hierarchical list in the main window. Alternatively, right-click the list root, and then select the appropriate peripheral device from the “insert...” options on the menu.

All peripheral devices added to the system appear in the System list.

- 7 If you are going to control the multiviewer, from a device using one of the supported TCP/IP router protocols — SW-P-02, SW-P-08, Network Modular, or NVEP Router (NP0016) —, then configure the router level to be controlled: click the multiviewer in the System list, and then, in the **Properties** pane, specify the logical router and level you want to control, by selecting the appropriate values in the **Router** and **Router level** lists under **TCP/IP Router control**.

Notes

- As of version 5.00 of the Kaleido Software, the router selected by default for TCP/IP control is the *KX Router* logical router
- To control the *KX Router* logical router from an external device or application, this device or application must support the *NVEP Router (NP0016)* protocol (see [Built-in Communications Protocols](#) on page 359, for more information).

- 8 On the **File** menu, click **Save**. Alternatively, click the toolbar's Save button. Changes to the system are saved.

Configuring the System Representation

- The **Kaleido-IP** has two, four, or six LAN connections, depending on the model, and two multiviewer outputs. The multiviewer's output can optionally be output over IP streaming. Configuring your Kaleido-IP's system representation in XEdit involves adding or removing transport streams until the representation matches the set of transport streams you want to monitor. See [Managing Sources in a Kaleido-IP System](#) on page 43, for details.
- The **Kaleido-IP VM** has a single multiviewer output over IP streaming, associated with output *Head 1*, in the system representation. Configuring your Kaleido-IP VM's system representation in XEdit involves adding or removing transport streams until the representation matches the set of transport streams you want to monitor. See [Managing Sources in a Kaleido-IP System](#) on page 43, for details.

Restoring the Factory-Default Configuration

A number of predefined rooms and layouts are available on the multiviewer when you first receive your system. This is the factory-default configuration. If after modifying the multiviewer's configuration, you are not satisfied with the results, there are the following methods to revert the multiviewer's configuration back to the factory-default configuration in order to start over.

- A menu option allows you to directly restore the multiviewer's factory-default configuration. See [To restore the XEdit factory defaults for a multiviewer model](#), on page 39.

Restoring the factory database does not modify the multiviewer's current IP addresses and system name. If these parameters need to be changed, it must be done using XAdmin. See the multiviewer's Installation & Service Manual. See [Related Documentation](#), on page 11.

IMPORTANT

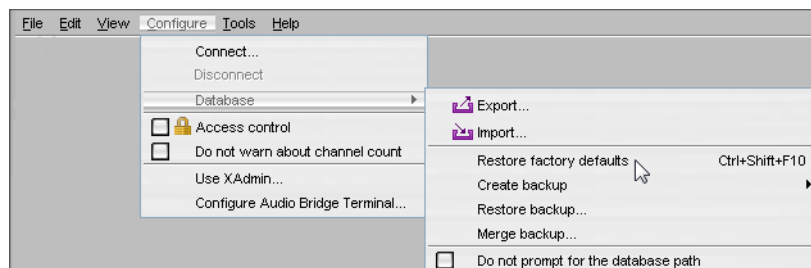
If you already have layouts that you want to keep, make sure to back up the XEdit database or export the layout before restoring the factory defaults. See [Creating a Backup](#), on page 33 and [Exporting Layouts](#), on page 182.

To restore the XEdit factory defaults for a multiviewer model

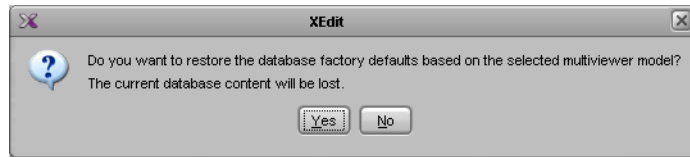
Note: If XEdit is offline from the multiviewer and the current model of multiviewer in XEdit does not match the actual multiviewer model, then you can replace the current configuration with one that matches your actual system and restore the multiviewer's factory-default configuration at the same time using the **replace with** option. See [Creating a Single Multiviewer System](#), on page 35.

For this procedure, XEdit can be online with the multiviewer or offline from the multiviewer.

- 1 In the main window, click the **System** tab, and then click **Description/Calibrations** on the second level tab bar.
- 2 Expand the System hierarchical list, and then select the multiviewer that you want to restore to its factory-default configuration.
- 3 On the **Configure** menu, click **Database** and then **Restore factory default**.



XEdit then prompts you to confirm that you want to restore the factory defaults for the selected multiviewer model.



4 Click **Yes**.

The configuration of the selected multiviewer model is reset to the factory default.

5 The local layout must be refreshed on the multiviewer's wall. See [Refreshing a Layout](#), on page 321.

The multiviewer's wall is now showing the factory-default configuration.

Managing Multiple Databases Efficiently

To avoid mistakes in managing databases, especially when multiple multiviewers are involved, it is recommended to follow the rules below:

- Back up the database for each system to a central repository, separate from the local workspace you use when working in XEdit offline.
- When using XEdit, limit yourself to a single workspace. When working online, the local workspace is not used. When working offline, first either import the database from the appropriate multiviewer into your XEdit workspace, or restore the latest backup for the system you want to work on.
- When your work session in XEdit is complete, always create a new backup of the database, regardless of whether you were working online or offline.

The next sections describe three typical situations, summarized below:

Online	Offline	System restore from backup (offline)
1 Work in XEdit.	1 Import database from multiviewer into local workspace.	1 Restore backup from central repository into local workspace.
2 Back up database from multiviewer to central repository.	2 Work in XEdit.	2 Work in XEdit, if needed... ...and then back up database from local workspace to central repository.
	3 Back up database from local workspace to central repository.	
	4 Export database from local workspace to multiviewer.	3 Export database from local workspace to multiviewer.

Working online

If you are connected to a multiviewer, and working online in XEdit, you are actually editing the database that is located inside the multiviewer's file system. There is one database per multiviewer. When you have completed your changes, create a backup of the current system and store it in a secure location on your PC.

To back up the current Kaleido multiviewer system

- 1 On the **Configure** menu, point to **Database**, to **Create backup**, and then click **All**.
- 2 Browse to the secure location on your PC where you store all your database backups (for example, `multiviewerDatabaseBackups`), and type a name for the new backup, preferably a name that includes the multiviewer name and the date (for example, `KX_A&B_08_12_02.zip`).

Working offline

When using XEdit offline, you work inside a workspace located on your client PC. You set the location for this workspace when you first opened XEdit. It is recommended to consider this workspace as a "sandbox" into which you import the database you want to work on during this session, and from which you export the database at the end of the session.

TIP

Once you are satisfied with the location of your local workspace, on the **Configure** menu, point to **Database**, and then select the **Do not prompt for the database path** check box, to avoid being prompted every time you open XEdit.

See [Importing a Database](#) on page 31, for instructions on how to import the database from a specific multiviewer into your workspace. Once the import is completed, you can work locally, in your XEdit workspace. When you have completed your changes, export the database from the workspace, back to the multiviewer.

Applying a backup database to the multiviewer

To restore a backup database, you must use XEdit in offline mode. A backup database must first be restored to your local workspace before it can be exported back to the appropriate multiviewer.

To restore a backup database

- 1 On the **Configure** menu, point to **Database**, and then click **Restore backup**.
A window appears, prompting you to locate a backup database.
- 2 Navigate to your central backup storage area, select the backup database you want to restore, and then click **Open**.
A message appears prompting you to confirm your choice.
- 3 Click **Yes**.

Once the operation completes, your XEdit workspace area will contain the restored database. You can now work on this database in offline mode, or export it back to the multiviewer.

4

Managing Sources in a Kaleido-IP System

Introduction

In order to obtain the list of programs and elementary streams under each transport stream, you must connect to your Kaleido-IP / Kaleido-IP VM in online mode (see [Using XEdit in Online Mode](#) on page 28).

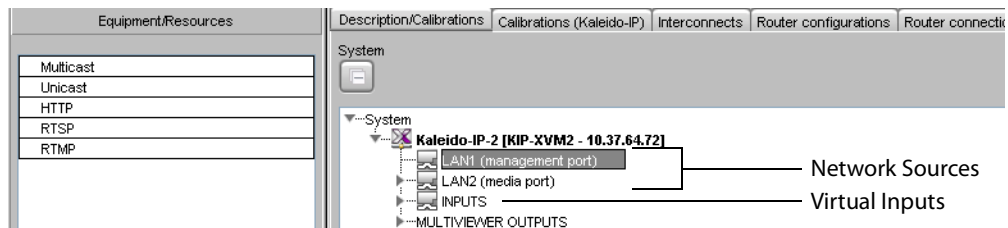
The supported stream types are:

- Any-Source Multicast (ASM)
- Source-specific multicast
- Source-filtered multicast (filtering limited to a single source IP in include mode only)
- Unicast
- RTSP
- RTMP
- HTTP Live Streaming (HLS)
- Uncompressed ST 2022-6 and ST 2110

Input Types - Network Sources Versus Virtual Inputs Explained

As of Kaleido Software version 9.20, Virtual Inputs are a new concept that has been added to Kaleido-IP multiviewers that differs from the traditional network Sources concept in a few ways.

In XEdit, both network Sources and virtual inputs are found in the main window, under the **System** tab, and then the **Description/Calibrations** on the second level tab bar as shown below.



The differences between network Sources and virtual inputs are described below.

What is a Network Source?

Sources are representations of streams that are available to the Kaleido-IP multiviewer. In XEdit, sources are placed into folders labeled **LAN1** to **LAN6**. Each of these folders corresponds to one of the multiviewer's physical network adapter interfaces. Each physical network adapter interface is connected to an independent LAN (Local Area Network or IP switch) on which the source stream is made available.

Once a stream has been added to a LAN, the Kaleido-IP multiviewer will periodically join the stream to analyze its structure (for example, to determine the amount and type of elementary streams and their associated PIDs) to make the information available in XEdit to allow users to make logical sources out of them. Typically, there is one monitoring logical source per video program, so a stream consisting in a Multi-Program Transport Stream (MPTS) with four video programs will need to be spread over four logical sources. Another example is a HLS stream consisting in four compression profiles. Each profile can be monitored by associating it with its own logical source.

Note that the Kaleido-IP multiviewer cannot discover the existence of a stream. The multicast address, unicast receiving port or HTTP URL must be manually specified or imported through a spreadsheet (for more information, see [Importing an Input Configuration from a Spreadsheet](#), on page 58).

When a source is associated with a logical source, and that logical source is assigned to a monitor on the monitor wall, the stream becomes active. The transport stream is joined or HTTP downloads begin (depending on the type of source) and alarms like TS Loss are valid. Individual elementary streams composing the transport stream are only decoded if a corresponding monitor is present on the wall, in which case associated alarms are also valid. If an elementary stream is not displayed on the wall through a monitor, its alarms are in the pending state (unknown).

A network Source does not support uncompressed streams.

Adding Network Source Streams to the Multiviewer - Overview

If you have connected your Kaleido-IP to more than one *Media Network*, or you want to monitor sources from Unicast streams or from other types of transport streams, or more sources from Multicast streams, then you need to add transport streams to the basic system configuration. See:

- To add Any-Source Multicast (ASM) transport streams, see [Adding Any-Source Multicast Transport Stream Sources](#) on page 46.
- To add Source-Specific Multicast or Source-Filtered Multicast (SSM or SFM) transport streams, see [Adding Source-Specific or Source-Filtered Multicast Transport Stream Sources](#) on page 48.
- To add unicast transport streams, see [Adding Unicast Transport Stream Sources](#) on page 50.
- To add HTTP Live Streaming (HLS) playlists, see [Adding HLS Playlist Sources](#) on page 51.
- To add RTSP streams, see [Adding RTSP Transport Stream Sources](#) on page 53.
- To add RTMP streams, see [Adding RTMP Transport Stream Sources](#) on page 54.

What is a Virtual Input?

A virtual input is like a physical input of traditional SDI multiviewers. It represents a port that receives a stream and decodes it.

A virtual input must be associated with a logical source to be able to view it on the wall. Typically, there is one logical source per virtual input.

When using virtual inputs, the Kaleido-IP multiviewer does not know the existence of a stream until it has been instructed to join it, at which point it becomes immediately active (joined immediately) whether the logical source is viewed on the wall through a monitor or

not (this behavior is different from a Network Source). Some alarms like stream presence are immediately valid, whereas other alarms are pending until the stream is displayed on the wall.

To add uncompressed ST 2022-6 / ST 2110 stream Inputs, see [Adding Virtual Inputs](#) on page 64.

Migration from Software Versions prior to Kaleido Software Version 9.20.

Virtual inputs were first introduced in Kaleido Software version 8.40. Prior to Kaleido Software version 9.20, they were configured in XEdit as *NMOS DEVICES*, found in the main window, under the **System** tab, and then the **Description/Calibrations** on the second level tab bar. When upgrading to Kaleido Software version 9.20 or higher, any *NMOS DEVICES* are converted into *INPUTS*. Such an upgrade will bring changes that are not backwards compatible with Kaleido Software versions earlier than 9.20. If a user installs Kaleido Software version 9.20 or higher and then decides to downgrade to a Kaleido Software version earlier than 9.20, the *INPUTS* folder will be empty and you will have to recreate the inputs or see *Workaround* below. The same applies to a user that exports a database from Kaleido Software version 9.20 (or higher) to a Kaleido Software version earlier than 9.20.

Workaround: Before upgrading to Kaleido Software version 9.20 (or higher), make a database backup. When downgrading to a Kaleido Software version earlier than 9.20, restore this database backup to the multiviewer.

Kaleido-IP Multiviewer Ethernet Port Usage

For non-virtual machine (VM) Kaleido-IP multiviewers, refer to the multiviewer's Installation & Service Manual for the correct multiviewer Ethernet port wiring connections. See [Related Documentation](#), on page 11.

Default Kaleido-IP Network Source Configuration in XEdit

The default configuration for a Kaleido-IP system includes eight predefined any-source multicast (ASM) streams, located under **LAN2**. Before you can use these streams, you must adjust their settings to match the actual transport streams you want to monitor. To modify previously configured streams and playlists, see [Modifying transport streams and HLS playlists](#) on page 55.

To remove streams from your system configuration, see [Removing transport streams and HLS playlists](#) on page 57.

Configuration Prerequisites

A URL path can be used to identify a source located on a remoter server to access HTTP, RTSP, RTMP, or Input streams. When using a URL, the multiviewer's DNS server configuration must have been previously configured in XAdmin to allow the multiviewer to be able to resolve the URL to the stream server's current network IP address.

To configure the multiviewer's DNS setting, open XAdmin, and navigate to *DNS and proxy configuration* under *System configuration*. Refer to *Configuring a Multiviewer's IP, Date, and Time Settings with XAdmin* in the multiviewer's Installation & Service Manual. See [Related Documentation](#), on page 11.

Configuring Network Sources

For more information about a Virtual Input, see [What is a Network Source?](#), on page 43.

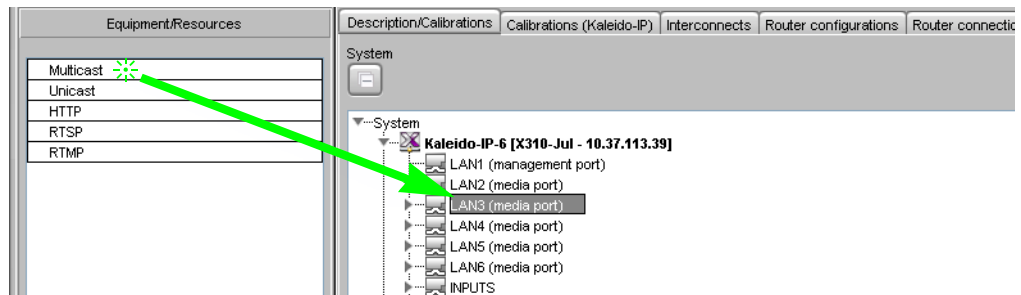
Adding Any-Source Multicast Transport Stream Sources

To add an Any-Source Multicast (ASM) Transport Stream

- 1 In the main window, click the **System** tab, and then click **Description/Calibrations** on the second level tab bar.
- 2 Expand the System hierarchical list, and then click the appropriate **LAN** element, for the stream you want to add. See also [Kaleido-IP Multiviewer Ethernet Port Usage](#), on page 45.

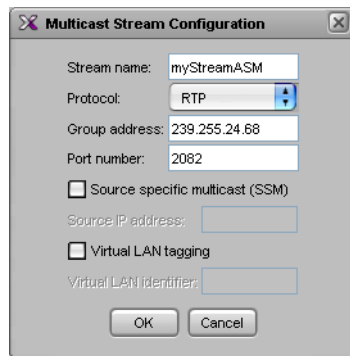
The supported stream types (**Multicast**, **Unicast**, **HTTP**, **RTSP**, **RTMP**) are listed on the **Tools** pane.

- 3 Drag **Multicast** from the **Tools** pane onto the **LAN** adapter.



The **Multicast Stream Configuration** window appears.

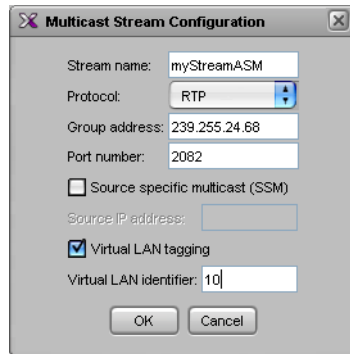
- 4 In **Multicast Stream Configuration**, to replace the default stream name if necessary, select the appropriate protocol (RTP, UDP), and type the multicast group address and port number associated with the transport stream you want to add.



Notes

- The Kaleido Software supports UTF-8 encoded stream names. The only characters, which cannot be used in a stream name are: @ / \ ' and ".
- Verify the protocol you selected. Registering an RTP stream as UDP instead of RTP may result in the decoded video appearing jerky or accelerated on the monitor wall.

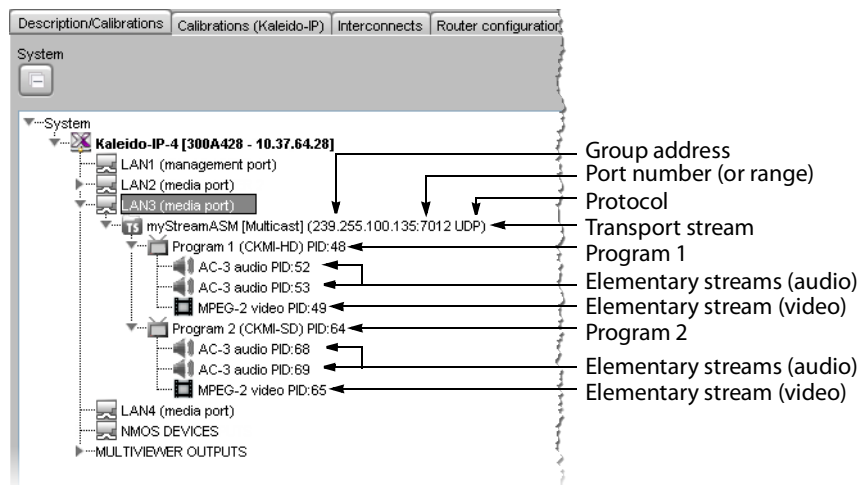
- If the stream you want to add is constrained to a virtual LAN, select **Virtual LAN tagging**, and then type the appropriate VLAN identifier.



Note: VLAN adapter settings must have been previously configured in XAdmin. See *Configuring Virtual LAN Adapters on a Kaleido-IP* in the Kaleido-IP's *Installation & Service Manual* for more information. See see [Related Documentation](#) on page 11.

- Click **OK**.

The Kaleido-IP establishes a connection with the selected stream. All programs that are part of the stream, and the elementary streams included in these programs, automatically appear under the transport stream element in the System list.



Note: Under the **LAN** elements, transport streams are listed in alphabetical order.

- Repeat this procedure until you have added all required ASM transport streams to your system configuration.
- On the **File** menu, click **Save**. Alternatively, click the toolbar's Save button. Changes to the system are saved.

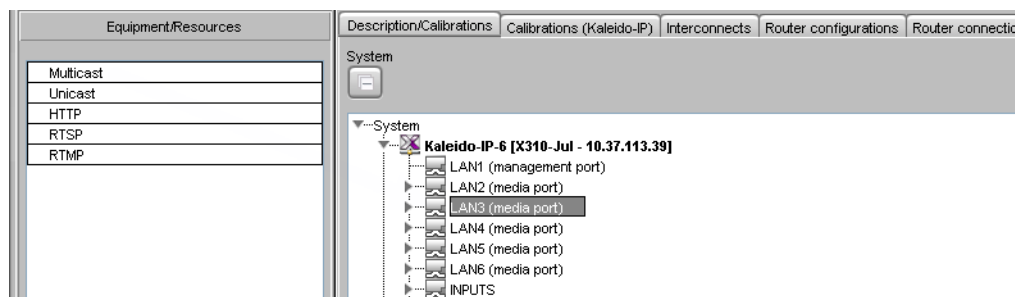
Adding Source-Specific or Source-Filtered Multicast Transport Stream Sources

To add a source-specific, or source-filtered multicast (SSM/SFM) transport stream

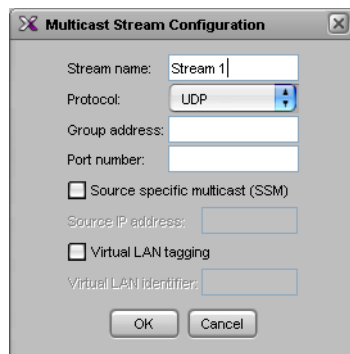
- 1 In the main window, click the **System** tab, and then click **Description/Calibrations** on the second level tab bar.
- 2 Expand the System hierarchical list, and then click the appropriate **LAN** element, for the stream you want to add. See also [Kaleido-IP Multiviewer Ethernet Port Usage](#), on page 45.

The supported stream types (**Multicast**, **Unicast**, **HTTP**, **RTSP**, **RTMP**) are listed on the **Tools** pane.

- 3 Drag **Multicast** from the **Tools** pane onto the **LAN** adapter.



The **Multicast Stream Configuration** window appears.

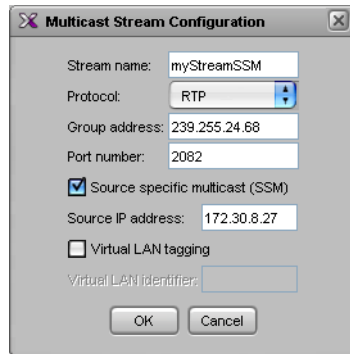


- 4 In **Multicast Stream Configuration**, to replace the default stream name if necessary, select the appropriate protocol (RTP, UDP), and type the multicast group address and port number associated with the transport stream you want to add.

Notes

- The Kaleido Software supports UTF-8 encoded stream names. The only characters, which cannot be used in a stream name are: @ / \ ' and " .
 - Verify the protocol you selected. Registering an RTP stream as UDP instead of RTP may result in the decoded video appearing jerky or accelerated on the monitor wall.
-

- 5 Select the **Source specific multicast (SSM)** check box, and then type the IP address associated with the specific source you want to monitor in the **Source IP address** box.

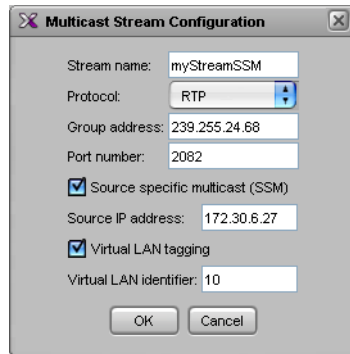


The screenshot shows a dialog box titled "Multicast Stream Configuration". It contains the following fields and options:

- Stream name: myStreamSSM
- Protocol: RTP
- Group address: 239.255.24.68
- Port number: 2082
- Source specific multicast (SSM)
- Source IP address: 172.30.8.27
- Virtual LAN tagging
- Virtual LAN identifier: (empty)
- Buttons: OK, Cancel

Note: In the case of streams that are available from the same multicast group address and port number, you must enter the source IP address associated with a stream before you can add the next one.

- 6 If the stream you want to add is constrained to a virtual LAN, select **Virtual LAN tagging**, and then type the appropriate VLAN identifier.



The screenshot shows the same dialog box as above, but with the following changes:

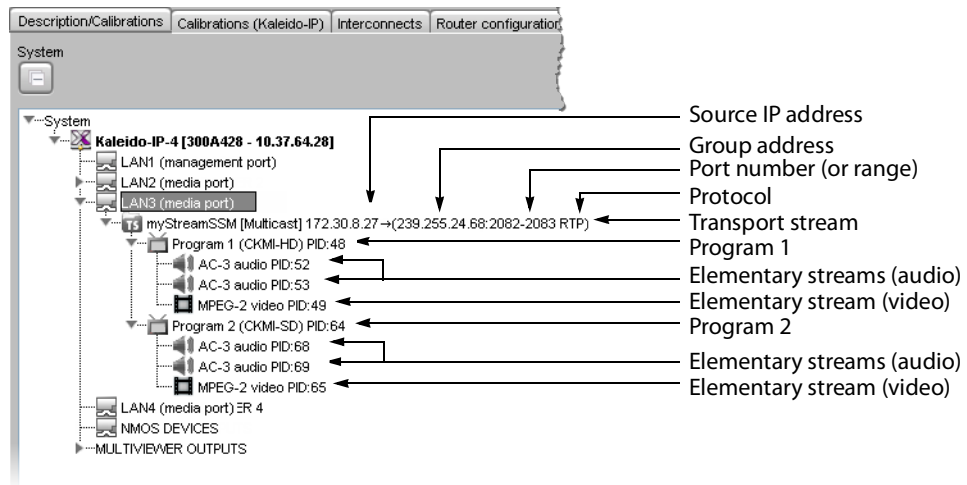
- Virtual LAN tagging
- Virtual LAN identifier: 10

Note: VLAN adapter settings must have been previously configured in XAdmin. See *Configuring Virtual LAN Adapters on a Kaleido-IP* in the multiviewer's *Installation & Service Manual* for more information. See see [Related Documentation](#) on page 11.

- 7 Click **OK**.

The Kaleido-IP establishes a connection with the selected SSM/SFM stream. All programs that are part of the selected stream, and the elementary streams included in

these programs, automatically appear under the transport stream element in the System list.



Note: Under the LAN elements, transport streams are listed in alphabetical order.

- 8 Repeat this procedure until you have added all required SSM/SFM transport streams to your system configuration.
- 9 On the **File** menu, click **Save**. Alternatively, click the toolbar's Save button. Changes to the system are saved.

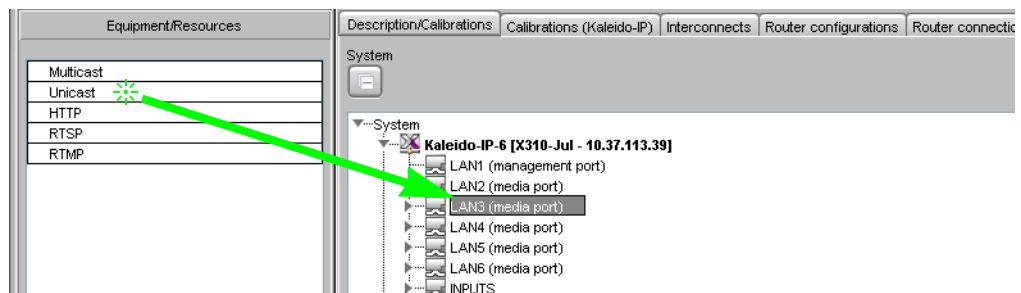
Adding Unicast Transport Stream Sources

To add a unicast transport stream

- 1 In the main window, click the **System** tab, and then click **Description/Calibrations** on the second level tab bar.
- 2 Expand the System hierarchical list, and then click the appropriate LAN element, for the stream you want to add. See also [Kaleido-IP Multiviewer Ethernet Port Usage](#), on page 45.

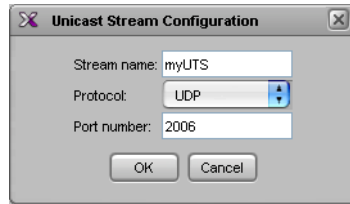
The supported stream types (**Multicast, Unicast, HTTP, RTSP, RTMP**) are listed on the **Tools** pane.

- 3 Drag **Unicast** from the **Tools** pane onto the LAN element.



The **Unicast Stream Configuration** window appears.

- 4 In **Unicast Stream Configuration**, to replace the default stream name if necessary, select the appropriate protocol (RTP, UDP), type the port number associated with the transport stream you want to add, and then click **OK**.



The Kaleido-IP establishes a connection with the selected stream. All programs that are part of the stream, and the elementary streams included in these programs, automatically appear under the transport stream element in the System list.

Notes

- The Kaleido Software supports UTF-8 encoded stream names. The only characters, which cannot be used in a stream name are: @ / \ ' and " .
- Verify the protocol you selected. Registering an RTP stream as UDP instead of RTP may result in the decoded video appearing jerky or accelerated on the monitor wall.
- Under the **LAN** elements, transport streams are listed in alphabetical order.

- 5 Repeat this procedure until you have added all required unicast transport streams to your system configuration.
- 6 On the **File** menu, click **Save**. Alternatively, click the toolbar's Save button. Changes to the system are saved.

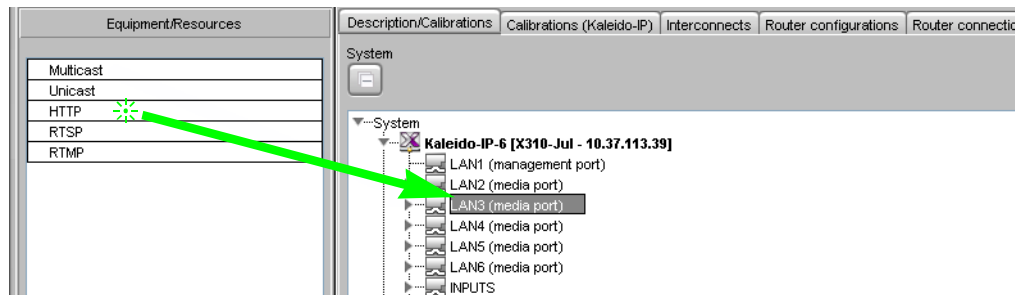
Adding HLS Playlist Sources

Note: Make sure the multiviewer's DNS and proxy settings are properly configured for your network, and that NTP synchronization is enabled. Refer to the *Kaleido-IP Installation & Service Manual* for more information. See [Related Documentation](#), on page 11.

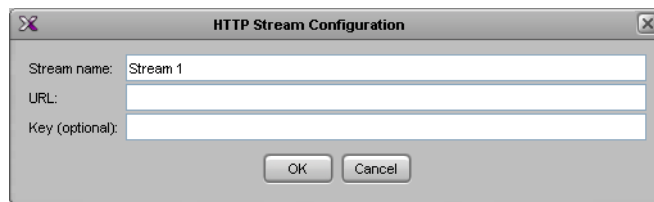
To add an HLS playlist

- 1 In the main window, click the **System** tab, and then click **Description/Calibrations** on the second level tab bar.
- 2 Expand the System hierarchical list, and then click the appropriate **LAN** element, for the stream you want to add. See also [Kaleido-IP Multiviewer Ethernet Port Usage](#), on page 45.
The supported stream types (**Multicast, Unicast, HTTP, RTSP, RTMP**) are listed on the **Tools** pane.

3 Drag HTTP from the **Tools** pane onto the **LAN** element.



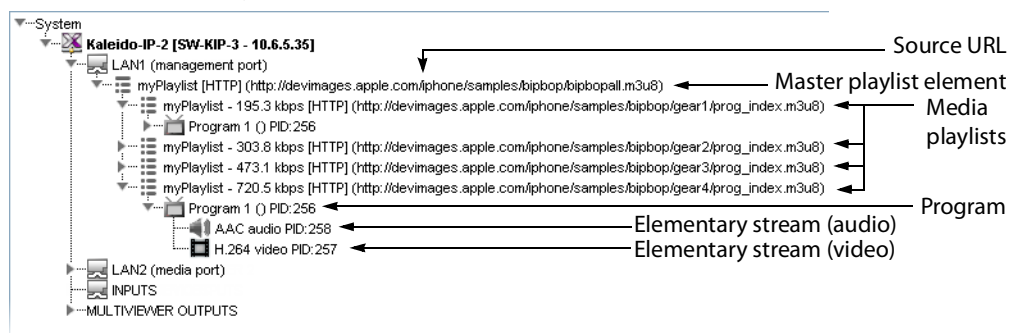
The HTTP Stream Configuration window appears.



4 In **HTTP Stream Configuration**, to replace the default stream name if necessary, type the URL of the playlist you want to monitor, provide the appropriate authentication key if required, and then click **OK**.

In the URL, include the HTTP prefix: `http://`, for example:
`http://example.com/stream`

The Kaleido-IP establishes a connection with the stream provider. In the System list, a *master playlist* element including all *media playlists* specified in the master playlist automatically appears under the LAN elements. All programs that are part of a media playlist, and the elementary streams included in these programs, automatically appear under the media playlist element.



Notes

- The Kaleido Software supports UTF-8 encoded stream names. The only characters, which cannot be used in a stream name are: @ / \ ' and " .
- Both HTTP and HTTPS protocols are supported. If HTTPS is used, there must be a valid certificate for the connection to be established.
- Under the LAN elements, HLS master playlists and media playlists are listed in alphabetical order.

- 5 Repeat this procedure until you have added all required HLS playlists to your system configuration.
- 6 On the **File** menu, click **Save**. Alternatively, click the toolbar's **Save** button. Changes to the system are saved.

Adding RTSP Transport Stream Sources

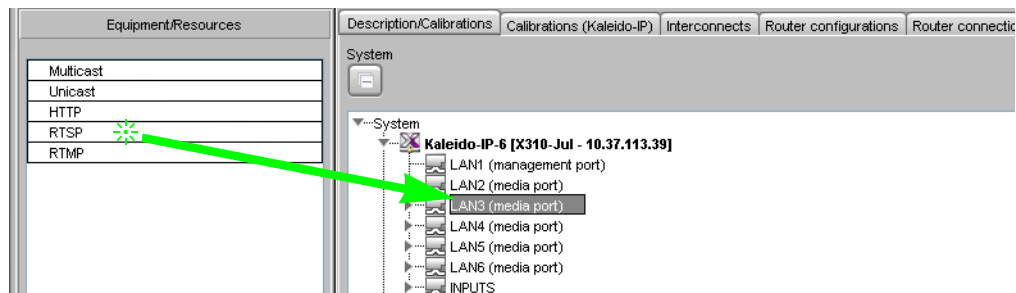
Note: Make sure the multiviewer's DNS and proxy settings are properly configured for your network. Refer to the *Kaleido-IP Installation & Service Manual* for more information. See [Related Documentation](#), on page 11.

To add an RTSP transport stream

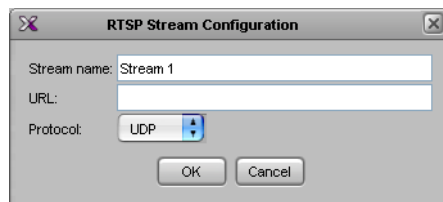
- 1 In the main window, click the **System** tab, and then click **Description/Calibrations** on the second level tab bar.
- 2 Expand the System hierarchical list, and then click the appropriate **LAN** element, for the stream you want to add. See also [Kaleido-IP Multiviewer Ethernet Port Usage](#), on page 45.

The supported stream types (**Multicast**, **Unicast**, **HTTP**, **RTSP**, **RTMP**) are listed on the **Tools** pane.

- 3 Drag **RTSP** from the **Tools** pane onto the **LAN** element.



The **RTSP Stream Configuration** window appears.



- 4 In **RTSP Stream Configuration**, to replace the default stream name if necessary, type the URL of the stream you want to monitor, select the appropriate protocol (RTP, UDP), and then click **OK**.

In the URL, include the RTSP prefix: `rtsp://`, for example:

`rtsp://example.com/stream`

The Kaleido-IP establishes a connection with the selected stream. All programs that are part of the stream, and the elementary streams included in these programs, automatically appear under the transport stream element.

Notes

- The Kaleido Software supports UTF-8 encoded stream names. The only characters, which cannot be used in a stream name are: @ / \ ' and " .
- Verify the protocol you selected. Registering an RTP stream as UDP instead of RTP may result in the decoded video appearing jerky or accelerated on the monitor wall.
- Under the **LAN** elements, transport streams are listed in alphabetical order.

- 5 Repeat this procedure until you have added all required RTSP transport streams to your system configuration.
- 6 On the **File** menu, click **Save**. Alternatively, click the toolbar's **Save** button. Changes to the system are saved.

Adding RTMP Transport Stream Sources

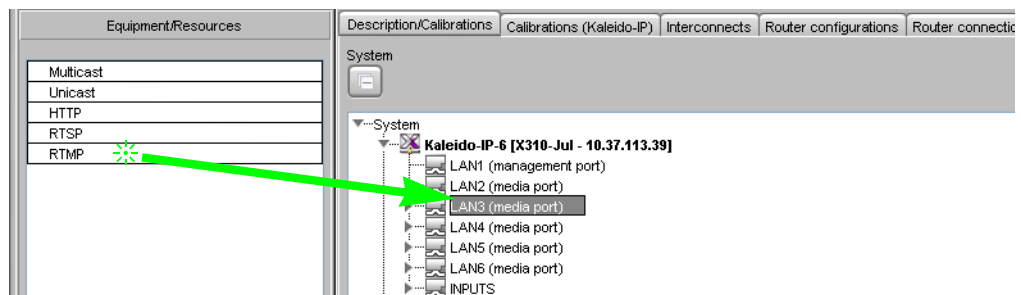
Note: Make sure the multiviewer's DNS and proxy settings are properly configured for your network. Refer to the *Kaleido-IP Installation & Service Manual* for more information. See [Related Documentation](#), on page 11.

To add an RTMP transport stream

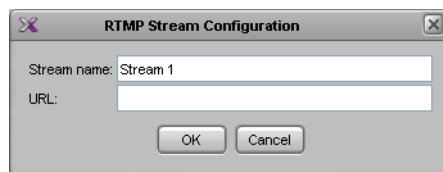
- 1 In the main window, click the **System** tab, and then click **Description/Calibrations** on the second level tab bar.
- 2 Expand the System hierarchical list, and then click the appropriate **LAN** element, for the stream you want to add. See also [Kaleido-IP Multiviewer Ethernet Port Usage](#), on page 45.

The supported stream types (**Multicast**, **Unicast**, **HTTP**, **RTSP**, **RTMP**) are listed on the **Tools** pane.

- 3 Drag **RTMP** from the **Tools** pane onto the **LAN** element.



The **RTMP Stream Configuration** window appears.



- 4 In **RTMP Stream Configuration**, to replace the default stream name if necessary, type the URL of the stream you want to monitor, and then click **OK**.

In the URL, include the RTMP prefix: `rtmp://`, for example:

```
rtmp://example.com/stream
```

The Kaleido-IP establishes a connection with the selected stream. All programs that are part of the stream, and the elementary streams included in these programs, automatically appear under the transport stream element.

Notes

- The Kaleido Software supports UTF-8 encoded stream names. The only characters, which cannot be used in a stream name are: @ / \ ' and ".
- Under the **LAN** elements, transport streams are listed in alphabetical order.

- 5 Repeat this procedure until you have added all required RTMP transport streams to your system configuration.
- 6 On the **File** menu, click **Save**. Alternatively, click the toolbar's **Save** button. Changes to the system are saved.

Modifying transport streams and HLS playlists

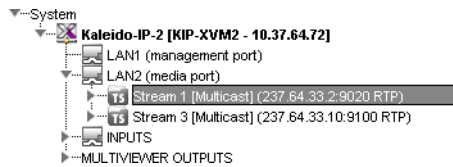
You may need to modify previously created stream information:

- One or more transport streams or HLS playlists have been added to a **LAN** element.
- The default configuration for a Kaleido-IP system includes eight predefined any-source multicast (ASM) streams, under **LAN2**. Before you can use these streams, you must adjust their settings to match the actual transport streams you want to monitor.

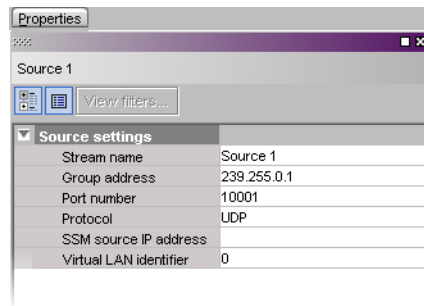
To modify transport stream or HLS playlist settings

- 1 In the main window, click the **System** tab, and then click **Description/Calibrations** on the second level tab bar.
- 2 Expand the System hierarchical list, and then navigate to the transport stream or master playlist you want to modify found under a **LAN** network interface. For example,

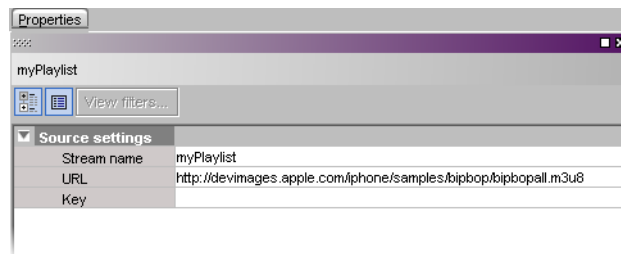
a default multicast transport stream found under **LAN2**. See also [Kaleido-IP Multiviewer Ethernet Port Usage](#), on page 45.



The settings for the selected stream or master playlist appear in the **Properties** pane.



Source settings (example showing settings for an any-source multicast stream)



Source settings (example showing settings for an HLS master playlist)

- 3 Replace the stream name if necessary and then, depending on the stream type:
 - Select the appropriate protocol (RTP, UDP).
 - Enter the multicast group IP address (in the case of a multicast stream) and port number associated with the actual transport stream you want to monitor.
 - In the case of an SSM (or SFM) stream, enter the IP address associated with the specific source you want to monitor in the **SSM source IP address** box.
 - In the case of a multicast stream constrained to a virtual LAN, enter the appropriate VLAN identifier.

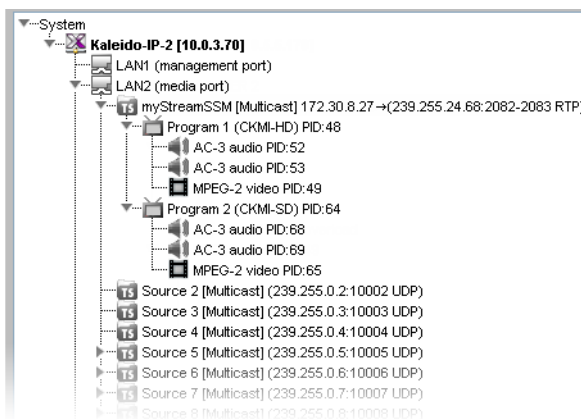
Note: VLAN adapter settings must have been previously configured in XAdmin. Refer to *Configuring Virtual LAN Adapters on a Kaleido-IP* in the *Kaleido-IP Installation & Service Manual* for more information. See [Related Documentation](#), on page 11.

- In the case of an HLS master playlist, RTSP stream, or RTMP stream, enter the new URL.

Notes

- The Kaleido Software supports UTF-8 encoded stream names. The only characters, which cannot be used in a stream name are: @ / \ ' and " .
- Verify the protocol you selected. Registering an RTP stream as UDP instead of RTP may result in the decoded video appearing jerky or accelerated on the monitor wall.
- For HLS playlists, both HTTP and HTTPS protocols are supported.

The Kaleido-IP establishes a connection with the stream provider. In the case of an HLS playlist, a *master playlist* element including all *media playlists* specified in the master playlist automatically appears under the **LAN** elements, in the System list. All programs that are part of a transport stream or specified in a media playlist, and the elementary streams included in these programs, automatically appear under the transport stream or media playlist element.



Example showing programs and elementary streams for a single-source multicast stream

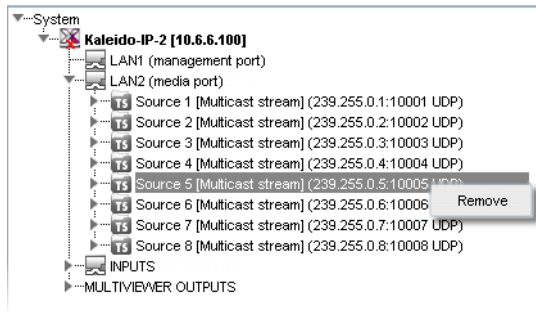
- 4 Repeat this until you have completed the required configuration changes to match the set of transport streams you want to monitor.
- 5 If there are default transport streams left, which you will not use, see [Removing transport streams and HLS playlists](#), on page 57.
- 6 On the **File** menu, click **Save**. Alternatively, click the Save button on the toolbar. Changes to the system are saved.

Removing transport streams and HLS playlists

To remove transport streams or HLS playlists from your system configuration

- 1 In the main window, click the **System** tab, and then click **Description/Calibrations** on the second level tab bar.
- 2 Expand the System hierarchical list, and then navigate to the master playlist or transport stream you want to remove.
- 3 If you want to remove multiple transport streams and master playlists in a single operation, then extend your selection by using the multi-selection Shift+click or Ctrl+click keyboard shortcuts.

- 4 Right-click the selection, and then click **Remove**.



- 5 When prompted to confirm, click **Yes**.
- 6 On the **File** menu, click **Save**.

Changes to the system are saved. If you are not planning on adding the removed streams back to your system, then you might now want to remove logical sources that were based on them: see [Removing logical sources for removed programs in a transport stream](#) on page 74.

Importing an Input Configuration from a Spreadsheet

This feature only applies to creating Network Sources.

If you need to monitor a large number of programs, you may find it convenient to import related configuration information from a spreadsheet in XLS or XLSX format. Once this file has been imported, the logical sources associated with the programs specified in the spreadsheet will be automatically added to the sources table. A sample spreadsheet is available. See [Software and Firmware Updates](#), on page 12.

WARNING

Grass Valley recommends making a backup of your system before importing stream configuration information from a spreadsheet. When you import streams from a spreadsheet, this erases all previously imported streams and associated logical sources. It may also overwrite streams that you had manually added (and logical sources) if they have the same name or index as a stream whose configuration is being imported.

Preparing a spreadsheet with stream lineup information

The spreadsheet file must contain the following:

- information about the *programs* you want to monitor, and the *transport streams* to which they belong,
- information about the *logical sources* that will be added to the sources table for these programs, including any *static text levels* you may want to add.

Notes

- Kaleido-IP X320, X310, X120 and X110 multiviewers support 6000 logical sources.

Notes (*continued*)

- In the case of the Kaleido-IP X300, to support more than 1500 sources, or to be able to use Kaleido Software version 7.90 or higher, the multiviewer's RAM must be upgraded to 24 GB. To order an upgrade kit, contact [Grass Valley Technical Support](#), on page 360 and order part number *KIP-X300-MEMORY-UPGRADE*. The document *Kaleido-IP X300 Memory Upgrade* (M926-9907) procedure is supplied with the kit.
- The Kaleido-IP X100 is limited to 1500 sources. To be able to use Kaleido Software version 7.90 or higher, the multiviewer's RAM must be upgraded to 16 GB. To order an upgrade kit, contact [Grass Valley Technical Support](#), on page 360 and order part number *KIP-X100-MEMORY-UPGRADE*. The document *Kaleido-IP X100 Memory Upgrade* (M926-9807) procedure is supplied with the kit.
- RTSP, RTMP, HTTP or HTTPS streams cannot be imported from a spreadsheet.

The spreadsheet is organized as follows:

- Two heading rows. The first heading row divides the spreadsheet into four main areas:
 - Programs. This area occupies the first column (A).
 - Transport streams. This area spans columns B–G.
 - Logical sources. This area spans columns H–J.
 - Additional static text levels (optional). This area starts at column K, and can extend to as many columns as you need. Text you enter on the second heading row in this area will be imported.
- One row for every program you want to monitor.

To prepare the spreadsheet file

- 1 Using your spreadsheet software, either open a copy of the sample spreadsheet file or create a new spreadsheet.
- 2 Enter the information about a program, and the transport stream to which it belongs:

In this column...		Enter this information...
A	Program number	The program number (MPEG ID), for the program you want to monitor.
B	Stream name	A name to identify the transport stream that includes this program. Alternatively, you can leave this cell blank, in which case a default name will be created. Stream names that only contain digits <i>and have decimal positions that are all zeros</i> must be preceded with an apostrophe in the spreadsheet.
C	Multicast group IP address	The multicast group IP address. In the case of a unicast stream, leave the cell blank.
D	Port number	The appropriate port number.
E	SSM/SFM source IP address	In the case of a source-specific multicast (SSM) or source-filtered multicast (SFM) transport stream, enter the source IP address.

In this column...		Enter this information...
F	Protocol	RTP or UDP.
G	NIC	The LAN identifier: see Kaleido-IP Multiviewer Ethernet Port Usage , on page 45 for Ethernet port usage information. The number of LANs varies depending on the Kaleido-IP model (see Representation of Multiviewer Models in Kaleido Software on page 23).

	A	B	C	D	E	F	G
1	Programs	Transport streams (SPTS or MPTS)					
2	Program number (MPEG ID)	Stream name (if left blank a default name will be created)	Multicast group IP address (leave blank for unicast stream)	Port number	SSM/SFM source IP address (leave blank if not used)	Protocol (RTP/UDP)	NIC (LAN1 to LAN6)
3	101	MAIN-MUX1	239.255.0.101	10001		UDP	LAN2
4	201	MAIN-MUX1	239.255.0.101	10001		UDP	LAN2
5	101	BACKUP-MUX1	239.255.0.101	10001		UDP	LAN3
6	201	BACKUP-MUX1	239.255.0.101	10001		UDP	LAN3
7	10001	SPTS1	239.255.0.101	10050		UDP	LAN2
8	505	SPTS2_SSM1	239.255.0.106	10060	192.168.1.1	UDP	LAN2
9	505	SPTS2_SSM2	239.255.0.106	10060	192.168.1.2	UDP	LAN2
10	1	UNICAST		2000		UDP	LAN2
11	1	UNICAST RTP		1002		RTP	LAN2
12							
13							

Sample spreadsheet: Programs, and Transport streams areas

- Enter the information that will be used to create the logical source associated with this program:

In this column...		Enter this information...
H	Index	If your system involves a control panel from which you control your multiviewer as a router, set a source number for the logical source associated with this program to be available through the <i>KX Router</i> logical router, by entering the appropriate number in this column. Source numbers must be unique.
I	Category	Text in this column can be used to group related logical sources together, when you sort the sources table in XEdit (see Sorting the Sources Table on page 85). The category text can have up to 200 characters.
J	Name	The name of the logical source. Names are limited to 48 characters. Logical source names that only contain digits <i>and have decimal positions that are all zeros</i> must be preceded with an apostrophe in the spreadsheet.

H	I	J
Logical sources		
Category/Name must be unique		
Index must be unique		
Index	Category	Name
41	MAIN-MUX1	'101
42	MAIN-MUX1	'201
43	BACKUP-MUX1	'101
44	BACKUP-MUX1	'201
45	MyCategory	Example1
46	MyCategory	Example2
47	MyCategory	Example3
48	MyCategory	Example4
49	MyCategory	Example5

Sample spreadsheet: Logical sources area

- Optionally, use the columns, starting at column K, to add static text levels. Enter the level name on the second heading row.

	K	L	M	N
	Additional static text levels for logical sources			
	[Name of static text level 1]	[Name of static text level 2]	[Name of static text level 3]	[Name of static text level 4]
	MyText1	st2-1	st3-1	st4-1
	MyText2	st2-2	st3-2	st4-2
	MyText3	st2-3	st3-3	st4-3
	MyText4	st2-4	st3-4	st4-4
	MyText5	st2-5	st3-5	st4-5
	MyText6	st2-6	st3-6	st4-6
	MyText7	st2-7	st3-7	st4-7
	MyText8	st2-8	st3-8	st4-8
	MyText9	st2-9	st3-9	st4-9

Sample spreadsheet: Additional static text levels area

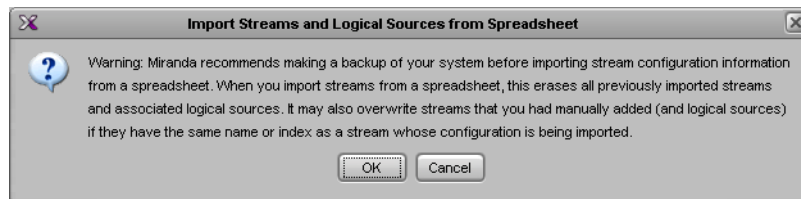
Static text level names and data that only contain digits *and have decimal positions that are all zeros* must be preceded with an apostrophe in the spreadsheet.

- Repeat this procedure until you have added the required information for all the programs you want to monitor.

To import a set of streams from a spreadsheet file

- In the main window, click the **System** tab, and then click **Description/Calibrations** on the second level tab bar.
- On the **File** menu, click **Import**.

XEdit prompts you for confirmation.



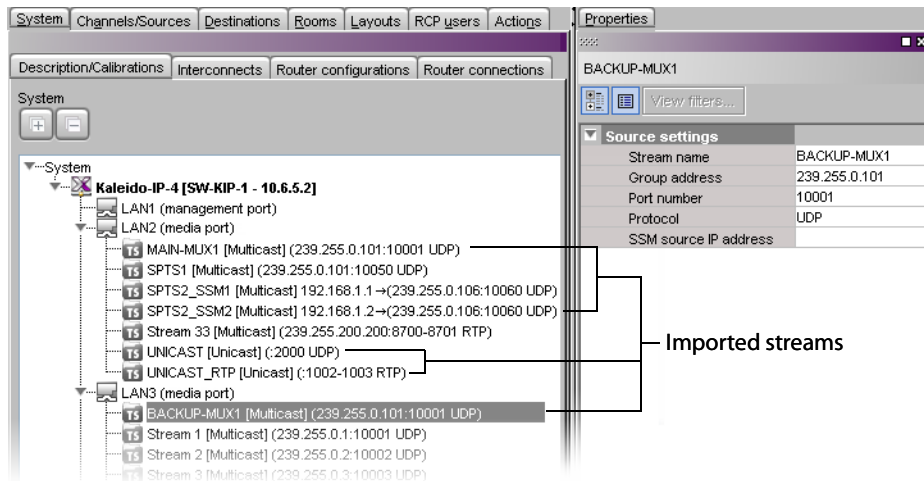
- Click **OK** to continue, if you are confident that you have a backup so that you can restore your system if needed - see [Creating a Backup](#), on page 33.
- Navigate to the spreadsheet file you want to import, select it, and then click **Open**.

XEdit validates the following: IP address range, LAN number, protocol, consistency of stream name vs. stream information (group and source IP addresses + port), duplicate stream names, duplicate logical source information (category + name), duplicate logical source index, and will report any error. If no errors were found, then the following message appears.



5 Click **OK** to continue.

The streams appear under the specified LANs.



Example showing streams imported from the sample spreadsheet file.

After a few minutes, if XEdit is connected to the multiviewer, all programs included in the transport streams are discovered.

Note: The set of discovered programs does not necessarily match the programs listed in the spreadsheet. The discovery being a dynamic process, it may find more (or less) programs.

In addition, logical sources for the programs listed in the spreadsheet you imported are automatically added to the sources table. If XEdit is not connected to the multiviewer, then the new sources' video levels appear in red in the sources table. In such case, the sources table will be updated when you work in online mode once you have exported the database to the multiviewer.

Channels/Sources		Source info		Video
#	Cat.	Name	video1	
/BACKUP-MUX1/101	43	BACKUP-MUX1	101	PG-NUM:101 ES-PID-ORD:1
/BACKUP-MUX1/201	44	BACKUP-MUX1	201	PG-NUM:201 ES-PID-ORD:1
/MAIN-MUX1/101	41	MAIN-MUX1	101	PG-NUM:101 ES-PID-ORD:1
/MAIN-MUX1/201	42	MAIN-MUX1	201	PG-NUM:201 ES-PID-ORD:1
/MyCategory/Example1	45	MyCategory	Example1	PG-NUM:10001 ES-PID-ORD:1
/MyCategory/Example2	46	MyCategory	Example2	PG-NUM:505 ES-PID-ORD:1
/MyCategory/Example3	47	MyCategory	Example3	PG-NUM:505 ES-PID-ORD:1
/MyCategory/Example4	48	MyCategory	Example4	PG-NUM:1 ES-PID-ORD:1
/MyCategory/Example5	49	MyCategory	Example5	PG-NUM:1 ES-PID-ORD:1
/Stream 1/PG-NUM1		Stream 1	PG-NUM1	PG-NUM:1 ES-PID-ORD:1
/Stream 1/PG-NUM137	1	Stream 1	PG-NUM137	PG-NUM:137 ES-PID-ORD:1
/Stream 1/PG-NUM138	2	Stream 1	PG-NUM138	PG-NUM:138 ES-PID-ORD:1
/Stream 1/PG-NUM139	3	Stream 1	PG-NUM139	PG-NUM:139 ES-PID-ORD:1
/Stream 1/PG-NUM163	4	Stream 1	PG-NUM163	PG-NUM:163 ES-PID-ORD:1
/Stream 1/PG-NUM165		Stream 1	PG-NUM165	PG-NUM:165 ES-PID-ORD:1

Logical sources created from imported programs

Should you want to add audio, dynamic text, alarm and time code levels to these logical sources, you may complete all physical assignments for one logical source, which you can then designate as the *template*. By applying the template, you will be able to populate the remaining levels in a single operation. See [Defining Physical Assignments](#) on page 79, for more information.

Configuring Virtual Inputs

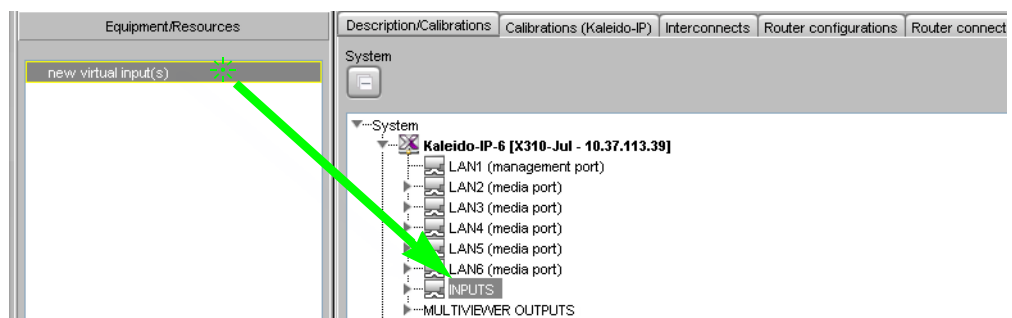
For more information about a Virtual Input, see [What is a Virtual Input?](#), on page 44.

Adding Virtual Inputs

Add virtual inputs to an **INPUT** element as follows.

To add an Input device

- 1 In the main window, click the **System** tab, and then click **Description/Calibrations** on the second level tab bar.
- 2 Expand the System hierarchical list, and then click the **INPUTS** element.
- 3 Drag **Input Device** from the **Tools** pane onto the **INPUTS** element.

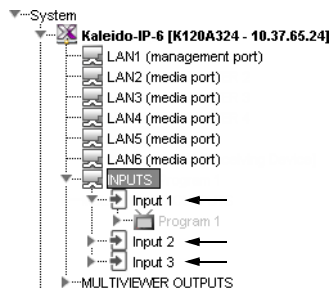


- 4 In **Insert virtual input(s)**, set the quantity of virtual inputs to create, and then click **OK**.

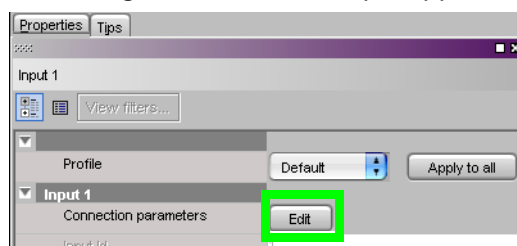


A predefined Input device skeleton appears under **INPUTS**, in the System list. The source stream must be configured for each individual **INPUT**.

- 5 Expand the System hierarchical list and select a numbered input.



The settings for the selected input appear in the **Properties** pane.



- 6 Click **Edit** in the **Properties** pane.
The *Virtual Input Configuration* screen opens.
- 7 Configure the input streams for video, audio channels, and teletext sources.
Certain multiviewers support uncompressed input streams.

Kaleido-IP X310 / X110	Kaleido-IP X320 / X120	Kaleido-IP VM
	●	

Refer to the multiviewer's Installation & Service Manual for how to configure it to use uncompressed streams, if applicable. See [Related Documentation](#), on page 11.

Virtual Input Configuration settings

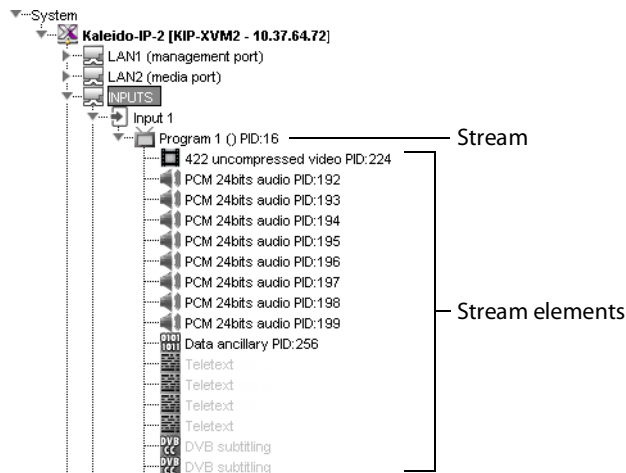
Parameter	Description
URL	Enter the URL (in the form <code>rtp://<ip_address>:<port></code>) associated with the transport stream you want to monitor. When the multiviewer has been configured to use NMOS, this parameter can be remotely controlled through IS-05 so that the virtual input will pickup an SMPTE ST 2022-6 / ST 2110 streams. Refer to the multiviewer's Installation & Service Manual for how to configure it to use NMOS. See Related Documentation , on page 11.
Label	Optionally enter a descriptive label for the stream.
LAN	Select the LAN port (and the network) that has IP connectivity to the stream's source. See also Kaleido-IP Multiviewer Ethernet Port Usage , on page 45.

Parameter	Description
Media type	The transport standard used by the stream: <ul style="list-style-type: none"> Receiver: VIDEO <ul style="list-style-type: none"> ST2022-6: Standard to transport video over an IP network. MPEG-TS: Use MPEG transport stream mapping. ST2110-20 (video): Standard to transport video over an IP network. Receiver: AUDIO_x <ul style="list-style-type: none"> ST2110-30 (audio): Standard to transport audio over an IP network. Multiple audio streams can be configured to support, for example, stereo audio (AUDIO_1), another for surround sound (AUDIO_2), and yet another for a second language (AUDIO_3). Receiver: DATA_ANC <ul style="list-style-type: none"> ST2110-40: Standard to transport ancillary data over an IP network (for example, Ancillary Timecode (ATC), EIA-708, OP-47 Teletext). <p>Note: The corresponding video stream (ST 2110-20) also must be joined in order to display the metadata properly.</p>
Program number	The program number (MPEG ID), for the program you want to monitor. This is only shown with the MPEG-TS option
Channels	Set the number of audio channels for the stream (1, 2, 4, 6, 8, or 16 channels). For example, use 2 for stereo, and 6 for surround sound (5.1).
Frequency	Set the audio sampling rate frequency. This is always 48 kHz.
Clear	Click to deallocate this virtual input. This stops the currently-configured stream from using network bandwidth.

8 Click **OK**.

The configuration information for this input is shown in the **Properties** pane.

The Kaleido-IP starts receiving the stream. Stream elements that are present are shown in black. Unavailable elements are grayed out.



Example showing the programs and elementary streams of a Virtual Input

Once an input has been created for each source, you can assign these logical sources to monitors in a layout.

Modifying Virtual Inputs

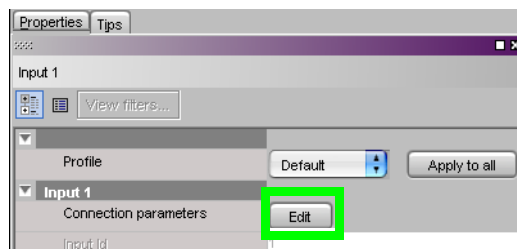
You may need to modify previously created virtual inputs that have been added to an **INPUT** element.

To modify virtual inputs settings

- 1 In the main window, click the **System** tab, and then click **Description/Calibrations** on the second level tab bar.
- 2 Expand the System hierarchical list, and under **INPUTS**, navigate to the virtual input you want to modify.



The settings for the selected virtual input appears in the **Properties** pane.



- 3 Click **Edit** in the **Properties** pane.
The *Virtual Input Configuration* screen opens.

4 Configure the input stream's source.

Certain multiviewers support uncompressed input streams.

Kaleido-IP X310 / X110	Kaleido-IP X320 / X120	Kaleido-IP VM
	●	

Refer to the multiviewer's Installation & Service Manual for how to configure it to use uncompressed streams, if applicable. See [Related Documentation](#), on page 11.

Virtual Input Configuration settings

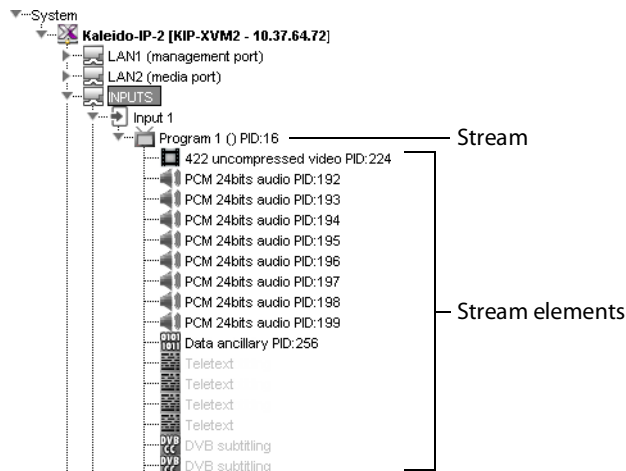
Parameter	Description
URL	Enter the URL (in the form rtp://<ip_address>:<port>) associated with the transport stream you want to monitor. When the multiviewer has been configured to use NMOS, this parameter can be remotely controlled through IS-05 so that the virtual input will pickup an SMPTE ST 2110 stream. Refer to the multiviewer's Installation & Service Manual for how to configure it to use NMOS. See Related Documentation , on page 11.
Label	Optionally enter a descriptive label for the stream.
LAN	Select the LAN port (and the network) that has IP connectivity to the stream's source. See also Kaleido-IP Multiviewer Ethernet Port Usage , on page 45.

Parameter	Description
Media type	<p>The transport standard used by the stream:</p> <ul style="list-style-type: none"> Receiver: VIDEO <ul style="list-style-type: none"> ST2022-6: Standard to transport video over an IP network. MPEG-TS: Use MPEG transport stream mapping. ST2110-20 (video): Standard to transport video over an IP network. Receiver: AUDIO_x <ul style="list-style-type: none"> ST2110-30 (audio): Standard to transport audio over an IP network. Multiple audio streams can be configured to support, for example, stereo audio (AUDIO_1), another for surround sound (AUDIO_2), and yet another for a second language (AUDIO_3). Receiver: DATA_ANC <ul style="list-style-type: none"> ST2110-40: Standard to transport ancillary data over an IP network (for example, Ancillary Timecode (ATC), EIA-708, OP-47 Teletext). Note: The corresponding video stream (ST 2110-20) also must be joined in order to display the metadata properly.
Program number	<p>The program number (MPEG ID), for the program you want to monitor. This is only shown with the MPEG-TS option</p>
Channels	<p>Set the number of audio channels for the stream (1, 2, 4, 6, 8, or 16 channels). For example, use 2 for stereo, and 6 for surround sound (5.1).</p>
Frequency	<p>Set the audio sampling rate frequency. This is always 48 kHz.</p>
Clear	<p>Click to deallocate this virtual input. This stops the currently-configured stream from using network bandwidth.</p>

5 Click **OK**.

The configuration information for this input is shown in the **Properties** pane.

The Kaleido-IP starts receiving the stream. Stream elements that are present are shown in black. Unavailable elements are grayed out.



Example showing the programs and elementary streams of a Virtual Input

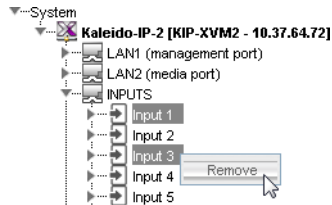
6 Repeat this until you have completed the required configuration changes to match the set of virtual inputs you want to monitor.

- 7 If there are virtual inputs left which you will not use, see [Removing Virtual Inputs](#), on page 70.
- 8 On the **File** menu, click **Save**. Alternatively, click the Save button on the toolbar. Changes to the system are saved.

Removing Virtual Inputs

To remove virtual inputs from your system configuration

- 1 In the main window, click the **System** tab, and then click **Description/Calibrations** on the second level tab bar.
- 2 Expand the System hierarchical list, and then navigate to the virtual input you want to remove.
- 3 If you want to remove multiple virtual inputs in a single operation, then extend your selection by using the multi-selection Shift+click or Ctrl+click keyboard shortcuts.
- 4 Right-click the selection, and then click **Remove**.




- 5 When prompted to confirm, click **Yes**.
- 6 On the **File** menu, click **Save**.
Changes to the system are saved. If you are not planning on adding the removed streams back to your system, then you might now want to remove logical sources that were based on them: see [Removing logical sources for removed programs in a transport stream](#) on page 74.

5 Logical Sources

Introduction

This chapter explain how to configure logical sources for your multiviewer system.

Key Concepts

Term	Description
Logical source	<p>A <i>logical source</i> (called a <i>channel</i>, in earlier versions of the Kaleido Software user interface, and related documentation) refers to a group of physical audio, video, or metadata sources, and text attributes. A logical source can be used as a whole, and assigned to a virtual monitor. The Kaleido Software supports up 7000 logical sources.</p> <p>Notes:</p> <ul style="list-style-type: none">• Kaleido-IP X320, X310, X120, and X110 multiviewers support up to 6000 logical sources.• If you choose to configure your multiviewer system with a large number of logical sources (for example, more than 1500), you should disable global alarm contribution for all alarm levels in the sources table (see Global Alarms on page 118), to improve the system performance. When you save the sources table, if there are more than 1500 sources, XEdit prompts you to let it disable these contributions for you.
Level	<p>Within a logical source, attributes are organized by <i>levels</i> belonging to either of the following categories: Source info, Video, Audio, Text, Alarm, Time code, and Color. For example, the video level category may comprise multiple levels, each representing a specific physical part of a video signal.</p>
Incremental copy	<p>Once a logical source (channel) is configured, it is possible to use incremental copy to automatically propagate appropriate physical assignments to other adjacent logical sources. For instance, if the current logical source's levels are assigned from Video 1, then the incremental copy tool will automatically assign corresponding physical elements from Video 2 to the next logical source's levels, and so on. Alternatively, if only one or a few specific levels are to be similarly configured, it is possible to use incremental copy on the corresponding level column only.</p>
Incremental copy handle	<p>In the sources table, the incremental copy handle is indicated by a small square  at the bottom right of the selected cell.</p>

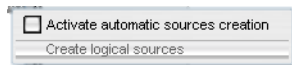
Creating and Configuring Logical Sources

When opening XEdit in offline mode, the initial database is populated with the default configuration for a Kaleido-X (7RU) system, including a fully-populated frame (all cards present) and a set of predefined logical sources. The *KX Router* logical router is also created as a 96 × 80 router where the 96 inputs are the multiviewer's logical sources, the first 48 outputs are those from the two router cards, and the last 32 outputs are monitor wall destinations.

Likewise, when you replace the initial Kaleido-X (7RU) with the appropriate multiviewer model that matches your actual system, you can choose to have your local database populated with a default set of logical sources and a preconfigured *KX Router* logical router.

Automatically Adding Logical Sources

A set of logical sources based on external video router sources or on multiviewer inputs can be added to the sources table, as a single operation, by clicking **Create logical sources** on the menu that appears when you right-click supported elements in the filtered system list.



Alternatively, in the case of a Kaleido-IP, a set of logical sources is also automatically created if you import the stream lineup from a spreadsheet file (see [Importing an Input Configuration from a Spreadsheet](#) on page 58).

About Automatic Sources Creation

From the same menu, you can also set *Activate automatic sources creation* if you want the multiviewer to create new logical sources automatically with the same settings as existing programs when the multiviewer detects new program elements as they become available in the transport stream. Similarly, when sources are added or modified in a router's own configuration environment, logical sources will be added or updated automatically in the multiviewer's sources table.

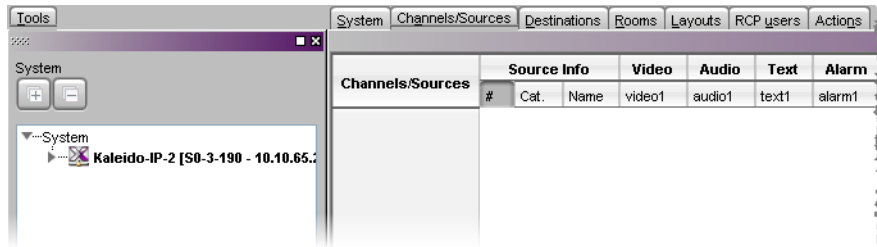
The *Activate automatic sources creation* option only creates new logical sources from newly detected program streams. When a program stream is no longer present, or when a router source is no longer present, this feature does not automatically remove the corresponding logical source that was automatically created. You must do this manually. See [Removing logical sources for removed programs in a transport stream](#), on page 74. Only remove logical sources for programs that you know will never return, as a rediscovered program stream will be created with a new internal ID that will not match up with the ID of the first instance. This means that you will have to reassign the channel/sources to the monitors.

To define logical sources for a transport stream

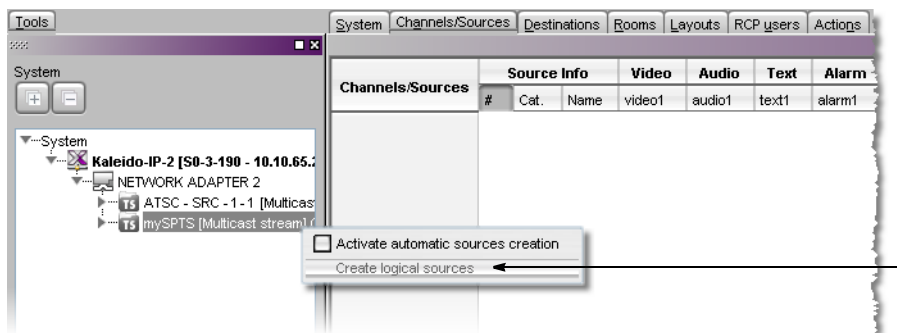
This procedure shows how to add "On Demand" Network Sources and "On Demand" Router Sources which are activated only when they are displayed through a logical source. See also [Logical Sources](#), on page 18

A Kaleido-IP multiviewer is used to illustrate the following procedure, however, the same procedure applies to all types of multiviewer inputs, including inputs from "On Demand" Router Sources.

- 1 In the main window, click the **Channels/Sources** tab.



- 2 On the **Tools** pane, expand the multiviewer, and navigate to the transport stream for which you want to define logical sources.
- 3 Right-click the transport stream, and then click **Create logical sources** on the menu. See also [About Automatic Sources Creation](#), on page 72.



Logical sources are automatically created for every program signal found in the selected transport stream.

Channels/Sources	Source Info			Video	Audio	Program Number
	#	Cat.	Name	video1	audio1	
mySPTS/PG-NUM1		mySPTS	PG-NUM1	PG-NUM:1 ES-IDX:1	PG-NUM:1 ES-PID:52	PG-Num: 1

Notes

- Under **Source info**, dynamic and static names resulting from the **Name** level assignments are limited to 48 characters and automatically truncated as needed.
- If the case of router sources, if the router is subject to frequent dimension changes, then you may want to select **Activate automatic sources creation**.
- Auto detected Level assignments follow reference "template" channel, identified by a "T" icon.

- 4 Repeat until you have added logical sources for every stream you want to monitor.
- 5 If your system involves a control panel from which you will control your multiviewer as a router, then configure source numbers for the *KX Router* logical router, by typing the appropriate numbers in the first column (#) under **Source info**, and using the incremental copy tool as needed.

Channels/Sources	Source Info			Video
	#	Cat.	Name	video1
/ATSC - SRC - 1/PG-NUM2	1	ATSC - SRC - 1	PG-NUM2	PG-NUM:1 ES-IDX:1
/ATSC - SRC - 1/PG-NUM3	2	ATSC - SRC - 1	PG-NUM3	PG-NUM:1 ES-IDX:1
/ATSC - SRC - 1/PG-NUM4	3	ATSC - SRC - 1	PG-NUM4	PG-NUM:1 ES-IDX:1
/ATSC - SRC - 1/PG-NUM6	4	ATSC - SRC - 1	PG-NUM6	PG-NUM:1 ES-IDX:1
/ATSC - SRC - 1/PG-NUM7	5	ATSC - SRC - 1	PG-NUM7	PG-NUM:1 ES-IDX:1

6 On the **File** menu, click **Save**.

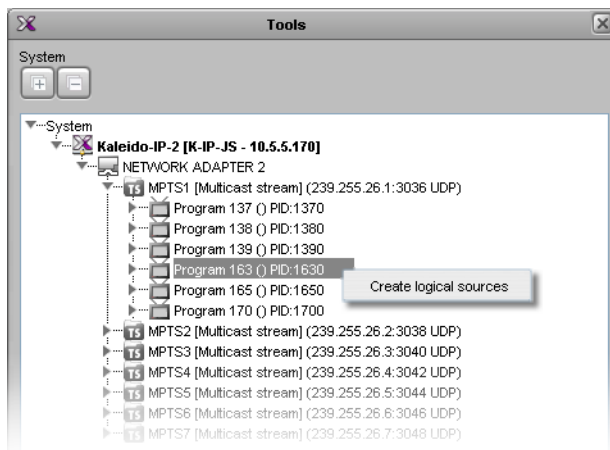
Managing Logical Sources Associated with Programs in a Transport Stream

In the case of a Kaleido-IP system, you may need to add or remove sources, from time to time, when programs are added or removed from a transport stream.

Adding logical sources for new programs in a transport stream

To add a logical source for a new program in a transport stream

- 1 Connect XEdit to the Kaleido-IP (see [Using XEdit in Online Mode](#) on page 28), and then click the **Channels/Sources** tab.
- 2 On the **Tools** pane, navigate to the transport stream that includes the new program.
- 3 Right-click the program, and then click **Create logical sources** on the menu.



A new entry appears in the sources table, with all assignments based on the logical source template (see [Defining Physical Assignments](#) on page 79).

Note: Under **Source info**, dynamic and static names resulting from the **Name** level assignments are limited to 48 characters and automatically truncated as needed.

4 On the **File** menu, click **Save**.

Removing logical sources for removed programs in a transport stream

To remove logical sources associated with programs that are not present anymore

- 1 Connect XEdit to the Kaleido-IP (see [Using XEdit in Online Mode](#) on page 28) and then click the **Channels/Sources** tab.

Logical sources associated with programs that have been removed from a transport stream will have elements marked in red.

System Channels/Sources Destinations Rooms Layouts RCP users Actions						
Channels/Sources	Source info			Video	Audio	
	#	Cat.	Name	video1	audio1	
MPTS1	1		MPTS1	PG-IDX:2 ES-IDX:1	PG-IDX:2 ES-IDX:1	
MPTS2	2		MPTS2	PG-IDX:2 ES-IDX:1	PG-IDX:2 ES-IDX:1	
MPTS3	3		MPTS3	PG-IDX:2 ES-IDX:1	PG-IDX:2 ES-IDX:1	
MPTS4	4		MPTS4	PG-IDX:1 ES-IDX:1	PG-IDX:1 ES-IDX:1	
MPTS5	5		MPTS5	PG-IDX:3 ES-IDX:1	PG-IDX:3 ES-IDX:1	
MPTS6	6		MPTS6	PG-IDX:5 ES-IDX:1	PG-IDX:5 ES-IDX:1	
MPTS7	7		MPTS7	PG-IDX:7 ES-IDX:1	PG-IDX:7 ES-IDX:1	
SPTS1	8		SPTS1	PG-IDX:1 ES-IDX:1	PG-IDX:1 ES-IDX:1	
SPTS2	9		SPTS2	PG-IDX:1 ES-IDX:1	PG-IDX:1 ES-IDX:1	
SPTS3	10		SPTS3	PG-IDX:1 ES-IDX:1	PG-IDX:1 ES-IDX:1	
SPTS4	11		SPTS4	PG-IDX:1 ES-IDX:1	PG-IDX:1 ES-IDX:1	
SPTS5	12		SPTS5	PG-IDX:1 ES-IDX:1	PG-IDX:1 ES-IDX:1	
SPTS6	13		SPTS6	PG-IDX:1 ES-IDX:1	PG-IDX:1 ES-IDX:1	

- 2 Select these sources (using the multi-selection Shift+click or Ctrl+click keyboard shortcuts to extend your selection as needed).
- 3 Right-click the selection, and then click **Delete selected sources** on the menu.

System Channels/Sources Destinations Rooms Layouts RCP users Actions						
Channels/Sources	Source info			Video	Audio	
	#	Cat.	Name	video1	audio1	
MPTS1	1		MPTS1	PG-IDX:2 ES-IDX:1	PG-IDX:2 ES-IDX:1	
MPTS2	2		MPTS2	PG-IDX:2 ES-IDX:1	PG-IDX:2 ES-IDX:1	
MPTS3	3		MPTS3	PG-IDX:2 ES-IDX:1	PG-IDX:2 ES-IDX:1	
MPTS4	4		MPTS4	PG-IDX:1 ES-IDX:1	PG-IDX:1 ES-IDX:1	
MPTS5	5		MPTS5	PG-IDX:3 ES-IDX:1	PG-IDX:3 ES-IDX:1	
MPTS6	6		MPTS6	PG-IDX:5 ES-IDX:1	PG-IDX:5 ES-IDX:1	
MPTS7	7		MPTS7	PG-IDX:7 ES-IDX:1	PG-IDX:7 ES-IDX:1	
SPTS1	8		SPTS1	PG-IDX:1 ES-IDX:1	PG-IDX:1 ES-IDX:1	
SPTS2	9		SPTS2	PG-IDX:1 ES-IDX:1	PG-IDX:1 ES-IDX:1	
SPTS3	10		SPTS3	PG-IDX:1 ES-IDX:1	PG-IDX:1 ES-IDX:1	
SPTS4	11		SPTS4	PG-IDX:1 ES-IDX:1	PG-IDX:1 ES-IDX:1	
SPTS5	12		SPTS5	PG-IDX:1 ES-IDX:1	PG-IDX:1 ES-IDX:1	
SPTS6	13		SPTS6	PG-IDX:1 ES-IDX:1	PG-IDX:1 ES-IDX:1	

Add source

Delete selected sources

Set source as template

Apply template to all sources

Apply template to selected sources

- 4 On the **File** menu, click **Save**.
- 5 Click the **Layouts** tab, open the appropriate layouts, locate any monitors that included assignments based on the sources you just deleted, and update their configuration as required (see [Assigning Logical Sources or Monitor Wall Destinations to Monitors](#) on page 185).

Manually adding a Logical Source

To add a logical source

- 1 Click the **Channels/Sources** tab in the main window.
The sources table appears.

System		Channels/Sources	Destinations	Rooms	Layouts	RCP users	Actions		
Channels/Sources	Source info			Video	Audio	Text	Alarm	Time code	Color
	#	Cat.	Name	video1	audio1	text1	Loss	timecode1	color1
Input A/Channel 01	1	Input A	Channel 01	A01	A01 Emb 1	InputA-video1	A01 Video loss	A01 Vid. TC	
Input A/Channel 02	2	Input A	Channel 02	A02	A02 Emb 1	InputA-video2	A02 Video loss	A02 Vid. TC	
Input A/Channel 03	3	Input A	Channel 03	A03	A03 Emb 1	InputA-video3	A03 Video loss	A03 Vid. TC	
Input A/Channel 04	4	Input A	Channel 04	A04	A04 Emb 1	InputA-video4	A04 Video loss	A04 Vid. TC	
Input A/Channel 05	5	Input A	Channel 05	A05	A05 Emb 1	InputA-video5	A05 Video loss	A05 Vid. TC	
Input A/Channel 06	6	Input A	Channel 06	A06	A06 Emb 1	InputA-video6	A06 Video loss	A06 Vid. TC	
Input A/Channel 07	7	Input A	Channel 07	A07	A07 Emb 1	InputA-video7	A07 Video loss	A07 Vid. TC	
Input A/Channel 08	8	Input A	Channel 08	A08	A08 Emb 1	InputA-video8	A08 Video loss	A08 Vid. TC	
Input A/Channel 09	9	Input A	Channel 09	A09	A09 Emb 1	InputA-video9	A09 Video loss	A09 Vid. TC	
Input A/Channel 10	10	Input A	Channel 10	A10	A10 Emb 1	InputA-video10	A10 Video loss	A10 Vid. TC	
Input A/Channel 11	11	Input A	Channel 11	A11	A11 Emb 1	InputA-video11	A11 Video loss	A11 Vid. TC	
Input A/Channel 12	12	Input A	Channel 12	A12	A12 Emb 1	InputA-video12	A12 Video loss	A12 Vid. TC	
Input A/Channel 13	13	Input A	Channel 13	A13	A13 Emb 1	InputA-video13	A13 Video loss	A13 Vid. TC	
Input A/Channel 14	14	Input A	Channel 14	A14	A14 Emb 1	InputA-video14	A14 Video loss	A14 Vid. TC	
Input A/Channel 15	15	Input A	Channel 15	A15	A15 Emb 1	InputA-video15	A15 Video loss	A15 Vid. TC	
Input A/Channel 16	16	Input A	Channel 16	A16	A16 Emb 1	InputA-video16	A16 Video loss	A16 Vid. TC	
Input B/Channel 01	17	Input B	Channel 01	B01	B01 Emb 1	InputB-video1	B01 Video loss	B01 Vid. TC	
Input B/Channel 02	18	Input B	Channel 02	B02	B02 Emb 1	InputB-video2	B02 Video loss	B02 Vid. TC	
Input B/Channel 03	19	Input B	Channel 03	B03	B03 Emb 1	InputB-video3	B03 Video loss	B03 Vid. TC	
Input B/Channel 04	20	Input B	Channel 04	B04	B04 Emb 1	InputB-video4	B04 Video loss	B04 Vid. TC	

Note: The sources table is preconfigured with a set of default assignments, including at least one level under each level category.

2 On the **File** menu, click **New**.

Alternatively right-click the **Channels/Sources** column heading, and then click **Add source** on the menu.

System		Channels/Sources	Destinations	Rooms	Layouts	RCP users	Actions
Channels/Sources	Source info			Video	Audio	Text	
	#	Cat.	Name	video1	audio1	text1	
Input A/Channel 01		Sort	Channel 01	A01	A01 Emb 1	InputA-video1	
Input A/Channel 02		Add source	Channel 02	A02	A02 Emb 1	InputA-video2	
Input A/Channel 03			Channel 03	A03	A03 Emb 1	InputA-video3	
Input A/Channel 04	4	Input A	Channel 04	A04	A04 Emb 1	InputA-video4	
Input A/Channel 05	5	Input A	Channel 05	A05	A05 Emb 1	InputA-video5	
Input A/Channel 06	6	Input A	Channel 06	A06	A06 Emb 1	InputA-video6	
Input A/Channel 07	7	Input A	Channel 07	A07	A07 Emb 1	InputA-video7	

A logical source is added at the bottom of the sources table.

Input F/Channel 10	90	Input F	Channel 10	F10	F10 Emb 1	InputF-video10	F10 Vid. TC
Input F/Channel 11	91	Input F	Channel 11	F11	F11 Emb 1	InputF-video11	F11 Vid. TC
Input F/Channel 12	92	Input F	Channel 12	F12	F12 Emb 1	InputF-video12	F12 Vid. TC
Input F/Channel 13	93	Input F	Channel 13	F13	F13 Emb 1	InputF-video13	F13 Vid. TC
Input F/Channel 14	94	Input F	Channel 14	F14	F14 Emb 1	InputF-video14	F14 Vid. TC
Input F/Channel 15	95	Input F	Channel 15	F15	F15 Emb 1	InputF-video15	F15 Vid. TC
Input F/Channel 16	96	Input F	Channel 16	F16	F16 Emb 1	InputF-video16	F16 Vid. TC
Channel1			Channel1				

Notes

- Under **Source info**, you can change the logical source name and path, resulting from the **Name** and **Cat.** level assignments. For example, “Channel 1” can be renamed “Cam 1” or assigned a dynamic name. You can group related logical sources together, by adding static or dynamic text elements to the **Cat.** level, and then sorting the table as needed, to suit your purposes (see [Sorting the Sources Table](#) on page 85). You can also apply a filter to the table, so that sources that do not match the filter be hidden from view (see [Filtering the Sources Table](#) on page 85).

- When a logical source's name or category changes, the row header is updated accordingly.
- When applying an *overall* incremental copy (from the row header), the **Source info** columns and the Video levels are excluded. These columns must be incremented individually. The overall incremental copy features relies on a video level having been populated first.

- 3 On the **File** menu, click **Save**.
The sources table is saved.

Managing Levels

Adding a level

Note: To be able to monitor a 3D stereoscopic signal, you must first add a second video level to your logical sources (so you have a level for each eye), and then for each video monitor or composite you want to use for 3D monitoring, you must assign the left-eye and right-eye levels.

To add a level

- 1 Click the **Channels/Sources** tab in the main window.

The level categories Video, Audio, Text, Alarm, Time code, and Color appear as main column headings in the sources table.

System Channels/Sources Destinations Rooms Layouts RCP users Actions										
Channels/Sources		Source info		Video	Audio	Text	Alarm	Time code	Color	← Level categories
#	Cat.	Name	video1	audio1	text1	alarm1	timecode1	color1		
1	Input A	Channel 01	A01	A01 Emb 1	InputA-video1	A01 Video loss	A01 Vid. TC			
2	Input A	Channel 02	A02	A02 Emb 1	InputA-video2	A02 Video loss	A02 Vid. TC			
3	Input A	Channel 03	A03	A03 Emb 1	InputA-video3	A03 Video loss	A03 Vid. TC			
4	Input A	Channel 04	A04	A04 Emb 1	InputA-video4	A04 Video loss	A04 Vid. TC			
5	Input A	Channel 05	A05	A05 Emb 1	InputA-video5	A05 Video loss	A05 Vid. TC			
6	Input A	Channel 06	A06	A06 Emb 1	InputA-video6	A06 Video loss	A06 Vid. TC			

- 2 Right-click the appropriate level category, and then click **Add level** on the menu.

Add level

System Channels/Sources Destinations Rooms Layouts RCP users Actions									
Channels/Sources		Source info		Video	Audio	Text	Alarm	Time code	Color
#	Cat.	Name	video1	audio1	text1	text2	alarm1	timecode1	color1
1	Input A	Channel 01	A01	A01 Emb 1	InputA-video1		A01 Video loss	A01 Vid. TC	
2	Input A	Channel 02	A02	A02 Emb 1	InputA-video2		A02 Video loss	A02 Vid. TC	
3	Input A	Channel 03	A03	A03 Emb 1	InputA-video3		A03 Video loss	A03 Vid. TC	
4	Input A	Channel 04	A04	A04 Emb 1	InputA-video4		A04 Video loss	A04 Vid. TC	
5	Input A	Channel 05	A05	A05 Emb 1	InputA-video5		A05 Video loss	A05 Vid. TC	
6	Input A	Channel 06	A06	A06 Emb 1	InputA-video6		A06 Video loss	A06 Vid. TC	

A new level appears under the selected category.

Channels/Sources		Source info		Video	Audio	Text	Alarm	Time code	Color
#	Cat.	Name	video1	audio1	text1	text2	alarm1	timecode1	color1
1	Input A	Channel 01	A01	A01 Emb 1	InputA-video1		A01 Video loss	A01 Vid. TC	
2	Input A	Channel 02	A02	A02 Emb 1	InputA-video2		A02 Video loss	A02 Vid. TC	
3	Input A	Channel 03	A03	A03 Emb 1	InputA-video3		A03 Video loss	A03 Vid. TC	
4	Input A	Channel 04	A04	A04 Emb 1	InputA-video4		A04 Video loss	A04 Vid. TC	
5	Input A	Channel 05	A05	A05 Emb 1	InputA-video5		A05 Video loss	A05 Vid. TC	
6	Input A	Channel 06	A06	A06 Emb 1	InputA-video6		A06 Video loss	A06 Vid. TC	

- 3 If you want to change the level name, click the level header, and then, in the **Properties** pane, type the new name in the **Level name** box.

In the case of an alarm level, you may also set its contribution to your system's global alarms. See [Configuring an alarm level's contribution](#) below.

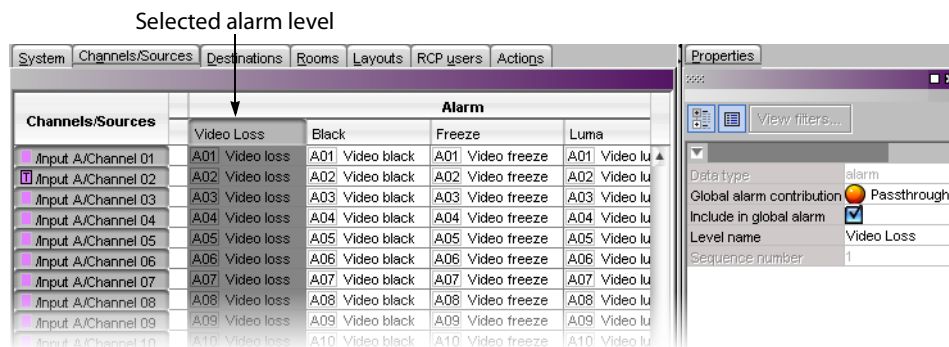
- On the **File** menu, click **Save**.
The sources table is saved.

Configuring an alarm level's contribution

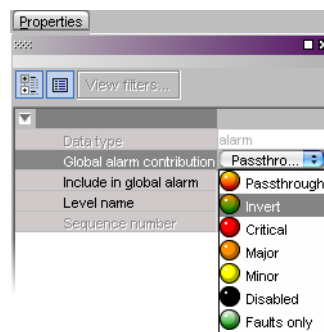
You can select which alarm levels contribute to the global alarm associated with every logical source (see [Global Alarms](#) on page 118), and rank their individual contribution.

To configure an alarm level's contribution to your system's global alarms

- In the sources table, click the column header for the level you want to configure. The **Properties** pane shows the name of the selected alarm level, and its current contribution settings.



- If you want to exclude alarms in this level from the global alarm calculation, then clear the **Include in global alarm** check box.
- To rank this level's contribution to your system's global alarms, click the **Global alarm contribution** box, and then select the appropriate value from the list.



- Passthrough:** This is the default value. Alarms in this level will pass their status unaltered to the global alarms.
- Critical, Major, Minor, Disabled:** It is possible to override the error status of alarms when they are triggered. This is useful when, for example, a device is only able to report a status of either normal or error, but you want the error condition to be considered as minor in the global alarm calculation.
- Invert:** Alarms in this level will pass the opposite of their status to the global alarms. This can be used, for example, to report alarms from GPI inputs, or to

handle cases where an error is expected, and not seeing an error is a sign that something probably went wrong. See [Inverting an alarm](#), on page 128.

- **Faults only:** Alarms in this level will be mapped to normal unless their status is one of the fault statuses—usually critical, major, and minor.¹

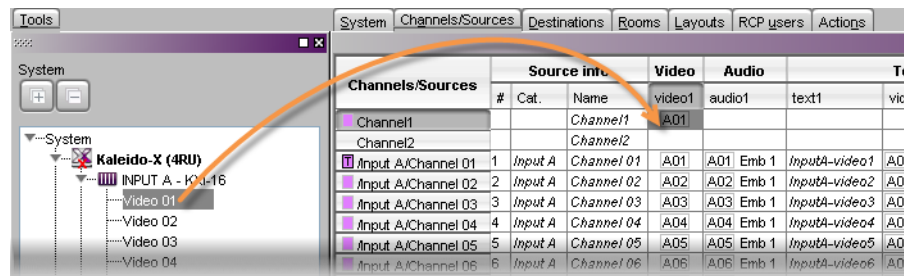
Defining Physical Assignments

Once you have created a logical source, you must make the physical assignments. This is required before you can create a layout.

To make the physical assignments for a logical source

- 1 In the sources table, click the cell that corresponds to the level you want to define for this logical source.
- 2 On the **Tools** pane, expand the filtered System list, and then drag the appropriate element from the list, to the selected level in the sources table.

For a typical logical source, you will normally start by making a video assignment, set the appropriate category and source ID (under **Source info**) if you want to control your multiviewer system as a router, and then proceed with the audio, text, alarm, time code, and color levels. See, for example, [Configuring text level assignments](#), on page 80, [Configuring alarm level assignments](#), on page 80, [Configuring logical sources based on external alarm providers](#), on page 81, and [Configuring color level assignments](#), on page 82.



Sources table with a selected cell in the Video level category for Channel1

- 3 Repeat this procedure until all required physical assignments are completed for this logical source.

Note: Under **Source info**, dynamic and static names resulting from the **Name** level assignments are limited to 48 characters and automatically truncated as needed.

- 4 If you want to be able to use this logical source as a template, right-click the source header and then click **Set source as template** on the menu.

1. The list of fault status can be modified by scripting.

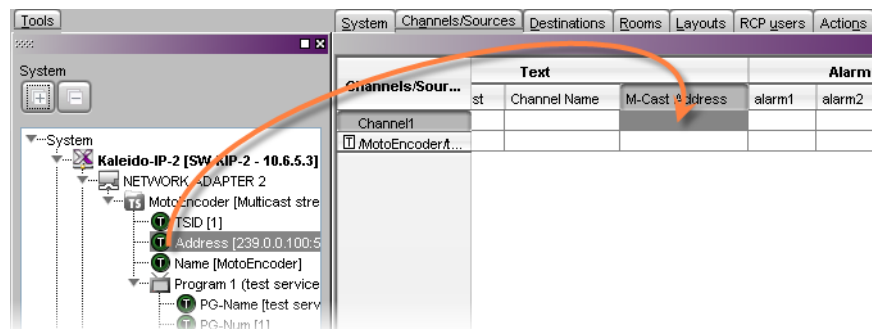
System	Channels/Sources	Destinations	Rooms	Layouts	RCP users	Actions
	Info	Video	Audio	Text	Alarm	
	Name	video1	audio1	text1	alarm1	timecode1
	<input type="checkbox"/> Input A/Channel 01	Channel 01	A01 Emb 1	Input-video1	A01 Video loss	A01 Vid. TC
	<input type="checkbox"/> Input A/Channel 02	Add source		Input-video2	A02 Video loss	A02 Vid. TC
	<input type="checkbox"/> Input A/Channel 03	Delete selected sources		Input-video3	A03 Video loss	A03 Vid. TC
	<input type="checkbox"/> Input A/Channel 04	Set source as template		Input-video4	A04 Video loss	A04 Vid. TC
	<input type="checkbox"/> Input A/Channel 05	Apply template to all sources		Input-video5	A05 Video loss	A05 Vid. TC
	<input type="checkbox"/> Input A/Channel 06	Apply template to selected sources		Input-video6	A06 Video loss	A06 Vid. TC
	<input type="checkbox"/> Input A/Channel 07			Input-video7	A07 Video loss	A07 Vid. TC
	<input type="checkbox"/> Input A/Channel 08	Channel 08	A08 Emb 1	Input-video8	A08 Video loss	A08 Vid. TC
	<input type="checkbox"/> Input A/Channel 09	Channel 09	A09 Emb 1	Input-video9	A09 Video loss	A09 Vid. TC
	<input type="checkbox"/> Input A/Channel 10	Channel 10	A10 Emb 1	Input-video10	A10 Video loss	A10 Vid. TC

Once you have added the required number of logical sources, and made appropriate video assignments, you will be able to populate remaining levels in a single operation by applying the template. If you have enabled automatic sources creation for an external router, then automatically-created logical sources will be based on the template.

Configuring text level assignments

To assign a text element to a logical source's text level

- 1 Click the **Channels/Sources** tab in the main window.
- 2 In the sources table, click the cell that corresponds to the logical source and text level you want to configure.
- 3 Expand the filtered System list on the **Tools** pane, locate the text element, and then drag it onto the selected cell in the sources table.



Note: Under **Source info**, dynamic and static names resulting from the **Name** level assignments are limited to 48 characters and automatically truncated as needed.

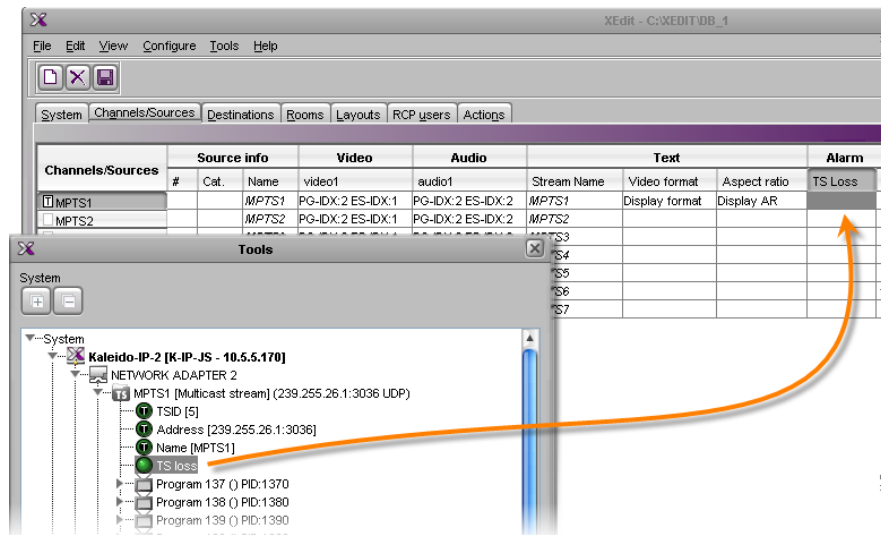
- 4 On the **File** menu, click **Save**.
The sources table is saved.

Configuring alarm level assignments

To assign an alarm to a logical source's alarm level

- 1 Click the **Channels/Sources** tab in the main window.
- 2 In the sources table, click the cell that corresponds to the logical source and alarm level you want to configure.

- Expand the filtered System list on the **Tools** pane, locate the alarm, and drag it onto the selected cell in the sources table.



- On the **File** menu, click **Save**.
The sources table is saved.

Configuring logical sources based on external alarm providers

To have access to alarms and text elements from an external alarm provider, you must have specified this provider in your multiviewer system configuration (see [Managing Alarm Providers](#) on page 126).

To assign an alarm or a text element from an external provider

- Open a GSM alarm browser associated with the alarm provider you want to use.
For example, after opening iControl Navigator, click **General status managers** on the **View** menu. Refer to the iControl User Guide for more information. See [Related Documentation](#), on page 11.
- In XEdit, click the **Channels/Sources** tab in the main window.
- In the GSM alarm browser, navigate to the element you want to assign, and then drag it onto the cell that corresponds to the alarm or text level you want to configure in the sources table.

In the selected cell, the prefix "EXT" indicates that the assignment is from an external source and is followed with information such as the device class and a name.

Notes

- You can select multiple elements in the GSM alarm browser (by pressing Shift+click or Ctrl+click as needed) and assign them to consecutive logical sources at once, by dragging the multiple selection to the appropriate level for the first logical source you want to configure. The elements are inserted in the same order you selected them.
 - Drag an alarm folder to an alarm level to monitor the folder's status. Dragging an alarm folder to a text level is not supported.
 - GSM alarms are not available as triggers for background actions (see [Creating Background Actions](#) on page 267).
 - Incremental copy is not supported in the case of assignments from external providers (see [Making Further Assignments by Incremental Copy](#) on page 83).
-

- 4 On the **File** menu, click **Save**.

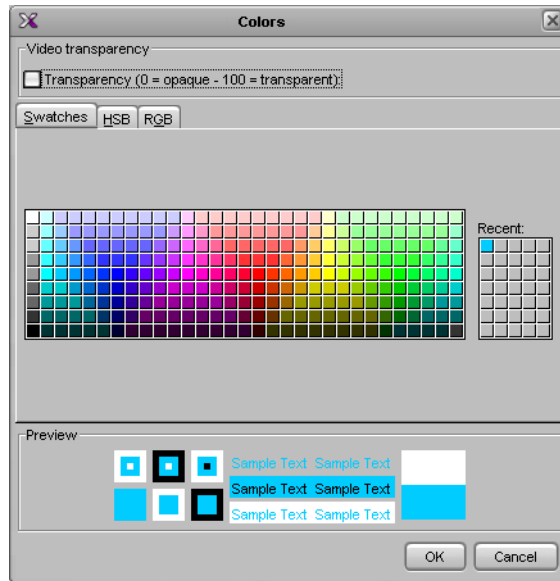
The sources table is saved.

Configuring color level assignments

You may configure sources with color levels so that you can distinguish them at a glance on the monitor wall. For example, your sources could have three color levels: one that you would apply to a monitor's border color, one to a UMD's background, and one to the UMD text.

To configure a logical source's color levels

- 1 Click the **Channels/Sources** tab in the main window.
- 2 In the sources table, double-click the cell that corresponds to the logical source and color level you want to configure.
The color picker window opens.
- 3 In **Colors**, click the tab that corresponds to the color space you want to use, and then choose the color that will be associated with the selected source and color level.



- 4 Click **OK** to close the color picker window.
The color you chose appears in the sources table.

Channels/Sources	Source info			Video	Audio	Text	Alarm	Time code	Color
	#	Cat.	Name	video1	audio1	text1	Loss	timecode1	color1
Input A/Channel 01	1	Input A	Channel 01	A01	A01 Emb 1	InputA-video1	A01 Video loss	A01 Vid. TC	R:0 G:204 B:255
Input A/Channel 02	2	Input A	Channel 02	A02	A02 Emb 1	InputA-video2	A02 Video loss	A02 Vid. TC	
Input A/Channel 03	3	Input A	Channel 03	A03	A03 Emb 1	InputA-video3	A03 Video loss	A03 Vid. TC	

- 5 Repeat from [step 2](#) until you have configured all color levels for this source.
- 6 On the **File** menu, click **Save**.
The sources table is saved.

Making Further Assignments by Incremental Copy

Once done with a first logical source, if the next logical source is to be similar to the first one, it is possible to use incremental copy to automatically create it. Alternatively, if only one or a few specific levels are to be similarly configured, it is possible to use incremental copy on the corresponding level column only.

Note: Color levels are not subject to incremental copy.

To use the incremental copy tool to propagate physical assignments to adjacent logical sources

- 1 Click the row header for the logical source whose assignments you want to propagate.
A small square, the *incremental copy handle*, appears in the bottom right corner of the header cell.

Logical Sources

Making Further Assignments by Incremental Copy

System Channels/Sources Destinations Rooms Layouts RCP_users Actions						
Channels/Sources		Video	Audio	Text	Alarm	Time code
	Source ID	video1	audio1	text1	alarm1	timecode1
/Input A/Channel 14	14	A14	A14 Emb 1	InputA-video14		A14 Vid. TC
/Input A/Channel 15	15	A15	A15 Emb 1	InputA-video15		A15 Vid. TC
/Input A/Channel 16	16	A16	A16 Emb 1	InputA-video16		A16 Vid. TC
/Input B/Channel 01	17	B01	B01 Emb 1	InputB-video1		B01 Vid. TC
/Input B/Channel 02						
/Input B/Channel 03						

Incremental copy handle

- 2 Move the pointer to the incremental copy handle. The pointer changes to crosshairs.

Channels/Sources		Video	Audio	Text	Alarm	Time code
	Source ID	video1	audio1	text1	alarm1	timecode1
/Input A/Channel 13	13	A13	A13 Emb 1	InputA-video13		A13 Vid. TC
/Input A/Channel 14	14	A14	A14 Emb 1	InputA-video14		A14 Vid. TC
/Input A/Channel 15	15	A15	A15 Emb 1	InputA-video15		A15 Vid. TC
/Input A/Channel 16	16	A16	A16 Emb 1	InputA-video16		A16 Vid. TC
/Input B/Channel 01	17	B01	B01 Emb 1	InputB-video1		B01 Vid. TC
/Input B/Channel 02						
/Input B/Channel 03						
/Input B/Channel 04						
/Input B/Channel 05						
/Input B/Channel 06						

- 3 Click and drag to propagate the selected logical source's physical assignments to the next logical sources' levels.

The source cells are highlighted with a green border and the target cells with a red border.

/Input A/Channel 15	15	A15	A15 Emb 1	InputA-video15		A15 Vid. TC
/Input A/Channel 16	16	A16	A16 Emb 1	InputA-video16		A16 Vid. TC
/Input B/Channel 01	17	B01	B01 Emb 1	InputB-video1		B01 Vid. TC
/Input B/Channel 02						
/Input B/Channel 03						
/Input B/Channel 04						
/Input B/Channel 05						
/Input B/Channel 06						
/Input B/Channel 07						

- 4 Release the mouse button once you have reached the last logical source to be configured.

The level cells are now populated with "incremented" physical assignments.

/Input A/Channel 14	14	A14	A14 Emb 1	InputA-video14		A14 Vid. TC
/Input A/Channel 15	15	A15	A15 Emb 1	InputA-video15		A15 Vid. TC
/Input A/Channel 16	16	A16	A16 Emb 1	InputA-video16		A16 Vid. TC
/Input B/Channel 01	17	B01	B01 Emb 1	InputB-video1		B01 Vid. TC
/Input B/Channel 02	18	B02	B02 Emb 1	InputB-video2		B02 Vid. TC
/Input B/Channel 03	19	B03	B03 Emb 1	InputB-video3		B03 Vid. TC
/Input B/Channel 04	20	B04	B04 Emb 1	InputB-video4		B04 Vid. TC
/Input B/Channel 05	21	B05	B05 Emb 1	InputB-video5		B05 Vid. TC
/Input B/Channel 06	22	B06	B06 Emb 1	InputB-video6		B06 Vid. TC
/Input B/Channel 07	23	B07	B07 Emb 1	InputB-video7		B07 Vid. TC
/Input B/Channel 08						
/Input B/Channel 09						

Note: It is possible to drag the incremental copy handle up, or down. The physical assignments will be decremented or incremented accordingly.

Sorting the Sources Table

To sort the sources table

- Right-click the heading of the column you want to sort by (for example,, either by **Source ID**, or any of the level headings), and then click **Sort** on the menu.

Channels/Sources						
	Video	Audio	Text	Alarm	Time code	
Source ID	video1	audio1	text1	alarm1	timecode1	
/Input A/Channel 01	A01		InputA-video1		A01 Vid. TC	
/Input A/Channel 03	A03		InputA-video3		A03 Vid. TC	
/Input A/Channel 04	A04		InputA-video4		A04 Vid. TC	
/Input A/Channel 02	A02	A02 Emb 1	InputA-video2		A02 Vid. TC	
/Input A/Channel 05	A05	A05 Emb 1	InputA-video5		A05 Vid. TC	
/Input A/Channel 06	A06	A06 Emb 1	InputA-video6		A06 Vid. TC	
/Input A/Channel 07	A07	A07 Emb 1	InputA-video7		A07 Vid. TC	

The sources table is sorted, based on the elements in the selected level.

Filtering the Sources Table

To filter the sources table

- Type in the **Cat./Name filter** box, located above the sources table.

Cat./Name filter →

Channels/Sources						
Source info						
#	Cat.	Name	video1	audio1	text1	
1	Input A	Channel 01	A01	A01 Emb 1	InputA-video1	
2	Input A	Channel 02	A02	A02 Emb 1	InputA-video2	
3	Input A	Channel 03	A03	A03 Emb 1	InputA-video3	
4	Input A	Channel 04	A04	A04 Emb 1	InputA-video4	
5	Input A	Channel 05	A05	A05 Emb 1	InputA-video5	
6	Input A	Channel 06	A06	A06 Emb 1	InputA-video6	
7	Input A	Channel 07	A07	A07 Emb 1	InputA-video7	
8	Input A	Channel 08	A08	A08 Emb 1	InputA-video8	

Logical sources with categories and names that do not match the text or regular expression are hidden as you type.

Filter text →

Example: Type "input f" to view only the sources that belong to Input F.

Channels/Sources						
Source info						
#	Cat.	Name	video1	audio1	text1	
81	Input F	Channel 01	F01	F01 Emb 1	InputF-video1	
82	Input F	Channel 02	F02	F02 Emb 1	InputF-video2	
83	Input F	Channel 03	F03	F03 Emb 1	InputF-video3	
84	Input F	Channel 04	F04	F04 Emb 1	InputF-video4	
85	Input F	Channel 05	F05	F05 Emb 1	InputF-video5	
86	Input F	Channel 06	F06	F06 Emb 1	InputF-video6	
87	Input F	Channel 07	F07	F07 Emb 1	InputF-video7	
88	Input F	Channel 08	F08	F08 Emb 1	InputF-video8	
89	Input F	Channel 09	F09	F09 Emb 1	InputF-video9	
90	Input F	Channel 10	F10	F10 Emb 1	InputF-video10	
91	Input F	Channel 11	F11	F11 Emb 1	InputF-video11	
92	Input F	Channel 12	F12	F12 Emb 1	InputF-video12	
93	Input F	Channel 13	F13	F13 Emb 1	InputF-video13	
94	Input F	Channel 14	F14	F14 Emb 1	InputF-video14	
95	Input F	Channel 15	F15	F15 Emb 1	InputF-video15	
96	Input F	Channel 16	F16	F16 Emb 1	InputF-video16	

Notes

- The filter is not applied to new logical sources that have yet to be saved. They will remain visible, until you saved the sources table.

Notes (continued)

- It is always possible to apply the template source to other logical sources, even when this specific source is hidden.
 - **Apply template to all sources** affects all logical sources, regardless of filtering.
 - The incremental copy tool affects visible sources only.
-

Resizing the Sources Table's Columns

To resize a column manually

- In the category or level heading row, point the column boundary you want to move until the pointer becomes a resize pointer (↔), and then drag the boundary to resize.

To resize a column to the width of its content

- In the category or level heading row, point either boundary for the column you want to resize to fit, until the pointer becomes a resize pointer (↔), and then double-click. The column width is adjusted to fit the content.

To resize all columns to the width of their content

- In the category or level heading row, point any column boundary until the pointer becomes a resize pointer (↔), and then triple-click.

All columns are resized to fit their content.

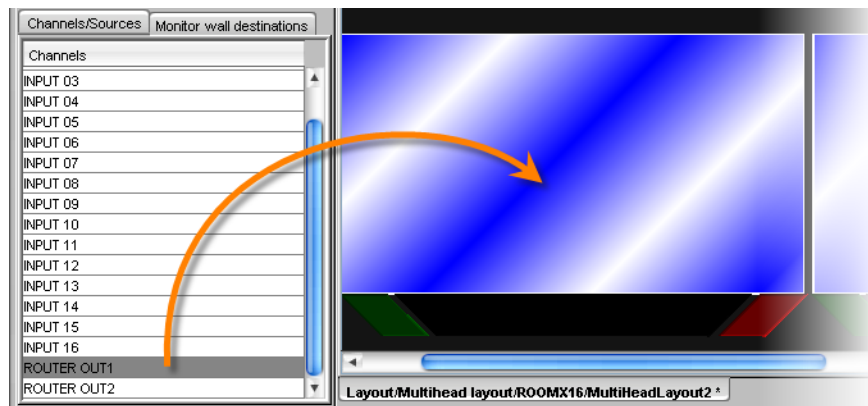
Note: If there are more than 250 rows in the sources tables, when you double- or triple-click, the columns are adjusted to fit the content of the currently visible rows only.

Monitoring Internal-Router Outputs on the Monitor Wall (Sample Scenario)

It is possible, for specific monitoring purposes, to configure a video monitor so that it displays the current signal at a physical output from the multiviewer's internal router, by assigning this router output to a logical source's video level.

To configure a monitor to follow an internal-router output on the monitor wall

- 1 Click the **Channels/Sources** tab in the main window.
- 2 Add a logical source to the table (see [Manually adding a Logical Source](#), on page 75).
- 3 In the new logical source row, click the cell that corresponds to the first video level.
- 4 Expand the filtered System list on the **Tools** pane, locate the router output you want to monitor, and then drag it onto the selected cell in the sources table.
- 5 On the **File** menu, click **Save**.
The sources table is saved.
- 6 Click the **Layouts** tab, and open the appropriate layout.
- 7 From the **Channel/Sources** list on the **Tools** pane, drag the new logical source onto the monitor you want to configure, and then save the layout.



Once such a logical source is available, you can also assign it to other composite or video monitors, directly on the monitor wall, and their video window will dynamically follow the video signal sent to that router output.

Note: The current version of the Kaleido Software does not support monitoring of the associated audio signal.

Logical Sources

Monitoring Internal-Router Outputs on the Monitor Wall (Sample Scenario)

Calibrating the Kaleido Software



Introduction

A Kaleido multiviewer system includes a number of cards or modules that process a variety of signal types. This section explains how to calibrate features related with the different signal types.

Key Concepts

IMPORTANT

Calibration changes are applied immediately

Unlike other elements in a multiviewer configuration, system calibrations do not need to be saved.

- When using XEdit in *online* mode, calibration changes become immediately effective.
- When using XEdit in *offline* mode, calibration changes are applied to the system representation in your local workspace.

Calibration changes are synchronized

When you export a database to a multiviewer, the *latest* calibrations prevail (for example, if the database you export is from a backup that included earlier calibration changes, or if calibrations were changed by using XEdit in *offline* mode, then any calibrations that were also changed in the meantime on the multiviewer itself, by using XEdit in *online* mode, will remain effective after the export).

Profiles

Profile	With the current version of the Kaleido Software, profiles are available for Kaleido-IP multiviewers only. A profile is a group of calibrations that you configure for a specific purpose, and then apply to specific elementary streams, or transport streams, as needed. A default audio profile, a default video profile, a default teletext profile, a default SCTE 35 profile, and a default transport stream profile are available with set calibrations. You may add custom profiles to your system, and configure them as needed. See Managing Calibration Profiles on page 93.
Video profile	Video profiles include video input calibrations: alarm debouncing, metadata holding time, and presence timeout parameters.
Audio profile	Audio profiles include audio input calibrations: a zero VU reference level calibration, alarm threshold calibrations, alarm debouncing, and loudness calibrations.

Teletext profile	Teletext profiles include calibrations for page selection, subtitling holding time, alarm debouncing, and text presence timeout parameters.
SCTE 35 profile	SCTE 35 profiles include calibrations for digital program insertion (DPI) signaling (for example, splice events, DTMF break sequences, timing information), and a signaling timeout calibration.
Transport stream profile	Transport stream (TS) profiles include calibrations for TR 101 290 first- and second-priority fault-reporting indicators.

Multiviewer Input Calibrations

Aspect ratio	Unlike <i>HD</i> signals where aspect ratio information, when available, always follows the SMPTE ST 2016 standard, there are different standards for encoding aspect ratio information in <i>SD</i> signals. The AFD & WSS calibrations determine which standard will be applied by default to <i>SD</i> signals feeding the selected multiviewer input. The aspect ratio of video windows on the monitor wall can then be automatically adjusted, based on the current source assignment. See Calibrating Aspect Ratio Decoding on page 105.
Subtitling/closed captioning	Presence alarms can be configured for up to four preset Teletext (WST) subtitle pages for each input signal. There are also subtitling calibrations for the CEA-608 CC and the DTVCB alarms. See Calibrating Subtitling/Closed Captioning on page 107.
Metadata holding time	The holding time parameters determine the delay after which decoded metadata such as closed captions, teletext subtitles, or XDS metadata will be cleared. This requires the CC/XDS option to be enabled (see the multiviewer's <i>Installation & Service Manual</i> for more information). See Calibrating Metadata Holding Time , on page 107 for details.
Zero VU (dBFS)	The Zero VU (dBFS) parameters determine the reference level to be applied to the selected digital (embedded, or from ABT) audio signal. dBFS stands for <i>decibels full scale</i> . Zero dBFS corresponds to the maximum possible level. By default the reference level for it is set to -20 dBFS, on a range of -24 dBFS to -8 dBFS. See Calibrating Zero VU Reference Levels for Embedded Audio Sources , on page 104 for details.
Audio loudness	A measure of the perceived loudness of a group of audio channels (an <i>audio program</i>). Various measurement modes are available depending on the hardware being used. It is possible to configure an alarm that will be triggered when the measured loudness deviates too far from a target specified either by a standard or by your organization. <ul style="list-style-type: none"> Compliant with recent standards (EBU R128, ATSC A/85, ARIB TR-B32) and provide two measures (short term, and momentary) per audio program. The Kaleido-IP supports loudness probing of audio streams with a sampling rate of 48 kHz only.

Alarm Debouncing

Alarm debouncing allows the filtering of false alarms. Two parameters can be calibrated: the time required for an alarm event to be present before the system considers it to be valid

(to avoid false triggering of alarms), and the time required for an alarm state to be normal before the system actually clears the alarm (to avoid false releasing of alarms).

An alarm is triggered when a probe is in a continuous error state for the number of seconds specified in the **Set duration** debouncing parameter. In most cases, the alarm status will revert to normal by default, as soon as the probe returns a normal state. To delay the releasing of an alarm, you can change its **Clear duration** parameter.

- For TR 101 290 fault-reporting indicators, the default debouncing parameters are as follows:

Attribute	Default value	Range	Description
Set duration	0 seconds	0 s – 300 s	By default, TR 101 290 faults are reported as soon as they are detected.
Clear duration	5 seconds	0 s – 90 s	Once the fault condition is no longer detected, this is the time interval to wait before resetting the alarm.

- For all other alarms, the default debouncing parameters are as follows:

Attribute	Default value	Range	Description
Set duration	15 seconds	0 s – 300 s	This is the time interval to wait before triggering an alarm once a probe has been in a continuous error state.
Clear duration	0 seconds	0 s – 90 s	Once a probe has returned to a normal state (the alarm condition is no longer detected), this is the time interval to wait before resetting the alarm.

Notes

- In the case of *video freeze* alarms, the default debouncing settings are appropriate for most purposes, when the intention is to detect a freeze. Note, however, that it may take up to one second (two seconds, in the case of a Kaleido-IP) more than the value of the **Set duration** parameter to trigger a video freeze alarm. On the other hand, if your situation requires detecting movement (e.g, to detect that nothing is put on air during an off-air period) then you may need to set an appropriate reset delay for this alarm (such as 5 seconds) by using the **Clear Duration** parameter.
- In the case of *video black*, *video luma too high*, and *teletext presence* alarms, it may take up to one second more than the value of the **Set duration** parameter to trigger these alarms, and it may take up to one second more than the value of the **Clear duration** parameter before the system clears them.
- In the case of *V-chip loss* alarms, the **Set duration** parameter should be *at least 3 seconds*, in order to avoid false alarms.

Notes *(continued)*

- As of version 6.60 of the Kaleido Software, the former **Occurrences** and **Detection window** debouncing parameters have been removed. You may need to revise your system's alarm debouncing calibrations when you upgrade to version 6.60 (or later) from version 6.50 (or earlier). Refer to the upgrade instructions in the *Installation & Service Manual*, for details. See [Related Documentation](#), on page 11.
-

See [Configuring Alarm Debouncing](#) on page 101, for more information.

Managing Calibration Profiles

Creating Calibration Profiles

To create a calibration profile

- 1 In XEdit's main window, click the **System** tab, and then click **Calibrations (Kaleido-IP)** on the second-level tab bar.
- 2 On the **File** menu, click **Add TS profile**, **Add video profile**, **Add audio profile**, **Add teletext profile**, or **Add SCTE 35 profile** depending on the type of calibration profile you want to create.
The new profile appears on the **Tools** pane.
- 3 Click the profile to rename it as necessary.

Deleting Calibration Profiles

To delete a calibration profile

- 1 In XEdit's main window, click the **System** tab, and then click **Calibrations (Kaleido-IP)** on the second-level tab bar.
- 2 On the **Tools** pane, click the profile you want to delete.
- 3 On the **File** menu, click **Delete profile**.

Configuring Calibration Profiles

To configure a calibration profile

- 1 In XEdit's main window, click the **System** tab, and then click **Calibrations (Kaleido-IP)** on the second-level tab bar.
- 2 On the **Tools** pane, click the profile you want to configure.
A hierarchical list representing all applicable calibrations appears in the main window.
- 3 Navigate to the element you want to calibrate, and select it.

The related attributes appear in the **Properties** pane.

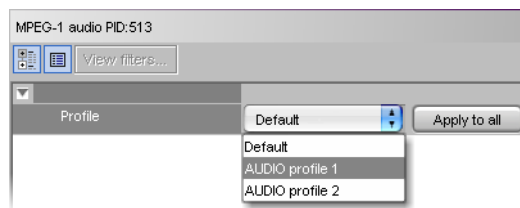
- See [Configuring Alarm Debouncing](#) on page 101, if you need to change debouncing parameters for teletext, audio, video, or transport stream alarms, and see [Configuring Alarm Thresholds](#) on page 96, to adjust alarm thresholds.
- For a TS profile:
 - See [Transport Calibration](#), on page 99, if you need to change alarm thresholds for TR 101 290 fault indicators.
- For an audio profile:
 - See [Audio Calibrations](#), on page 98, if you need to change audio alarm thresholds.
 - See [Calibrating Loudness Measurement](#) on page 103, for detailed instructions on calibrating loudness measurement.
 - See [Calibrating Zero VU Reference Levels for Embedded Audio Sources](#) on page 104, if you need to change the Zero Vu reference level for all sources associated with the current profile.

- For a video profile:
 - See [Calibrating Metadata Holding Time](#) on page 107, if you need to change the holding time for XDS metadata, CC or DTVCC captions.
 - See [Metadata Calibration](#), on page 99, if you need to change the presence timeout value for DTVCC services and text.
 - For a teletext profile:
 - See [Calibrating Metadata Holding Time](#) on page 107, if you need to change the holding time for teletext subtitles.
 - See [Calibrating Subtitling/Closed Captioning](#) on page 107, to configure the teletext page selection parameters.
 - For a SCTE 35 profile:
 - See [Metadata Calibration](#), on page 99, if you need to change the presence timeout value for SCTE 35 signaling.
 - See [Calibrating DTMF Tone Sequences](#) on page 110, to register the out-of-network, and in-network DTMF sequences you need to monitor.
 - See [Calibrating SCTE 35 Event Reporting Duration](#) on page 111, if you want to adjust the delay after which alarms triggered when SCTE 35 commands are detected return to normal.
- 4 Repeat [step 3](#) until the profile is properly configured for your purposes.

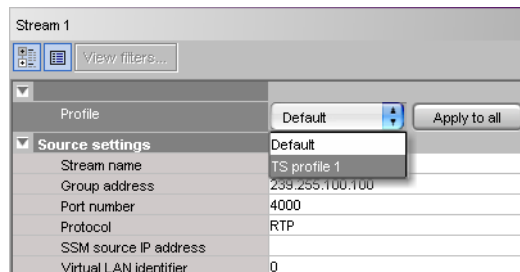
Assigning Calibration Profiles

To assign a calibration profile

- 1 In the main window, click the **System** tab, and then click **Description/Calibrations** on the second-level tab bar. The main pane displays the System hierarchical list.
- 2 Navigate to the elementary stream, or transport stream you want to calibrate and select it.
- 3 In the **Properties** pane, click **Profile**, and then select the calibration profile you want to apply to this stream.



Elementary stream profile assignment example



Transport stream profile assignment example

- 4 To apply the same profile to all elementary streams of a compatible type (such as all audio elementary streams), click **Apply to all**.

Alternatively, you can drag a profile from the **Tools** pane, onto an elementary stream, or transport stream in the System list.

Configuring Alarm Thresholds

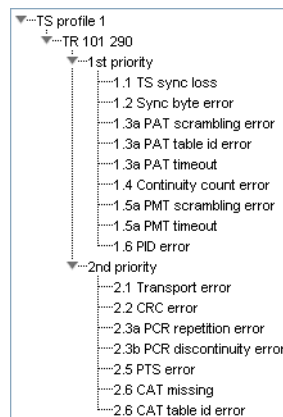
Note: The Kaleido-IP supports threshold calibrations for *audio*, *teletext*, *SCTE 35*, and *TR 101 290* alarms.

To configure the threshold for an alarm

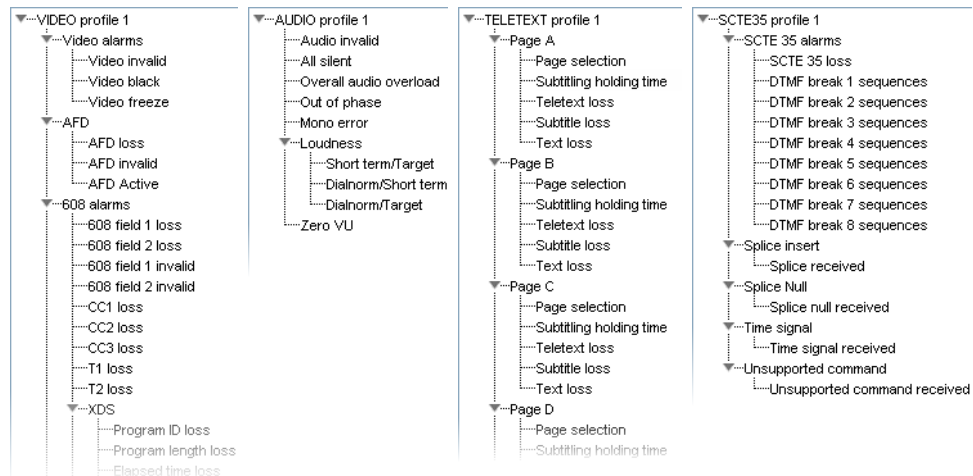
- 1 Connect to the multiviewer you want to configure, if you want to apply the changes in real time (see [Connecting to a Multiviewer](#) on page 28).

Note: If this step is omitted, then you will need to export the database to apply the calibration changes.

- 2 In the main window, click the **System** tab, and then click **Calibrations (Kaleido-IP)** on the second-level tab bar, select the appropriate calibration profile on the **Tools** pane, and then click the alarm whose threshold you want to calibrate in the main pane.



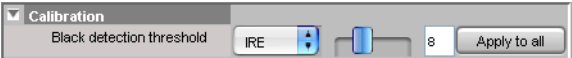
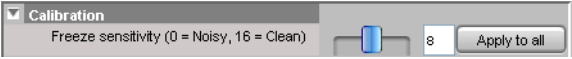
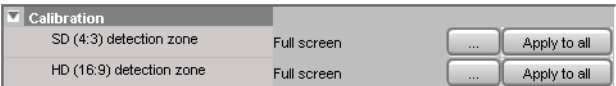

A transport stream profile







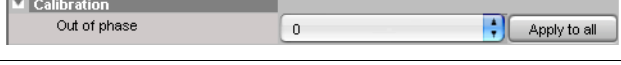

Elementary stream profiles

- 3 In the **Properties** pane, set the relevant values under **Calibration**.





Video Calibrations

Black detection threshold	<p>Set the level (in IRE, sample values, or mV) below which the signal will be considered to be black. By default the threshold is set at 8 IRE, or 0 mV, depending on the multiviewer model.</p>  <p>Note: The IRE scale assumes a 7.5 IRE setup.</p>
Freeze sensitivity	<p>Freeze detection is done by comparing successive frames. Noise in the signal could disrupt this process, so filtering is added to remove it. Adjust the sensitivity according to the signal being monitored, on a range of 0 (for a noisy signal) to 16 (for a clean signal). By default the sensitivity is set at 8, and the alarm will be triggered after at least 15 seconds of continuous freeze. Once the alarm is triggered it will only be released if no other freeze condition is detected over the period determined by the Clear duration parameter (by default, there is no delay), to avoid unwanted alarm flickering that could be caused by glitches on the signal.</p>  <p>Note that when setting the Clear duration parameter to any value other than 0, it may happen that the freeze alarm will only be released after a long time (longer than the value of the period determined by the Clear duration parameter) if the video has short-duration freezes during this period.</p>
SD/HD detection zone	<p>Determine the video window area to be monitored for Freeze and Black detection. Two detection zones can be configured: one for SD signals, one for HD signals.</p> 
Luma too high detection threshold	<p>Set the level (in IRE, sample values, or mV) above which <i>Luma too high</i> will be reported. By default the threshold is set at 100 IRE, or 700 mV, depending on the multiviewer model.</p>  <p>Note: The IRE scale assumes a 7.5 IRE setup.</p>




Audio Calibrations



Silence left/right/center	<p>Select the level (in dB or dBFS for digital audio sources, in dB or dBu for analog audio sources) below which the audio signal will be considered silenced. The default value is -55 dBFS, on a range of -63 to 0.</p>
	
All silent / All silent program 2	<p>Select the level (in dB or dBFS for digital audio sources, in dB or dBu for analog audio sources) below which an audio signal will be considered silenced. An alarm is raised if all available channels are below the threshold. The default value is -55 dBFS, on a range of -63 to 0.</p>
	
Overload left/right	<p>Select the level (in dB or dBFS for digital audio sources, in dB or dBu for analog audio sources) above which the audio signal will be considered overloaded. The default value is -5 dBFS, on a range of -63 to 0.</p>
	
Overall audio overload	<p>Select the level (in dB or dBFS) above which an audio signal will be considered overloaded. An alarm is raised if any available speaker is above the threshold. The default value is -5 dBFS, on a range of -63 to 0. Available for Kaleido-IP only.</p>
	
Out of phase	<p>Select the sensitivity level below which the audio signal will be considered out of phase. The sensitivity is a value between -1 and $+1$, where -1 means completely out of phase and $+1$ means perfectly in phase. The default value is 0.</p>
	
Mono	<p>An audio source is considered to be mono if the left and right signals are perfectly in phase (that is, more likely to be the same). Select the sensitivity level above which audio will be considered mono. The sensitivity is a value between -1 and $+1$, where -1 means that everything is considered to be mono, and $+1$ means that only perfectly in phase audio will be considered mono. The default value is 1 (Perfectly in phase).</p>
	

Metadata Calibration

DTVCC service presence timeout	<p>Set the delay (in seconds) after which a <i>Service loss</i> alarm will be triggered, if the multiviewer has not received any DTVCC data blocks for the given service. This calibration applies to the six standard services. The default value is 30 seconds, on a range of 1 to 360.</p>
	
DTVCC text presence timeout	<p>Set the delay (in seconds) after which a <i>Text loss</i> alarm will be triggered, if the multiviewer has not received any characters for the given service. This calibration applies to the six standard services. The default value is 30 seconds, on a range of 1 to 360.</p>
	
Teletext/subtitling text loss	<p>Set the delay (in seconds) after which a <i>Text loss</i> alarm will be triggered for the configured WST subtitling page. The default value is 30 seconds, on a range of 1 to 360.</p>
	
SCTE 35 loss	<p>Set the delay (in minutes) after which a <i>SCTE 35 loss</i> alarm will be triggered to report that no new SCTE 35 messages were detected during this much time. The default value is 60 minutes, on a range of 1 to 360.</p>
	

Transport Calibration

1.3a PAT timeout	<p>Set the delay (in millisecond) after which a timeout alarm will be triggered to report that no Program Association Table (PAT) was found in the transport stream during this much time. The default value is 500 ms, on a range of 10 to 2500.</p>
	
1.5a PMT timeout	<p>Set the delay (in millisecond) after which a timeout alarm will be triggered to report that no Program Map Table (PMT) was found on the Packet Identifier (PID) specified in the PAT during this much time. The default value is 500 ms, on a range of 10 to 2500.</p>
	
1.6 PID error	<p>Set the delay (in millisecond) after which an alarm will be triggered to report that the data stream associated with a PID has not occurred in the transport stream during this much time. The default value is 5000 ms, on a range of 10 to 25000.</p>
	

2.3a PCR repetition error	<p>Set the delay (in millisecond) after which an alarm will be triggered to report that the interval between two consecutive Primary Clock Reference (PCR) values has exceeded the specified time. The default value is 40 ms, on a range of 10 to 200.</p>  <p>The screenshot shows a 'Calibration' window with a dropdown menu expanded to show '2.3a PCR repetition error (ms)'. Below the label is a slider control with a blue knob positioned at the 40 mark on a scale from 10 to 200.</p>
2.5 PTS error	<p>Set the delay (in millisecond) after which an alarm will be triggered to report that no Presentation Time Stamp (PTS) was found in the transport stream during this much time. The default value is 700 ms, on a range of 10 to 3500.</p>  <p>The screenshot shows a 'Calibration' window with a dropdown menu expanded to show '2.5 PTS error (ms)'. Below the label is a slider control with a blue knob positioned at the 700 mark on a scale from 10 to 3500.</p>

Configuring Alarm Debouncing

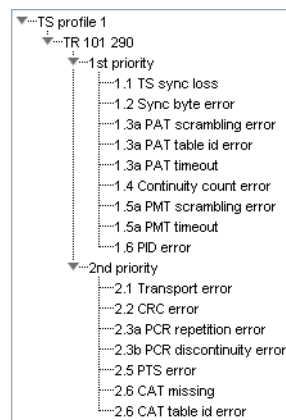
To configure alarm debouncing

- 1 Connect to the multiviewer you want to configure, if you want to apply the changes in real time (see [Connecting to a Multiviewer](#) on page 28).

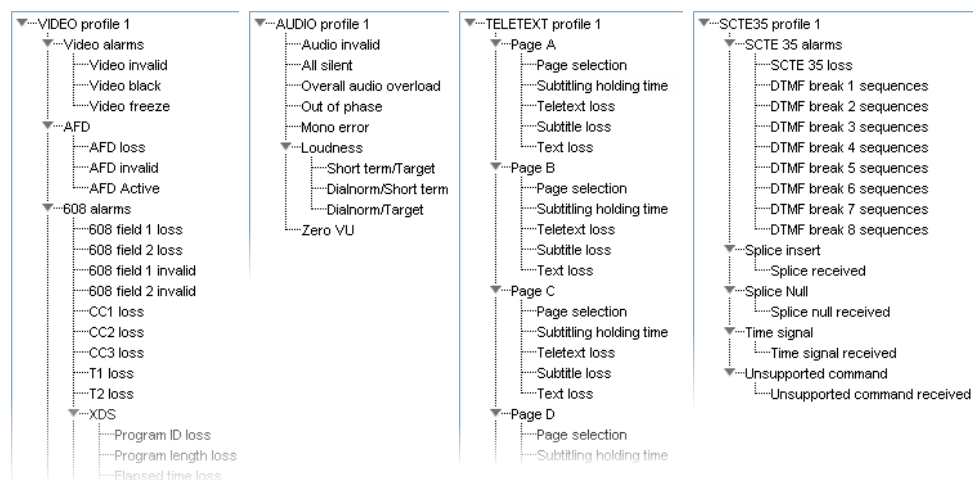
Note: If this step is omitted, then you will need to export the database to apply the new calibrations to the multiviewer.

- 2 In the main window, click the **System** tab, and then:

- In the case of a Kaleido-IP, click **Calibrations (Kaleido-IP)** on the second-level tab bar, select the appropriate calibration profile on the **Tools** pane, and then click the alarm whose debouncing you want to calibrate in the main pane.



A transport stream profile



Elementary stream profiles

- For all other multiviewer models, click **Description/Calibrations** on the second-level tab bar, navigate to the alarm whose debouncing you want to calibrate, by expanding the appropriate multiviewer input, one of its Video elements, and then the alarm-related elements (or the ABT element, and then one of the ABT's audio elements).

- 3 In the **Properties** pane, under **Debouncing**, set appropriate values (see [page 90](#)) for the **Set duration** and **Clear duration** attributes.



Multiviewer Input Calibrations

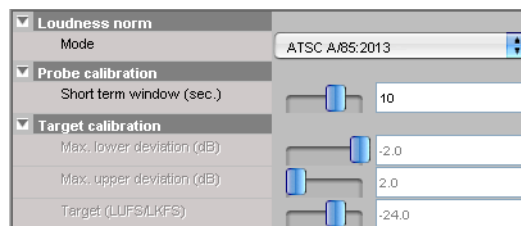
To calibrate your multiviewer inputs, you navigate a hierarchical representation of your system in XEdit, and set parameters to match your monitoring purposes.

- In the case of a Kaleido-IP, default audio, video, teletext, SCTE 35, and transport stream profiles are available with preset calibrations, which cannot be modified. You can add custom profiles, and configure them as needed, from XEdit's **Calibrations (Kaleido-IP)** tab. You can apply a profile to an elementary stream in the **Description/Calibrations** tab. See [Profiles](#) on page 89.
- For all other multiviewer models, you can modify calibrations for every multiviewer input, from the System list in XEdit's **Description/Calibrations** tab. To apply a specific calibration to all inputs at once, click the corresponding **Apply to all** button.

Calibrating Loudness Measurement

To calibrate loudness measurement

- 1 Navigate to the appropriate input's **Loudness** element in the System list or audio profile, and select it. See [Navigating to the loudness calibration in a Kaleido-IP calibration profile](#), on page 104.
- 2 In the **Properties** pane, set the appropriate values for your installation.



The following values are involved:

Parameter	Description
Mode	Select the loudness standard you want to apply: EBU R128, ATSC A/85, or ARIB TR-B32. Alternatively, you can define a custom mode to gain more control.
Short term window	This parameter determines the integration time of the short term loudness measurement. It is configurable when using ATSC A/85 or a custom measurement mode, with a value on a scale ranging between 1 and 15 seconds.
Max. lower deviation	The Max. lower deviation parameter determines the tolerated excursion range of the short term loudness below the target value. The measured short term loudness and the encoded dialnorm can be compared against each other and against a standard or your organization's target value, and alarms will be triggered in case of too much deviation. In <i>custom</i> mode, possible values range from -70 dB to 0 dB. ¹

Parameter	Description
Max. upper deviation	The Max. upper deviation parameter determines the tolerated excursion range of the short term loudness above the target value. The measured short term loudness and the encoded dialnorm can be compared against each other and against a standard or your organization's target value, and alarms will be triggered in case of too much deviation. In <i>custom</i> mode, the possible values range from 0 dB to 15 dB.
Target	Type the appropriate loudness value for your custom standard, in the box, or set it using the slider. The default value is -24, on a scale of -70 LUFS/LKFS to 0 LUFS/LKFS. ² This value can then be compared against the measured loudness, and against the encoded dialnorm found in the VANC audio metadata (SMPTE ST 2020-A).

1. Setting this parameter to its lowest value (-70 dB) will prevent the short term/Target alarm from being triggered when silence is detected.
2. On the monitor wall, loudness monitors using a custom measurement mode have their scale labeled *LU*, or *LUFS*. There is no functional difference between the LU vs. LK, or LUFS vs. LKFS scales.

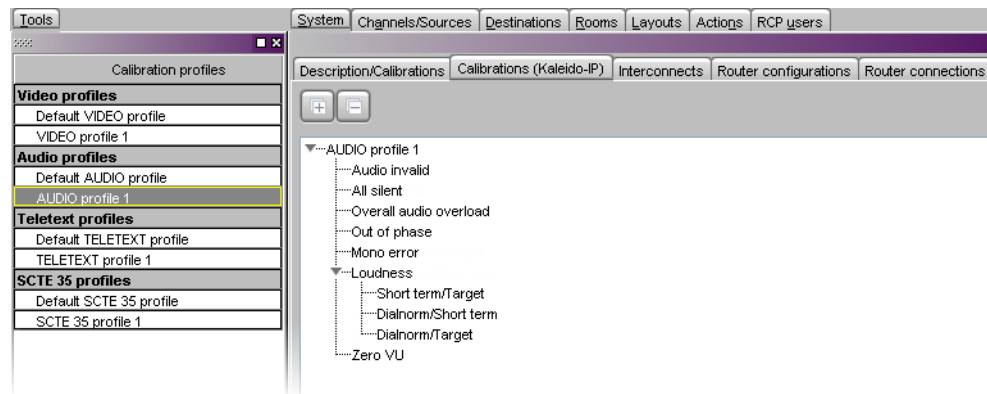
Navigating to the loudness calibration in a Kaleido-IP calibration profile

To navigate to the loudness calibration in a Kaleido-IP calibration profile

- 1 In XEdit's main window, click the **System** tab, and then click **Calibrations (Kaleido-IP)** on the second-level tab bar.
- 2 On the **Tools** tab, select the audio profile whose loudness measurement you would like to calibrate.

A hierarchical list representing all applicable calibrations for this profile appears in the main window.

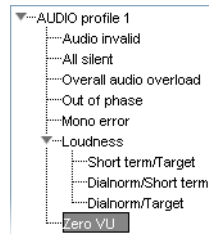
- 3 Expand the list, and then click **Loudness**.



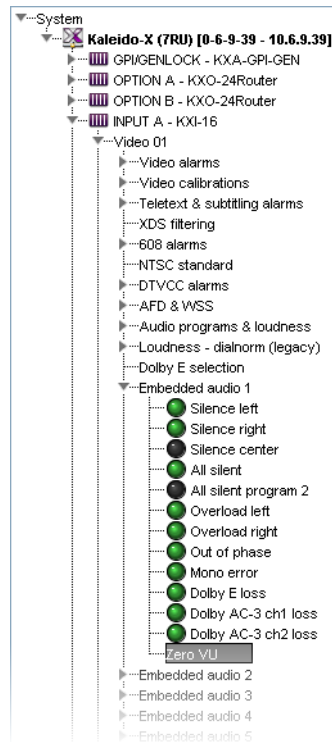
Calibrating Zero VU Reference Levels for Embedded Audio Sources

To calibrate a Zero VU reference level

- 1 In the main window, click the **System** tab, and then:
 - In the case of a Kaleido-IP, click the **Calibrations (Kaleido-IP)** tab, select the audio profile you want to configure, and then click **Zero VU**.



- For all other multiviewer models, click **Description/Calibrations** on the second-level tab bar, expand the appropriate input, then one of its embedded audio elements, and select **Zero VU**.



- 2 In the **Properties** pane, set the reference level to the appropriate value (in dBFS), using the **Zero VU** slider, under **Calibration**.

Alternatively, type the value directly in the **Zero VU** box.



Calibrating Aspect Ratio Decoding

Note: This section applies to multiviewers that are used to monitor **SD signals**. In the case of HD signals, since the AFD information always follows AFD 2016, no calibration is needed. No calibration is needed for the Kaleido-IP either, since it supports decoding of a signal's aspect ratio from AFD metadata only. See [Aspect ratio](#), on page 90 for more information.

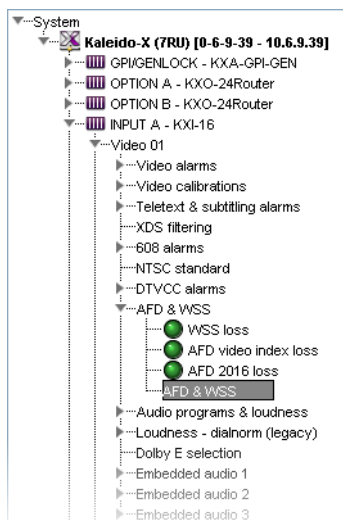
Aspect ratio information can be encoded following different standards: AFD 2016, AFD VI, or WSS. The following table shows the different standards and their availability according to the signal type:

Signal type	AFD 2016	Video index (AFD VI)	Wide screen signaling (WSS)
HD	Yes	—	—
SD 525	Yes	Yes	—
SD 625	Yes	Yes	Yes

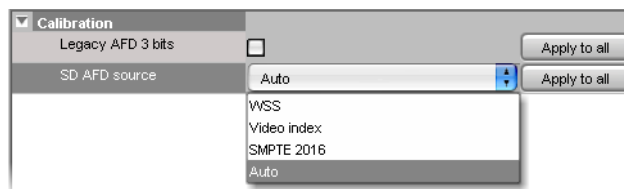
AFD VI information can be encoded as 4 bits or 3 bits (legacy).

To select the AFD source for an SD signal

- 1 In the main window, click the **System** tab, and then click **Description/Calibrations** on the second-level tab bar.
 A hierarchical list representing the current system appears.
- 2 In the list, expand the multiviewer whose inputs you want to calibrate.
- 3 Expand the appropriate input, and then click **AFD & WSS**.



- 4 In the **Properties** pane, select **Legacy AFD 3 bits** to support the legacy AFD 3-bit format for the video index, if appropriate.
- 5 Select the appropriate value from the **SD AFD source** list.



The default value is **Auto**, which means that the multiviewer will automatically detect what is present in the signal and use it to report AFD. If more than one AFD type is present in the signal, and **SD AFD source** is set to **Auto**, then the AFD type is selected in this order: (1) AFD 2016, (2) AFD VI, or (3) WSS.

Calibrating Subtitling/Closed Captioning

In the case of a Kaleido-IP, presence alarms can be configured for up to eight preset Teletext (WST) subtitle pages for each input signal and all eight teletext pages (page A to page H) can be decoded.

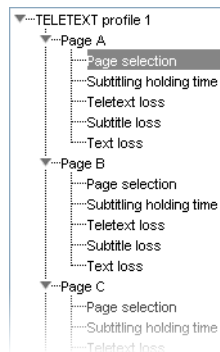
The subtitling page selection parameters determine which pages will be monitored.

This requires the CC/XDS option to be enabled (see the multiviewer's *Installation & Service Manual* for more information).

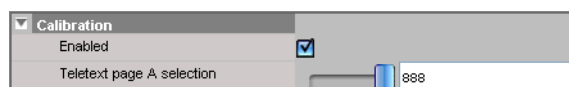
Configuring Teletext/Subtitling Page Selection for a Kaleido-IP

To configure Teletext/Subtitling page selection for a Kaleido-IP

- 1 In the main window, click the **System** tab, and then click the **Calibrations (Kaleido-IP)** tab.
- 2 Select the teletext profile you want to configure, expand the **Page A** element, and then click **Page selection**.



- 3 In the **Properties** pane, type the page number you want to be the default selection for Page A, in the **Teletext page A selection** box. Alternatively, use the slider to set the page number.



- 4 If you want to enable or disable teletext decoding for this page, then select or clear the **Enabled** check box accordingly.
Only decoding of Page A is enabled by default.
- 5 Repeat this procedure for the Page B, to Page H elements.

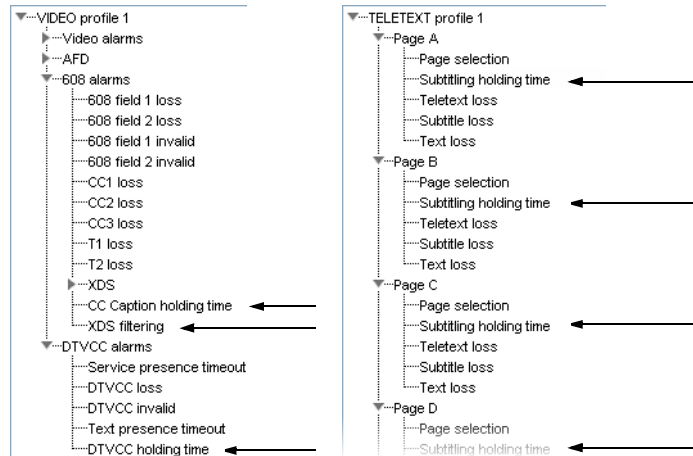
Note: Alarms can be configured for all eight preset pages (see [Configuring Alarm Debouncing](#) on page 101 for instructions on how to configure the alarms).

Calibrating Metadata Holding Time

To calibrate metadata holding time

- 1 In the main window, click the **System** tab, and then:

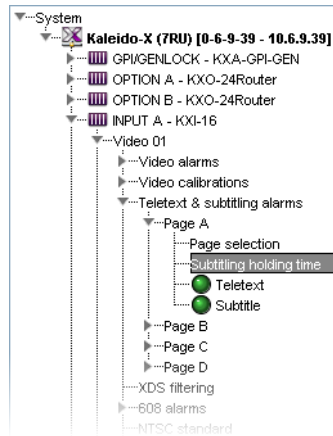
- In the case of a Kaleido-IP, click the **Calibrations (Kaleido-IP)** tab, select the video or teletext profile you want to configure, and then click **CC Caption holding time**, **XDS filtering**, **DTVCC holding time** (for a video profile), or **Subtitling holding time** (for a teletext profile).



- For all other multiviewer models, click **Description/Calibrations** on the second-level tab bar, expand the appropriate input module, then the video input you want to calibrate, and select the metadata element whose holding time you want to configure.

- 2 In the **Properties** pane, set the value by typing it directly in the box, or by using the slider (refer to the table below as needed).

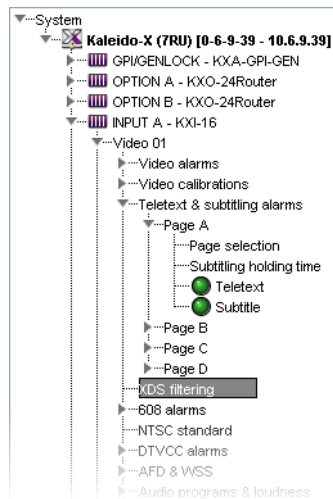
Subtitling holding time



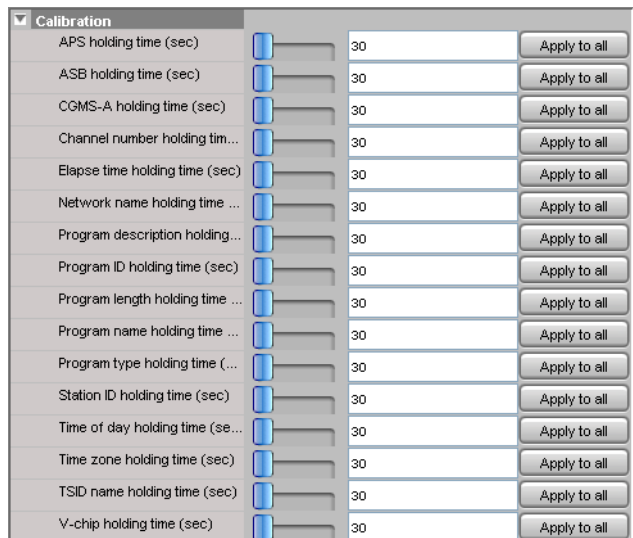
Set the delay (between 5 and 360 seconds, default value is 16 seconds) after which subtitles are cleared.

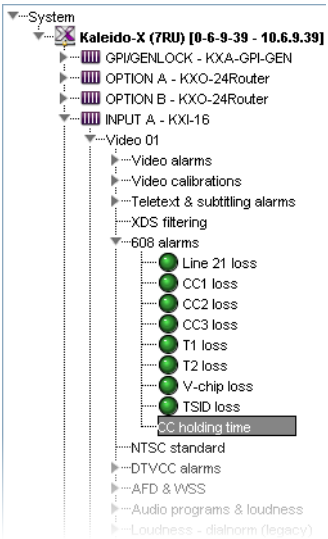

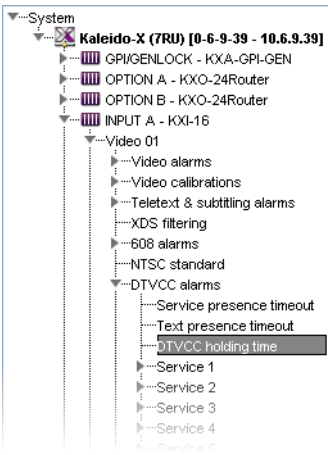



XDS filtering



Set the holding time (between 5 and 360 seconds, default value is 30 seconds) for each XDS metadata element (APS, ASB, CGMS-A; channel number; elapsed time; network name; program description, ID, name, length, and type; station ID; TSID name; time of day; time zone; V-chip rating).



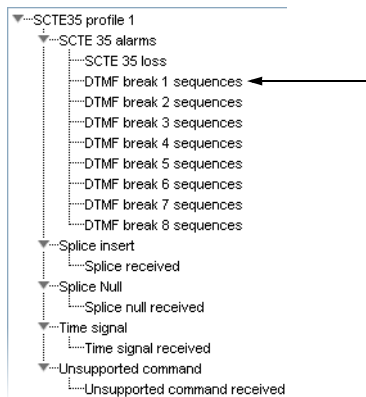
<p>CC holding time</p> 	<p>Set the delay (between 5 and 360 seconds, default value is 16 seconds) after which closed captions (608) are cleared.</p> 
<p>DTVCC holding time</p> 	<p>Set the amount of time (between 15 and 360 seconds, default value is 30 seconds) during which DTVCC closed captions (708) should persist on the monitor wall, if the multiviewer has not received a clear message block for the corresponding DTVCC service. When this delay expires the text is forcibly cleared on the monitor wall.</p> 

Calibrating DTMF Tone Sequences

The Kaleido-IP can detect 16 specific DTMF sequences in a SCTE 35 stream, to trigger up to 8 DTMF break alarms and to return their status to normal. Define the sequences, matching those used in the actual programs you want to monitor.

To calibrate out-of-network, and in-network DTMF tone sequences

- 1 In the main window, click the **System** tab, and then click the **Calibrations (Kaleido-IP)** tab on the second-level tab bar.
- 2 On the **Tools** pane, select the SCTE 35 profile you want to configure, and then click **DTMF break 1 sequences**.



- 3 In the **Properties** pane, set the appropriate values for the out-of-network, and in-network DTMF sequences.

Calibration	
Out of network	902*11
In network	902#10

Allowed characters: 0–9, A–D, *, and #.

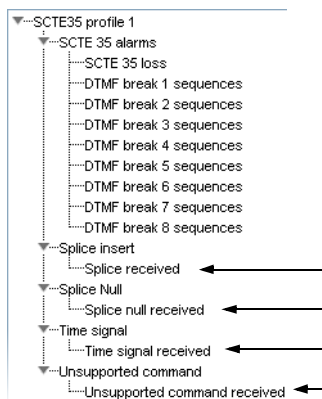
- 4 Proceed in the same fashion with **DTMF break 2 sequences** to **DTMF break 8 sequences**, as needed, to define the remaining DTMF sequences you want to monitor.

Calibrating SCTE 35 Event Reporting Duration





When the Kaleido-IP detects a SCTE 35 command in a transport stream, it momentarily triggers the corresponding alarm. The alarm status returns to normal after a delay, which you can configure for your specific purposes if needed.

To calibrate SCTE 35 event reporting duration

- 1 In the main window, click the **System** tab, and then click the **Calibrations (Kaleido-IP)** tab on the second-level tab bar.
- 2 On the **Tools** pane, select the SCTE 35 profile you want to configure.
- 3 In the main pane, click **Splice received**, **Splice null received**, **Time signal received**, or **Unsupported command received**.



- 4 In the **Properties** pane, set the relevant values under **Calibration**.

<p>Splice received timeout</p>	<p>Set the delay (in seconds) after which the <i>splice received alarm</i> will be cleared. The splice received alarm is triggered immediately whenever the Kaleido-IP detects a <i>splice insert</i> command. The default value is 120 seconds, on a range of 1 to 3600.</p> 
<p>Splice null received timeout</p>	<p>Set the delay (in seconds) after which the <i>splice null received alarm</i> will be cleared. The splice null received alarm is triggered immediately whenever the Kaleido-IP detects a <i>splice null</i> command. The default value is 60 seconds, on a range of 1 to 3600.</p> 
<p>Time signal received timeout</p>	<p>Set the delay (in seconds) after which the <i>time signal received alarm</i> will be cleared. The time signal received alarm is triggered immediately whenever the Kaleido-IP detects a <i>time signal</i> command. The default value is 60 seconds, on a range of 1 to 3600.</p> 
<p>Unsupported command received timeout</p>	<p>Set the delay (in seconds) after which the <i>unsupported command received alarm</i> will be cleared. The unsupported command received alarm is triggered immediately whenever the Kaleido-IP detects a command that does not belong to the set of supported commands. The default value is 60 seconds, on a range of 1 to 3600.</p> 

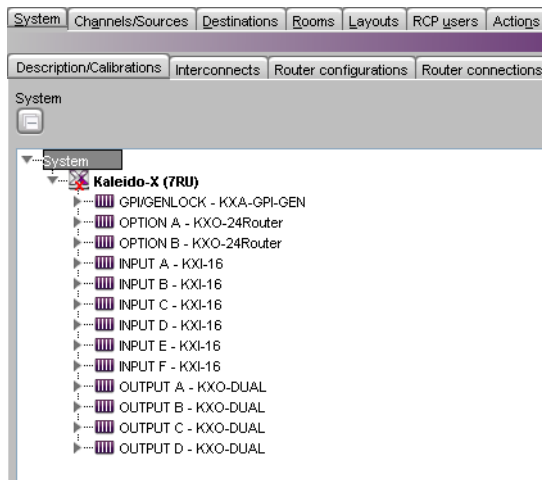
Multiviewer Output Calibrations

Calibrating the Audio Monitoring Color

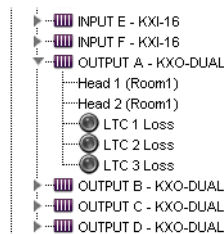
When the **Monitoring indicator** check box is selected (see [Configuring Audio Monitors](#), on page 207), a color-keyed rectangle is shown below the VU meter that is the same color set below in **Audio Monitoring Color** when that display head is being monitored. See also [Triggering Audio Monitoring by Using the mouse, the RCP-200, or the Kaleido-RCP2](#), on page 342.

To calibrate the audio monitoring color

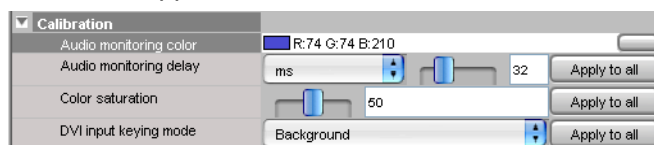
- 1 In the main window, click the **System** tab, and then click **Description/Calibrations** on the second-level tab bar.
A hierarchical list representing the current system appears.
- 2 In the list, expand the multiviewer whose output heads you want to calibrate.



- 3 Expand the appropriate output module.
The expanded module will show the output heads. (Depending on the multiviewer model, other items may also appear.)

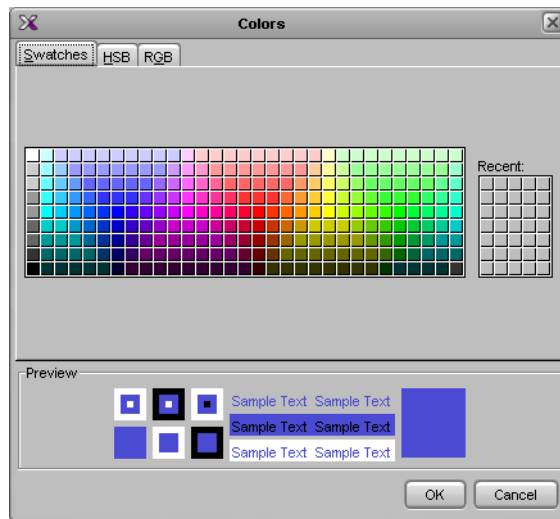


- 4 Select the head you want to calibrate.
- 5 In the **Properties** pane, click the **Audio Monitoring Color** box, and then click the button that appears at the end of the line.



Click to open the color picker window

The color picker window opens.



- 6 In **Colors**, click the tab that corresponds to the color space you want to use, and then choose the color that will be associated with the selected output head.
- 7 Click **OK** to close the color picker window.

7 Configuring Alarms

Introduction

Your Kaleido multiviewer system can help you monitor alarm conditions efficiently. This section describes how to configure alarm detection and alarm sharing parameters for your system. This configuration is made in XEdit.

Key Concepts

Alarm

An *alarm* is a report on a single, defined condition (generated by a device or service) within a multiviewer system. A multiviewer analyses the signals that pass through it, and can detect and flag problems by raising alarms. Each alarm can be individually configured. Most alarm definitions specify detection thresholds, a *set duration*, and a *clear duration*, in order to exclude transient events. See [Configuring Alarm Thresholds](#) on page 96, and [Configuring Alarm Debouncing](#), on page 101.

When XEdit is connected to a multiviewer in online mode, alarms generated by the current multiviewer are displayed in the System list and you can review their status in real time. You can manage additional alarms, including health monitoring alarms, or alarms generated by external devices, by using an alarm browser such as iControl's GSM alarm browser or the alarm browser pane in XEdit's **Build Virtual Alarm** window (see [Virtual Alarm](#) on page 119).

As part of the alarm calibration process, you can specify that an alarm, when triggered, be sent as an *SNMP trap*. See [Simple Network Management Protocol \(SNMP\)](#) on page 120.

General Status Manager (GSM)

The general status manager (GSM) is the service responsible for central management of all alarm conditions within a monitoring and control system. Every Kaleido multiviewer has a GSM and can be configured to share GSM information with other multiviewers and iControl systems. For example:

- Display alarm status information from Densité cards on the monitor wall.
- Display alarms detected within a Kaleido multiviewer system on an iControl Web page.
- Display EdgeVision alarms along with the stream coming from the EdgeVision on a Kaleido-IP multiviewer.
- Display alarm status information in XEdit (online mode).
- Create virtual alarms that combine a number of alarm statuses, not only within a single system, but also from different devices within multiple Kaleido multiviewers and iControl systems. See [Creating Virtual Alarms](#) on page 128.

In addition, as of version 6.40 of the Kaleido Software, it is possible to assign elements from any GSM alarm browser to alarm levels in the sources table, directly, by a drag-and-drop operation (see [Configuring logical sources based on external alarm providers](#) on page 81).

Alarm Logging

As part of the alarm calibration process, you can specify that an alarm, when triggered, be logged to an iControl application server. This requires adding a log plug-in to your multiviewer's GSM configuration (see [Adding a GSM log plug-in](#) on page 136). As of version 6.50 of the Kaleido Software, alarms logged to an iControl application server include time code information from the corresponding video signal (ATC or VITC, depending on the signal format).

- By default, native alarms are *not* logged. See [Enabling logging for a native alarm](#) on page 139.
- Virtual alarms are logged by default. See [Disabling logging for a virtual alarm](#) on page 140. When a virtual alarm status changes, then the native sub-alarms that triggered the change are logged even if logging is disabled for these sub-alarms.
- Global alarms are always logged. It is possible, however, to disable alarm logging for a global alarm, by editing the corresponding plug-in from the iControl application server's GSM alarm browser. Refer to the iControl User Guide, for more information. See [Related Documentation](#), on page 11.

Alarm Browser

The alarm browser is a window, accessible from within iControl Navigator and other iControl applications. XEdit's **Build Virtual Alarm** window features an alarm browser pane. The information that appears in the Alarm Browser is generated by a specific GSM. The alarm browser displays a hierarchical view of all the alarms that have been discovered by the GSM. The alarms may be related to Grass Valley devices, or other supported third-party devices, and are organized into folders. The current status of each alarm is shown as an icon next to its name. These status are dynamically updated.

Alarm Status

The current status of an alarm determines the color of the LED-like icon to the left of its name, in XEdit, in GSM alarm browsers, and in iControl log viewers. Video monitors, UMDs and alarm monitors have alarm reporting features (such as border color and thickness, blink mode, latch) that can be customized in XEdit, when you create a layout.

Each possible alarm status is represented by a color. Alarm statuses are dynamically updated. The following alarm status values are supported as described in the table below: *pending*, *normal* (or *OK*), *warning* (or *minor*), *major*, *critical*, *unknown*, *nonexistent*, and *disabled*. In a multiviewer's System list and on the monitor wall, *nonexistent* and *unknown* alarms are considered *disabled*.

Status	Color	Description
Pending	White	Alarm exists but was not reported yet: The software is waiting for the hardware or driver to update the alarm.
Normal (or OK)	Green	No error detected.
Warning (or Minor)	Yellow	Supported for Gateway alarms only (see Gateway on page 263).
Major	Orange	Supported for Gateway alarms only (see Gateway on page 263).
Critical	Red	Error detected.
Unknown	Gray	Could not get status: Failed to communicate with device to get status. It could happen for example, if the network connection is lost. Another example is a loss of signal that would trigger a critical alarm for signal presence while the alarm state for all other parameters would become unknown. The freeze or black status is disabled if the signal is not present.
Nonexistent	Blue	Alarm that has been removed (or was never added): It can happen if the alarm reference in XEdit does not exist on the multiviewer. All associated alarms will disappear from the GSM and become disabled on the multiviewer.
Disabled	Black	No alarm assigned to the status indicator: Alarm exists but is disabled at the source by the user. The Kaleido Software has the ability to deactivate some alarms on the multiviewer hardware itself.

A multiviewer alarm status is only visible in iControl's GSM alarm browser when at least one of the following conditions apply:

- The alarm is already monitored on the monitor wall.
- Someone navigated to this alarm by expanding the System list in iControl or XEdit.
- The alarm is associated with a background action.
- The alarm contributes to a virtual alarm.

TIP

Create a virtual alarm, based on the alarms whose status you want to be able to monitor in real time. See [Virtual Alarm](#) on page 119.

When navigating a multiviewer's GSM, by using the alarm browser in iControl, some alarm folders may show a disabled (black) status, until you expand them to reveal the alarms they contain, at which point the folder color will be updated to reflect the status of the alarms.

In the case of a **Kaleido-IP**, alarm status and text information for a source is available only when the corresponding source is being monitored on the wall. For SCTE 35 alarm status and text information to be available (and logged to iControl, if applicable), make sure to assign at least *one text or alarm level from every SCTE 35 stream you want to monitor*, to UMD components (tally or text) on the monitor wall layout. Alarms associated with sources that are currently not assigned to any layout element on the monitor wall appear with a pending (white) status in a Kaleido-IP System list or GSM alarm browser.

External Alarm Provider

Once you have declared a device (such as an iControl application server, an EdgeVision quality of experience monitoring system, another multiviewer) as an external alarm provider to your multiviewer system, any alarms registered with this device's GSM, in addition to the alarms generated by the current multiviewer system, can contribute to your monitoring and control purposes. See [Managing Alarm Providers](#) on page 126.

IMPORTANT

iControl application server requirement

In the case of an iControl system involving multiple application servers, there will typically be only one or two of the servers with a lookup service enabled. To qualify as an external alarm provider, an iControl application server must have its lookup service enabled (that is, it must be a *lookup server*). Refer to the iControl User Guide for more information. See [Related Documentation](#), on page 11.

Lookup Service

Grass Valley's monitoring and control products implement a lookup service for discovery and information sharing over a network. A program on one device can use a lookup service to obtain information from remote applications or devices, including alarm-related information from a device's GSM. By default, every multiviewer has a lookup service and can therefore be considered a *lookup server*. For example, before you can use an RCP-200 control panel to operate your monitor wall, the multiviewer must be specified as a lookup server in the RCP-200's configuration (see *Specifying lookup servers for the RCP-200* in the multiviewer's *Installation & Service Manual* for more information).

Alarm Suppression

Alarms that are not relevant—momentarily or on a recurrent basis—can be squelched, either manually or by defining schedules, so that only meaningful alarm information remains to be monitored. A schedule can put an alarm in either of the following operational modes: *offline*, *in maintenance*, or *inverted*.

Note: A background action triggered by an alarm is executed, regardless of the alarm's operational mode (see [Creating Background Actions](#) on page 267).

Global Alarms

A logical source comprises different level categories, including alarms (see [Logical source](#) on page 71). Each logical source can include multiple alarm levels: one for each alarm state that can be reported to the Kaleido multiviewer system. In many cases, a single, combined status, based on all the alarms in every alarm level for a logical source, is more useful than having to individually assess each and every alarm condition detected. Such a global alarm combines all the individual alarm statuses into an overall status, where the most critical events take precedence.

Example: Three alarms occur, two of which can be acknowledged without further action, while the other one is considered an Error. In such a case, the overall alarm status would be Error.

The Kaleido Software creates one global alarm for every logical source. The global alarms are not directly exposed in the **Channels/Sources** tab, but you can configure which alarm levels contribute to them (see [Configuring an alarm level's contribution](#) on page 78). If you have disabled global alarm contribution for all alarm levels, then the global alarms are *not* generated.

Note: If you choose to configure your multiviewer system with a large number of logical sources (for example, more than 1500), you should disable global alarm contribution for all alarm levels in the sources table, to improve the system performance.

In the **Layouts** tab, you can assign a global alarm to a layout element that supports alarm reporting, like a UMD or an alarm monitor: in the **Properties** pane, the lists of alarm levels that can be assigned to a monitor include the item *GlobalAlarm*, along with all the individual alarm levels.

You can select this global alarm not only as an alarm status, but also as a text label. When an individual alarm is in Error, its friendly name will contribute to the global alarm text value. When the global alarm level is assigned to an alarm monitor, the text values for all contributing alarms currently in Error will be visible.

See [Configuring Video Monitors](#), on page 191, [Configuring UMDs](#), on page 224, [Configuring Alarm Monitors](#), on page 231, and [Configuring Subtitling Monitors](#), on page 235), for detailed instructions.

Virtual Alarm

A virtual alarm allows you to derive a result from the status of one or more existing alarms. Any alarms — including other virtual alarms — can be combined together to form a new, higher-level virtual alarm. Since a virtual alarm can be composed of virtual alarms other than itself, there can be many levels of virtual alarms within a particular virtual alarm. At this time there is no limit to the number of levels that a virtual alarm can have. See [Creating Virtual Alarms](#) on page 128.

Notes

- *Do not* include the reserved text *GlobalAlarm* in a virtual alarm name.
 - Creating a virtual alarm that includes itself as a sub-alarm, directly or indirectly, creates a circular reference. XEdit does not automatically check for this dependency. Your multiviewer will, however, perform cycle validation and will record an error in `vroom.log` if such a condition is detected.
-

Sub-Alarm

A sub-alarm is an alarm that contributes to the status of a higher-level virtual alarm. The effect of a sub-alarm's contribution is determined by the way in which the higher-level alarm is configured.

Alarm Monitor

Alarm monitors help you see the status of global and virtual alarms, but their use is not limited to this type of alarms. When any alarm level is assigned to an alarm monitor, the status of this alarm will be shown. When using the global alarm at the text label level, it will display the text value of the alarm, which is a readable name. See [Configuring Alarm Monitors](#) on page 231, for more information.

Simple Network Management Protocol (SNMP)

Certain multiviewers support at least one SNMP *agent*, which is capable of sending SNMP *traps* to notify external SNMP *managers* of significant events. Within your multiviewer system, these significant events are reported as alarms (see [Alarm](#) on page 115).

For a **Kaleido-IP** multiviewer, the SNMP status for an alarm is only valid if the corresponding source is monitored on the monitor wall.

TIP

To make text status available to SNMP managers

- 1 In XEdit, add the text status element from the appropriate source signal to a logical source (channel).
 - 2 Assign the logical source to a UMD.
 - 3 Load the layout that includes this UMD on the monitor wall.
-

SNMP traps

Setting up your multiviewer's SNMP trap process involves the following actions:

- Identify the targets (SNMP managers) to which SNMP traps will be sent (see [Identifying Target SNMP Managers](#) on page 141).
- Choose the traps that will be sent to the selected SNMP managers (see [Enabling SNMP Traps](#) on page 142). *Not available for Kaleido-IP.*

Traps are automatically sent for all logical sources' *global alarms* (see [Global Alarms](#) on page 118), and for *virtual alarms* (see [Virtual Alarm](#) on page 119). Each trap contains a cause, and the name of the logical source. Kaleido-IP X100 and Kaleido-IP X300 multiviewers *cannot* send health-related SNMP traps. To send health-related traps, a Kaleido-IP X120, X110, X320, or X310 requires advanced server configuration, for which you will need assistance from Technical Support ([Grass Valley Technical Support](#), on page 360).

TIP

Create *virtual alarms* based on health-related alarms from your Kaleido-IP to make this information automatically available to your target SNMP managers.

To make Kaleido-IP health-related status available to SNMP managers

TIP (continued)

- 1 Connect XEdit to the Kaleido-IP.
 - 2 On the **Tools** menu, click **New virtual alarm**.
 - 3 In **Build Virtual Alarm**, select your Kaleido-IP from the list in the left-hand part of the GSM alarm browser pane.
 - 4 In the right-hand part of the alarm browser pane, expand the MULTIVIEWER OUTPUTS element to navigate to the health-related alarms you want to monitor.
 - 5 Proceed with the creation of the new virtual alarm (see [Creating Virtual Alarms](#) on page 128, for detailed instructions).
-

MIB documents

Before you can use a network management system (NMS) to send SNMP requests (such as `Get`, `GetNext`, `Set`) to your multiviewer, and to process the multiviewer's responses and traps, you need to download the appropriate MIBs from your multiviewer, and then load them into the NMS.

Note: The Kaleido Software does not support the SNMP v2 `GetBulk` command. Performing a `GetBulk` on `kxVideoTable` returns "There is no such instance in this MIB" instead of the data for the table.

To obtain MIBs from your multiviewer, point your browser to the URLs indicated below.

Kaleido-IP

To manage these multiviewers (through port 161), or process any SNMP traps they might send, NMSs require both `Kaleido-IP-MIB`, and `MIRANDA-MIB`.

- `http://<your multiviewer's IP address>/pub/Kaleido-IP-MIB.mib`
- `http://<your multiviewer's IP address>/pub/MIRANDA-MIB.mib`

In addition, health-related status information from a **Kaleido-IP X320**, **Kaleido-IP X310**, **Kaleido-IP X120**, or **Kaleido-IP X110** multiviewer is available through port 1161, for which your NMS will need the `basebrd7_v5.mib` MIB.

- `http://<your multiviewer's IP address>/pub/basebrd7_v5.mib`

Health-related status information from a **Kaleido-IP X300**, or **Kaleido-IP X100** multiviewer is available through port 1161, for which your NMS will need the `SUPERMICRO-HEALTH-MIB`, and `SUPERMICRO-SMI` MIBs.

- `http://<your multiviewer's IP address>/pub/SUPERMICRO-HEALTH-MIB.my`
- `http://<your multiviewer's IP address>/pub/SUPERMICRO-SMI.my`

In the case of a Kaleido-IP, publishing signal/service probing alarms to SNMP managers is not fully supported. `Kaleido-IP-MIB` is a subset of `KALEIDO-KX-MIB`. The Kaleido-IP can report service/signal status to an SNMP manager through the `Kaleido-IP-MIB` file's `kxVirtualAlarmTable`. This table includes entries for all virtual alarms and logical sources created in XEdit for your multiviewer. For each logical source, the global alarm and associated text information is available. Refer to the MIB-embedded descriptions for exceptions.

TIP

If an iControl Application Server is available to your system, configure it to relay your Kaleido-IP alarm status information to the target devices. See [General Status Manager \(GSM\)](#) on page 115, and refer to *iControl and SNMP* in the iControl User Guide, for more information. See [Related Documentation](#), on page 11.

Teletext, Subtitles, and Closed Captions

Multiviewer	Supports
Kaleido-IP	Can monitor teletext and subtitling from DVB streams, and subtitling from SCTE 27 streams. The lines of text extracted from a DVB subtitling stream compliant with ETSI EN 300 743 V 1.2.1 (2002-10), or from a SCTE 27 subtitling stream can be displayed within the corresponding video window, or in a subtitling monitor. In the case of DVB teletext streams, the lines of text are displayed within the corresponding video window.

Teletext may comprise up to 799 pages of displayable data (numbered from page 100 to 899). Teletext subtitles are decoded as described by the ETSI EN 300 472 V1.3.1 (2003-05) standard (for Kaleido-IP) or ETSI ETS 300 706 (for other multiviewer models). The Kaleido-IP can decode up to eight pages from a DVB teletext stream, and monitor teletext, subtitle, and text presence for each of the selected pages. See [Setting a Video Monitor's Text Mode](#), on page 201, and [Displaying Subtitles and Closed Caption Text](#), on page 326, for more information.

Decoding Precedence

The CEA-708 standard supports legacy CEA-608 data. In the case of an HD-SDI source carrying both 708 captions and 608 legacy caption data, the multiviewer will display the 708 captions, and automatically fall back to displaying the 608 captions only if the 708 data becomes unavailable.

In the case of a Kaleido-IP, when a video or subtitling monitor's *text mode* is set to **Auto sense**, and the associated source carries more than one type of captioning, teletext or subtitling data, decoding precedence is as follows: DVB subtitling, SCTE 27 subtitling, DVB teletext (WST), CC (608). For example, DVB teletext is only decoded if there is no DVB subtitling, and no SCTE 27 subtitling available.

For the other multiviewer models, the following table shows which of captioning, teletext, or subtitling data is decoded by default for each supported video format, when a video monitor's text mode is set to **Auto sense**: DTVC (708), CC (608), teletext (RDD 8/OP-47, ST 2031, or WST).

Video format	Decoded data	Video format	Decoded data
SDI 525	CC (608)	1080i59.94	DTVC (708)
SDI 625	Teletext	1080PsF23.98	N/A

Video format	Decoded data	Video format	Decoded data
NTSC ^a	CC (608)	1080PsF24	N/A
PAL ^b	Teletext	1080PsF25	Teletext
SECAM	Teletext	1080PsF29.97	DTVCC (708)
720p24	N/A	1080p23.98	N/A
720p25	N/A	1080p24	N/A
720p29.97	DTVCC (708)	1080p25	N/A
720p50	Teletext	1080p29.97	DTVCC (708)
720p59.94	DTVCC (708)	1080p50	Teletext
1080i50	Teletext	1080p59.94	DTVCC (708)

a. All supported NTSC formats.

b. All supported PAL formats.

CEA-608 CC Alarm Definitions

Line 21 loss	CEA-608 preamble presence indicator
CC1 loss – CC3 loss	Closed caption data presence indicators

CEA-708 DTVCC Alarm Definitions

Service loss	Reports, after a configurable amount of time (see DTVCC service presence timeout on page 99), the absence of DTVCC data blocks in the video signal for the given DTVCC service
Text loss	Reports, after a configurable amount of time (see DTVCC text presence timeout on page 99), the absence of characters for the given DTVCC service

Dolby E/AC-3 Metadata

Dolby E and PCM audio levels can be displayed through audio monitors.

- If multichannel audio (up to 8 channels) is coded in a Dolby E stream and transported over a single AES channel, metadata and audio levels are extracted from the Dolby E stream:
 - no ABT support
 - VU and Peak meters (8 channels), for each source
 - Program configuration, for each source
 - Dialnorm for program 1, for each source
- If multichannel audio (up to 16 channels) is transported as regular AES channels (up to 8) in the SDI embedded audio, metadata is extracted from VANC packets:
 - Program configuration
 - Dialnorm for program 1
 - VU and Peak meters come from the AES in PCM

Definitions

Term	Definition
Dolby E stream	A coded (compressed) 8-channel digital stream that fits inside an AES channel (L/R)
Dolby E metadata	Metadata such as <i>dialnorm</i> and <i>program config</i> extracted from a Dolby E stream. Includes audio level data from encoded audio data
VANC metadata	Audio metadata extracted from SMPTE ST 2020-A VANC packets. Audio level data is probed directly from the PCM AES signal
Embedded audio source or channel	Any of the 8 SDI or HD-SDI embedded audio AES signals
AES signal or source	A bitstream for audio service
Multichannel audio	Audio service or essence composed of more than 2 channels of audio (more than Left and Right)

Audio Format

The format of each audio channel (PCM, Dolby AC-3, Dolby E, other or Unavailable) is reported as a text attribute, that can be assigned to a text level within a logical source.

Audio Metadata

The metadata extracted from the VANC and from the Dolby E is available as text in the XEdit hierarchical system list, and therefore can be exposed through any layout element capable of displaying text levels from logical sources (currently only UMDs).

Dialnorm is displayed as a numeric value between -31 and -1 dB. *Program Config* is displayed as the Dolby E Program Config description. *Unavailable* is displayed if the source is not being decoded, or is not Dolby E.

Logical Source Assignment

Logical source assignment is performed by dragging an AES pair onto a logical source's audio level.

If the AES pair is calibrated as a Dolby E source, then the 8 channels are available to be displayed by an audio monitor. The channel displayed by the audio monitor depends on how the monitor was configured.

For Dolby VANC, if the audio monitor is set to **Auto** or **Dolby VANC**, the VANC metadata from the video of the assigned AES will be decoded. The audio monitor will have access to all amended audio peaks depending on VANC program configuration (regardless of which AES pair was assigned to the logical source).

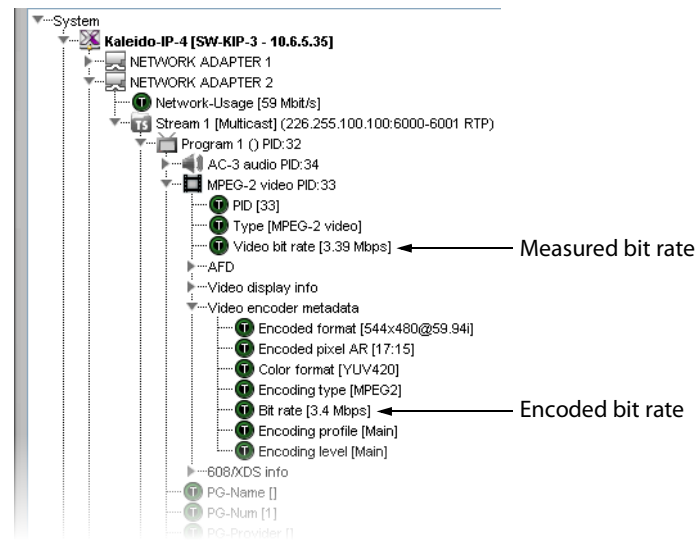
SCTE 35 Digital Program Insertion (DPI) Signaling

The Kaleido-IP can monitor digital program insertion (DPI) signaling from SCTE 35 streams. It supports a splice break alarm, eight DTMF break alarms, and text information for logging purposes.

Bit Rate Measurement

The Kaleido-IP reports bit rate measurements as text values, for every type of elementary streams. Measurements are performed based on guidelines from ETSI TR 101 290. A 188-byte packet format is assumed. (With the current version of the Kaleido Software, bit rate values reported for streams encoded with a 204-byte packet format are therefore not accurate.)

Note: Do not confuse the *video bit rate* (measured value) with the bit rate reported under **Video encoder metadata** (extracted information).



Transport Stream Monitoring

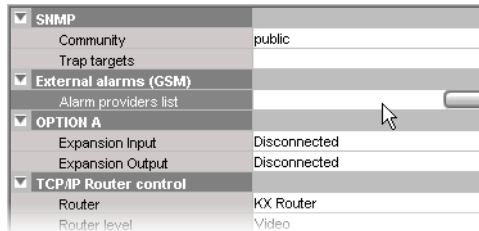
The Kaleido-IP reports TR 101 290 first- and second-priority faults, as alarms and text values, for every type of transport streams. Measurements are performed based on guidelines from ETSI TR 101 290. Second-priority indicator 2.5 (PTS_error) is available for video and audio elementary streams, only. Second-priority indicator 2.4 (PCR_accuracy_error) is *not* available.

Note: Text values are not persisted and should not be displayed in monitor wall layouts. They are suitable for logging purposes only.

Managing Alarm Providers

To add alarm providers to your Kaleido multiviewer system

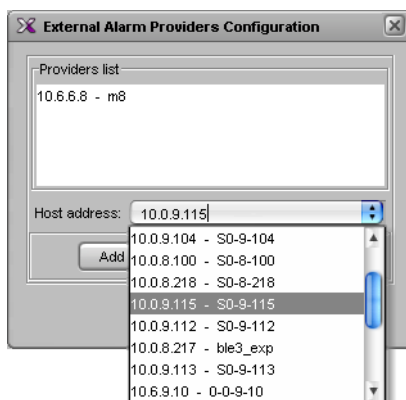
- 1 In the main window, click the **System** tab, and then click **Description/Calibrations** on the second-level tab bar.
A hierarchical list representing the current system appears.
- 2 Click the multiviewer whose alarm providers you want to define.
- 3 In the **Properties** pane, click the **Alarm providers list** box.



- 4 Click the button that appeared at the end of the box to open the **External Alarm Providers Configuration** window.



- 5 In **External Alarm Providers Configuration**, review the alarm providers list, and then add or remove devices, as required.



- To add a device to the providers list, select the device from the **Host address** list, or type the appropriate IP address in the box, and then click **Add**.
- To remove a device from the alarm providers list, select it, and then click **Remove**.

Note: To qualify as an external alarm provider, an iControl application server must have its lookup service enabled. See [External Alarm Provider](#) on page 118.

- 6 Once you have added all devices required for your purposes, click **OK** to close the window.
- 7 On the **File** menu, click **Save**.

Managing Virtual Alarms

Creating Virtual Alarms

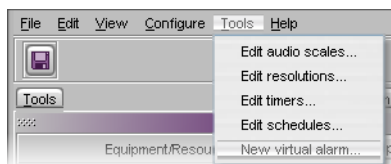
Inverting an alarm

The **Invert** contribution allows performing a logical “NOT” calculation on sub-alarms. This feature can be used, for example, to report alarms from GPI inputs. It can also be used to handle cases where an error is expected, and *not* seeing an error is a sign that something probably went wrong. The table below describes the result of inverting sub-alarms:

Sub-alarm status	Inverted contribution
NORMAL	ERROR
MINOR	NORMAL
MAJOR	NORMAL
CRITICAL	NORMAL
NON-EXISTENT	NON-EXISTENT
PENDING	PENDING
DISABLED	DISABLED
UNKNOWN	UNKNOWN

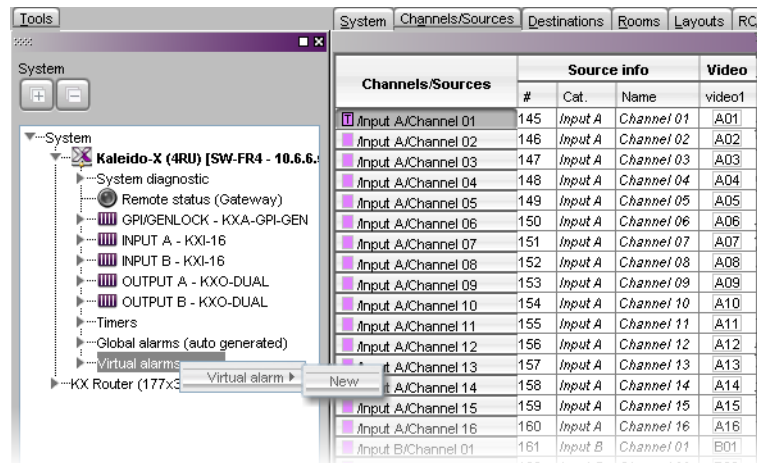
To create a virtual alarm

- 1 Connect XEdit to the multiviewer (see [Using XEdit in Online Mode](#) on page 28).
- 2 On the **Tools** menu, click **New virtual alarm**.



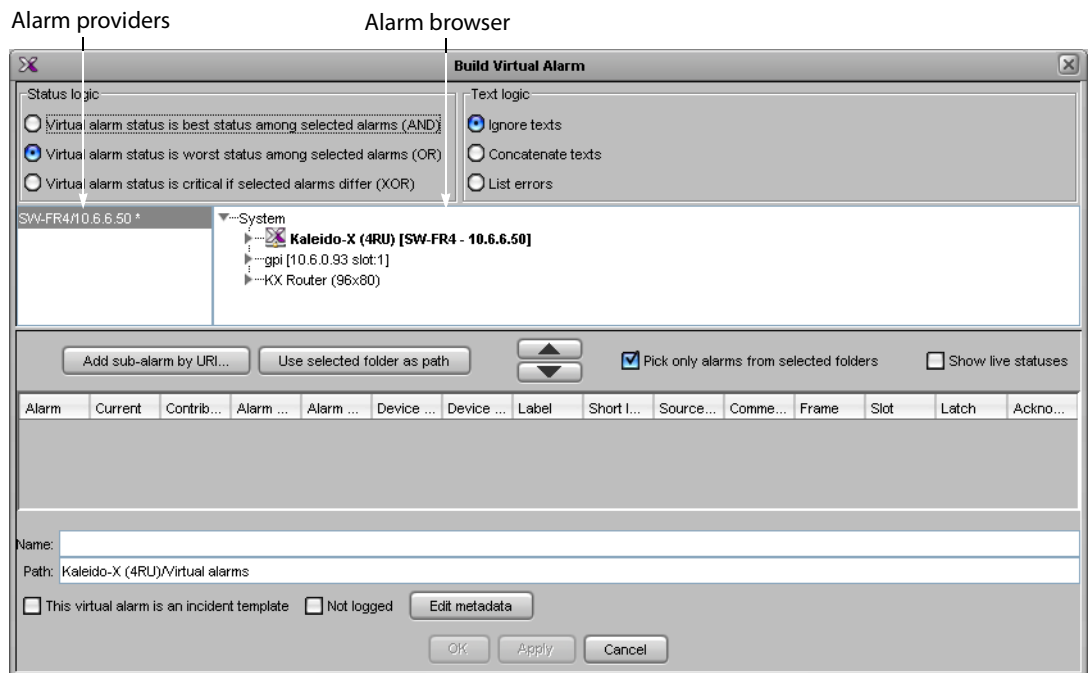
Alternatively, after clicking the Actions tab, or while a *text* or *alarm* level is selected in the sources table you can:

- Right-click **Virtual alarms** in the filtered System list, point to **Virtual alarm**, and then click **New**.



- Expand **Virtual alarms** in the filtered System list, right-click any existing virtual alarm, point to **Virtual alarm**, and then click **New**.

The **Build Virtual Alarm** window appears.



3 In the **Status logic** section, select one of the following three options:

Virtual alarm status is best status among selected alarms (AND) — Choose this option to have the contribution of the sub-alarms calculated using the *optimistic* version of the alarm logic tables.

Virtual alarm status is worst status among selected alarms (OR) — Choose this option to have the contribution of the sub-alarms calculated using the *pessimistic* version of the alarm logic tables. This is the most common option, since it brings changes in the status of any sub-alarms to the attention of the operators.

Virtual alarm status is critical if selected alarms differ (XOR) — Choose this option to have the contribution of the sub-alarms calculated using the *XOR* version of the alarm

logic tables. This causes the virtual alarm to reflect whether or not all of its sub-alarms have the same status. If all sub-alarms are the same, the virtual alarm will be green. Otherwise, it will be red.

For a more detailed description of the difference between these options, refer to “Understanding the Alarm Logic Tables” in the iControl User Guide. See [Related Documentation](#), on page 11.

- 4 In the **Text logic** section, determine what to include in this virtual alarm’s text attribute by selecting one of the following three options:

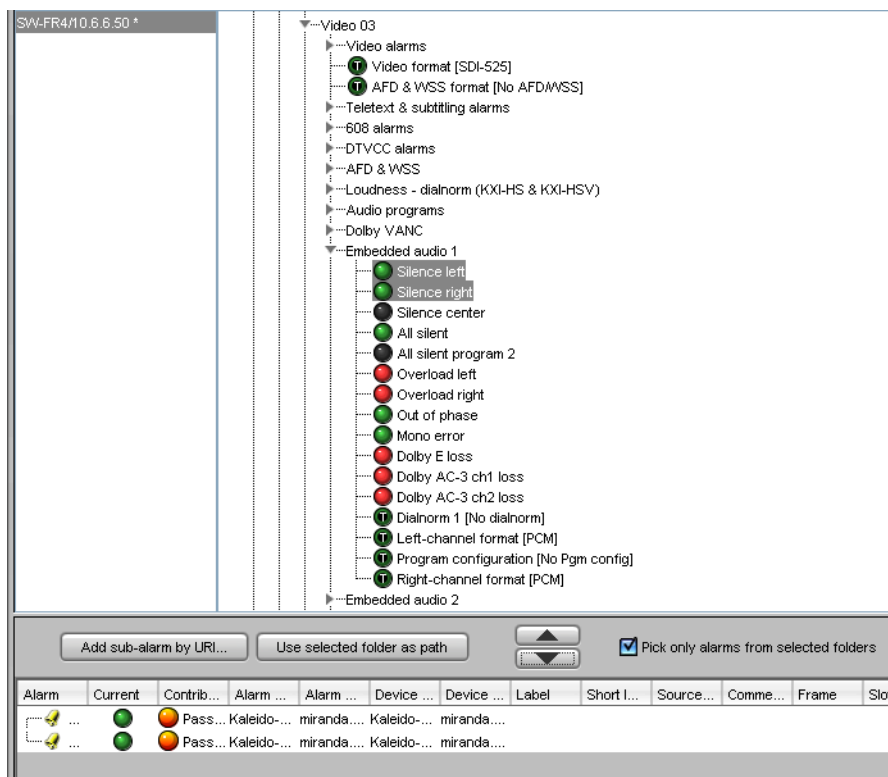
Ignore texts — No text logic (default).

Concatenate texts — Concatenate the text attributes from all sub-alarms.

List errors — List the text attributes from the sub-alarms that are in error.

- 5 Select the alarm provider you want to use from the list in the left-hand part of the GSM alarm browser pane.

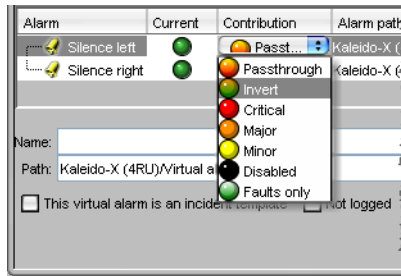
- 6 In the right-hand part of the alarm browser, select the alarms that are to be sub-alarms of the new virtual alarm, and then click the large down arrow button to transfer them to the table in the bottom half of the window.



- 7 The table displays various details about the sub-alarms you have selected, including their *contribution*, which defines how a sub-alarm will pass its status on to the virtual alarm. The default contribution value is **Passthrough**, which means the sub-alarm will pass its status unaltered to the overall calculation of the virtual alarm.

It is possible to override the error status of sub-alarms when they are triggered. This is useful when, for example, a device is only able to report a status of either *normal* (green) or *error* (red), but you want the error condition to be considered as *minor* (yellow) in the virtual alarm calculation. To change a sub-alarm’s contribution, click in

the **Contribution** column, and then select the status you want the virtual alarm to use when an error occurs.



For example, if a sub-alarm goes from green to orange or red, but the selected contribution is yellow, the virtual alarm will “see” yellow (the virtual alarm’s overall status may still depend on other sub-alarms).

The **Invert** contribution allows performing a logical “NOT” calculation on sub-alarms. This feature can be used, for example, to report alarms from GPI inputs. It can also be used to handle cases where an error is expected, and *not* seeing an error is a sign that something probably went wrong. See [Inverting an alarm](#), on page 128.

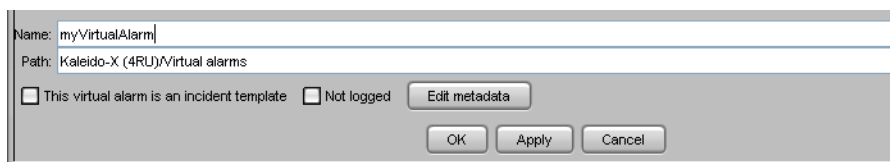
Selecting the **Faults only** contribution causes a sub-alarm to be mapped to NORMAL unless it is in one of the fault statuses—usually CRITICAL, MAJOR, and MINOR. Refer to the iControl User Guide for more information. See [Related Documentation](#), on page 11.

Note: If the sub-alarm’s fault condition is cleared, its contribution will always be *green* (NORMAL), unless the value specified in the **Contribution** column is *black* (DISABLED).

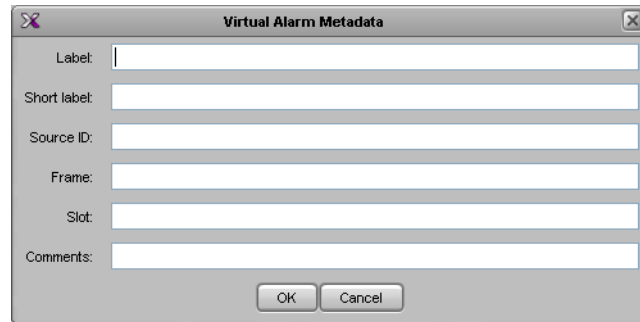
- 8 Repeat from [step 5](#), until you have added all the required sub-alarms.
- 9 Specify a name for the new virtual alarm in the **Name** box.

Note: *Do not* include the reserved text *GlobalAlarm* in a virtual alarm name.

- 10 Optionally, change the default path as needed in order to logically group alarms together.



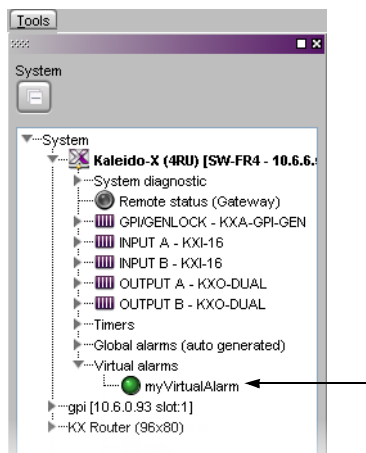
- 11 Configure logging behavior as required (see [Alarm Logging](#) on page 116):
 - If you want to disable logging for this virtual alarm, then select **Not logged**.
 - If you want to have occurrences of this virtual alarm logged as *incidents*, select **This virtual alarm is an incident template**. Refer to the iControl User Guide for more information. See [Related Documentation](#), on page 11.
 - To add relevant information for your logging purposes, click **Edit metadata**. The **Virtual Alarm Metadata** window appears.



The information you provide for this virtual alarm can be used to sort and locate events and incidents in the iControl log viewers. For example, a meaningful Source ID may help you distinguish this virtual alarm's sub-alarms from other alarms. Click **OK** to close the window.

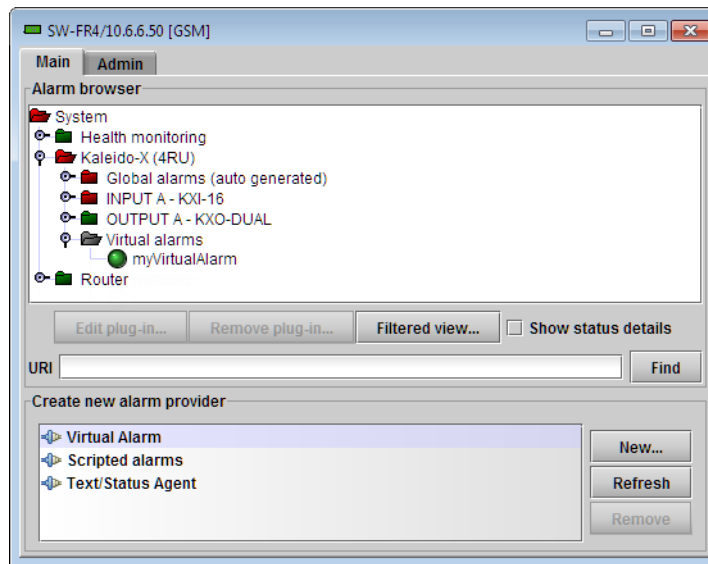
12 Click **OK**.

The **Build Virtual Alarm** window closes and the newly created alarm appears at the specified path, under **Virtual alarms**, in your multiviewer's filtered System list (such as when a text or alarm level is selected in the sources table).



If the multiviewer's IP address was added to an iControl applications server's **Service and alarm discovery** table² you will also be able to manage your multiviewer's virtual alarms from the multiviewer's GSM, by using the iControl GSM alarm browser.

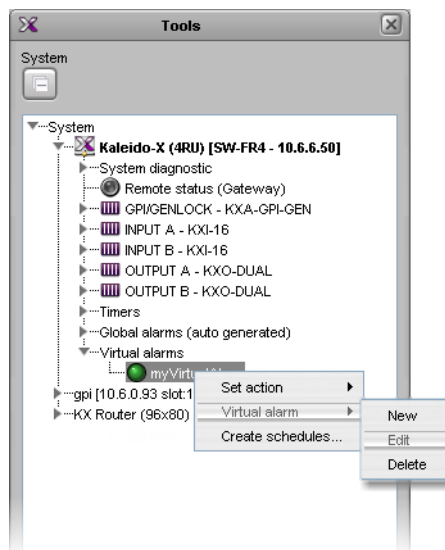
2. To access the iControl Lookup locations page, where you can review and update the **Service and alarm discovery** table, click **System tools** on the Startup page, and then click **Edit service locations**.



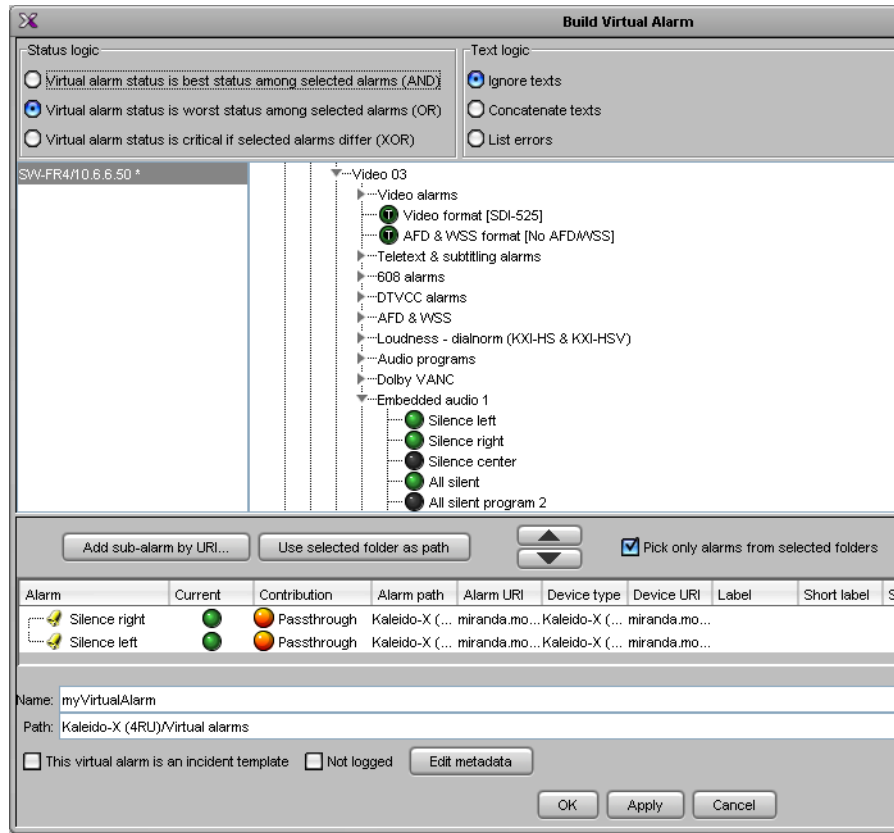
Modifying Virtual Alarms

To modify a virtual alarm

- 1 In the sources table, select a text or alarm level.
Alternatively, click the **Actions** tab.
- 2 Expand the filtered System list, and navigate to the virtual alarm you want to modify.
- 3 Right-click the alarm, point to **Virtual alarm**, and then click **Edit**.



The **Build Virtual Alarm** window appears.

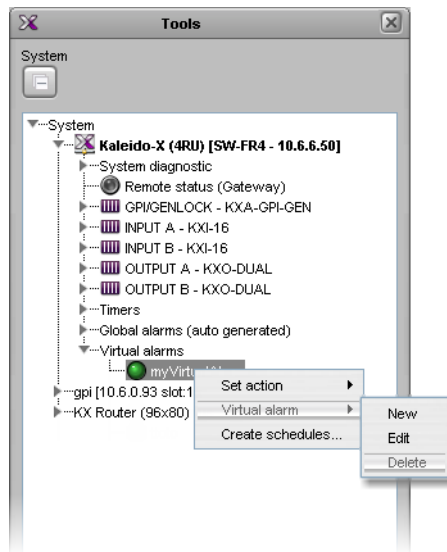


- 4 Modify your virtual alarm, by adding or removing sub-alarms, changing their contribution, the alarm name or path, etc. See [Creating Virtual Alarms](#), on page 128, as needed. For example:
 - after selecting the sub-alarms you want to remove from the table in the bottom half of the window, click the large up arrow button.
 - after selecting the appropriate alarm provider from the list in the left-hand part of the GSM alarm browser pane, select the sub-alarms you want to add, from the right-hand part of the alarm browser, and then click the large down arrow button to transfer them to the table in the bottom half of the window.
- 5 Once you have completed your changes, click **OK** to close the **Build Virtual Alarm** window.

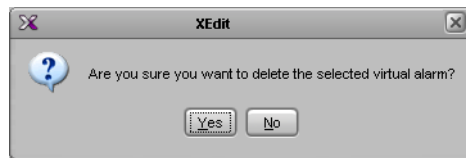
Deleting Virtual Alarms

To delete a virtual alarm

- 1 In the sources table, select a text or alarm level.
Alternatively, click the **Actions** tab.
- 2 Expand the filtered System list, and navigate to the virtual alarm you want to delete.
- 3 Right-click the alarm, point to **Virtual alarm**, and then click **Delete**.



XEdit prompts you to confirm.



4 Click **Yes** to proceed.

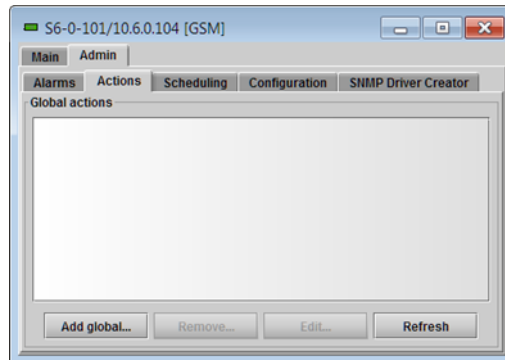
The selected virtual alarm is removed from your configuration.

Managing Alarm Logging

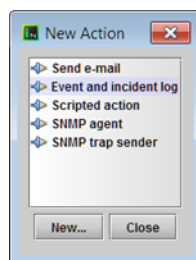
Adding a GSM log plug-in

To add a log plug-in to your multiviewer's GSM

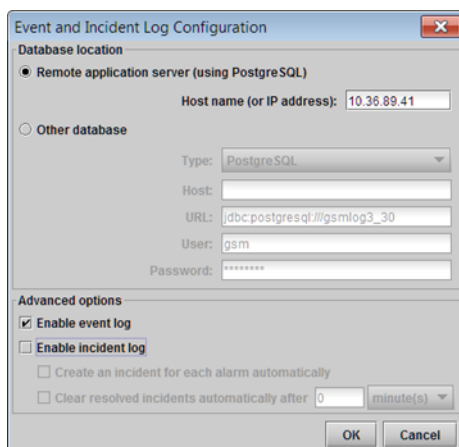
- 1 Make sure your multiviewer is specified as a lookup server in the iControl application server's configuration. See [Specifying your multiviewer as a lookup server for iControl](#), below.
- 2 Open iC Navigator. Refer to *Starting iC Navigator*, in the iControl User Guide, if needed. See [Related Documentation](#), on page 11.
- 3 On the **View** menu, click **General status managers**.
The **General Status Managers** window appears.
- 4 In the left pane, click your multiviewer's GSM.
- 5 In the main pane, click the **Admin** tab, and then click **Actions** on the second-level tab bar.



- 6 Click **Add global**.
The **New Action** window appears.

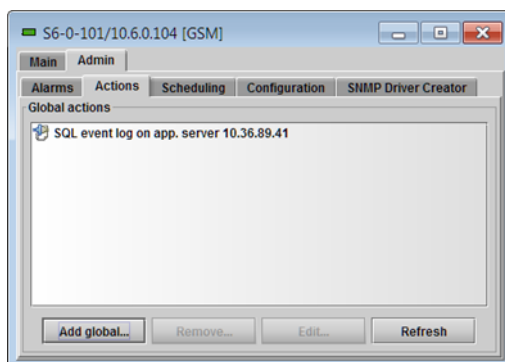


- 7 Click **Event and Incident log**, and then click **New**.
The **Event and Incident Log Configuration** window appears.
- 8 In **Host name (or IP address)**, type the iControl application server's IP address.
- 9 Under **Advanced options**, *clear* **Enable incident log**.



10 Click **OK**.

Your new log plug-in appears under **Global actions**.



11 Close **General Status Managers**.

In iControl Navigator, you may now open **Event Log Viewer**, and search the application server's event log database for any relevant alarm information logged by your multiviewer. Refer to the iControl User Guide for more information. See [Related Documentation](#), on page 11.

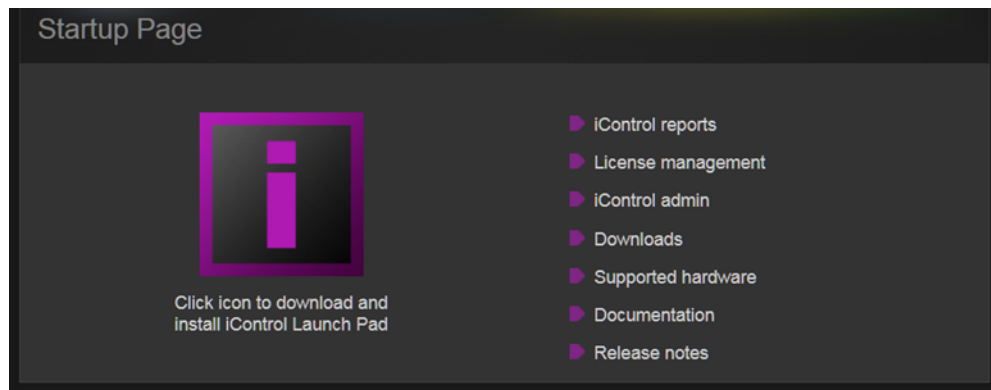
Specifying your multiviewer as a lookup server for iControl

To specify your multiviewer as a lookup server for iControl

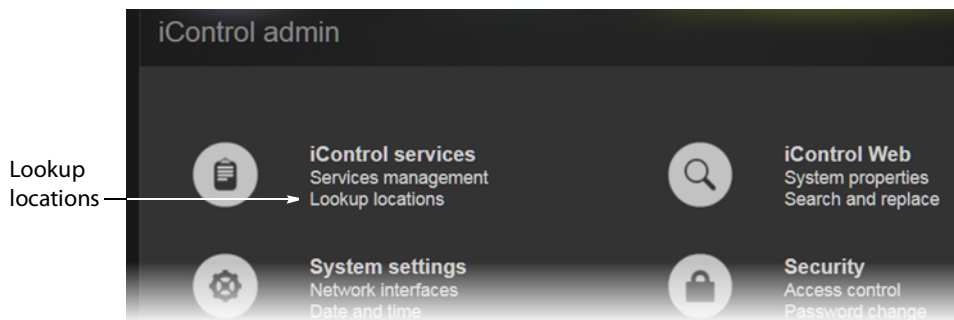
- 1 Open a Web browser window, and enter the IP address or host name of the iControl application server whose event log you want to use, in the address bar.
iControl's Startup page appears.

Configuring Alarms

Specifying your multiviewer as a lookup server for iControl



- 2 Click **iControl admin**.
- 3 If the iControl admin login page appears, type the appropriate user name and password, and then click **Log In**.
The iControl admin page appears.
- 4 Click **Lookup locations**.



The Lookup location page appears.

- 5 In the **Service and alarm discovery** area, type your multiviewer's IP address, and then click **Add lookup**.



Your multiviewer's IP address appears as a lookup entry, at the bottom of the **Service and alarm discovery** area.

IP address:

Name (optional):

Current lookup entries are:

IP address	Name	
10.6.0.104		<input type="button" value="Delete"/>

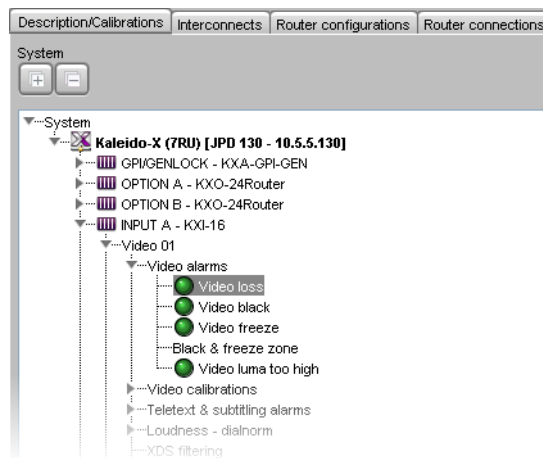
Enabling logging for a native alarm

To allow an alarm to be logged to the GSM log plug-in configured for this system

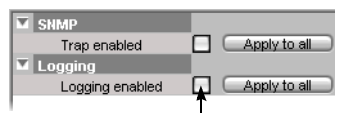
- 1 In the main window, click the **System** tab, and then click **Description/Calibrations** on the second-level tab bar.

A hierarchical list representing the current system appears.

- 2 Expand the multiviewer whose alarms you want to log, navigate to the appropriate alarm, and then click the alarm to select it.



- 3 In the **Properties** pane, select the **Logging enabled** check box to have the multiviewer publish this alarm to the application server's log, each time this alarm is triggered.



- 4 Click **Apply to all** if you want to apply this setting to *all other alarms with the same name*, throughout the system.

In the example, clicking **Apply to all** will enable logging for the *Video Loss* alarm on every multiviewer input in your system.

- 5 Repeat this procedure until logging is enabled for all alarms that require it.
- 6 On the **File** menu, click **Save**.

Disabling logging for a virtual alarm

To prevent a virtual alarm from being logged to the GSM log plug-in

- 1 In the sources table, select a text or alarm level.
Alternatively, click the **Actions** tab.
- 2 Expand the filtered System list, and navigate to the virtual alarm you want to modify.
- 3 Right-click the alarm, point to **Virtual alarm**, and then click **Edit**.
The **Build Virtual Alarm** window appears.
- 4 In the bottom area of the window, select **Not logged**.
- 5 Click **OK** to close the **Build Virtual Alarm** window.

Publishing Alarms to SNMP Managers

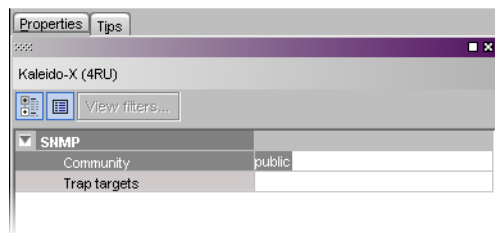
Identifying Target SNMP Managers

To identify the target SNMP managers

- 1 In the main window, click the **System** tab, and then click **Description/Calibrations** on the second-level tab bar.

A hierarchical list representing the current system appears.

- 2 Click the multiviewer whose SNMP trap targets you want to identify.
- 3 If your target SNMP managers filter traps based on a specific community string, then the **Properties** pane, click the **Community** box (which contains "public" by default), and type the appropriate string.



- 4 Click the **Trap targets** box.

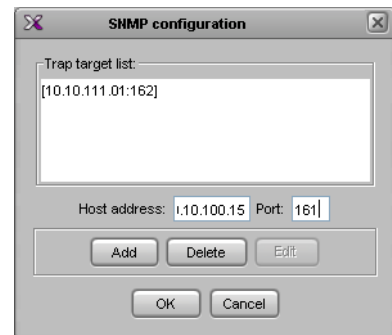


- 5 Click the button that appeared at the end of the box to open the **SNMP Configuration** window.

The trap targets list shows all trap targets currently identified for the selected multiviewer.

SNMP Managers that are trap targets for this multiviewer are identified by their host address and port number.

- 6 Add, remove, or modify trap targets as needed, and then click **OK** to confirm and apply the changes, or click **Cancel** to close the **SNMP Configuration** window without saving your changes to the trap targets list.



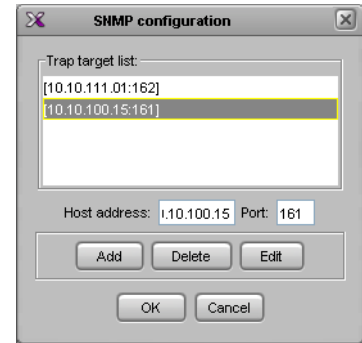
To add a trap target to the list

- 1 In the **Host address** box, type the IP address of the device that has the target SNMP manager.
- 2 In the **Port** box, type the port number through which the SNMP manager will be accessed.
- 3 Click **Add**.

The new trap target is added to the list.

To modify an existing trap target

- 1 Click the trap target you want to modify in the list.
It becomes highlighted and its host address and port number appear in the data boxes, and the **Edit** button is available.
- 2 Type new or revised data in the data boxes.
- 3 Click **Edit**.
The revised data appears in the target list.



To remove a trap target from the list

- 1 Click the trap target you want to remove in the list.
It becomes highlighted and its host address and port number appear in the data boxes.
- 2 Click **Delete**.
The trap target is removed from the list.

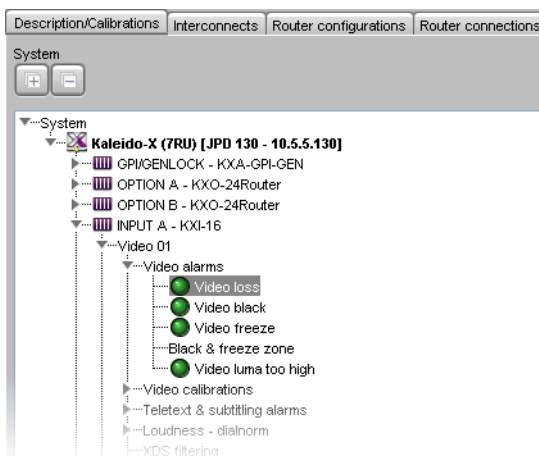
TIP

The host address and port number remain in the data boxes. Hence the trap target can easily be added back to the list, by clicking **Add**, if it was removed in error.

Enabling SNMP Traps

To choose the traps that will be sent to the selected trap targets for this system

- 1 In the main window, click the **System** tab, and then click **Description/Calibrations** on the second-level tab bar.
A hierarchical list representing the current system appears.
- 2 Expand the multiviewer whose traps you want to enable, navigate to the appropriate alarm, and then click the alarm to select it.



- 3 In the **Properties** pane, select the **Trap enabled** check box to have the multiviewer issue an SNMP trap each time this alarm is triggered.



- 4 Click **Apply to all** to apply this setting to *all other alarms with the same name*, throughout the system.

In the example, clicking **Apply to all** will enable Video Loss SNMP traps for every input in your system. This is particularly useful for audio input errors, because of the large number of channels arriving at the multiviewer.

- 5 Repeat this procedure until all required SNMP traps have been enabled.
- 6 On the **File** menu, click **Save**.

8 Setting Up Rooms

Introduction

This section describes Kaleido multiviewer rooms and their configuration.

Key Concepts

Term	Description
Room	A room is a visual grouping of displays that represent the physical displays positioned and sized as they are installed in an actual room. Multiple operators can share the same room. Display grouping creates a large virtual monitor wall that operators see as a single large display. The room definition specifies display resolutions and sizes, as well as zones that are used to display full screen layouts. See Managing Rooms , on page 146.
UHD room	A Kaleido-IP X320 / X120 uses displays to output one or two UHDTV mosaic images. See Creating a Room , on page 146.
Display versus monitor	Within the XEdit workflow, a <i>display</i> refers to the representation of a physical display monitor (such as a flat screen display) within a room, whereas a <i>monitor</i> represents a physical signal within a layout: for example, a video monitor displaying a specific video signal.
Full screen zone	A full screen zone is a sub-section of a room. It can be any size and it can be positioned on any of the displays in the room. A full screen zone can be associated with one or more full screen layouts assigned to specific users.
Display library	A display library contains a collection of predefined displays that can be conveniently reused to configure your system's rooms. More than one display library can exist.

Managing Rooms

In XEdit, a room represents a grouping of displays on the monitor wall driven by your Kaleido multiviewer system. When creating a room, you add displays, and assign each of them an output head. You can also define full screen zones.

Creating a Room

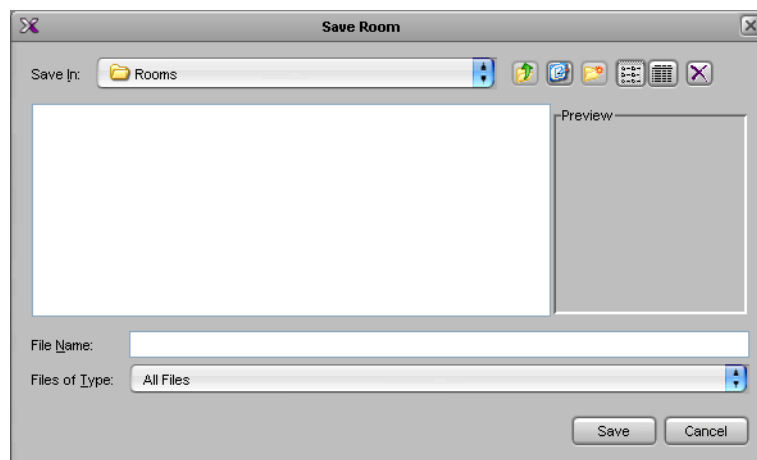
When the multiviewer feeds one or more individual displays, use the following procedure to configure each output head individually. Each display can have different resolutions and orientations.

When configuring a Kaleido-IP X320 / X120 UHD multiviewer, configure it to use one or two displays that are later set to use the UHD display resolution parameter (**UHDTV-1**), which is available for this model's HDMI outputs. See [Changing Room Display Resolutions](#), on page 157.

To create a room

- 1 Click the **Rooms** tab in the main window.
- 2 On the **File** menu, click **New**.
An empty room with a black background appears in the main window.
- 3 Add the appropriate number of displays, and configure them to match your actual installation. See [Adding Displays](#), on page 148, and [Configuring Displays](#), on page 153.
- 4 Optionally add full screen zones (see [Adding Full Screen Zones](#) on page 151).
- 5 On the **File** menu, click **Save**.

The **Save Room** window appears.



- 6 Type a name for the new room, and then click **Save**.

Notes

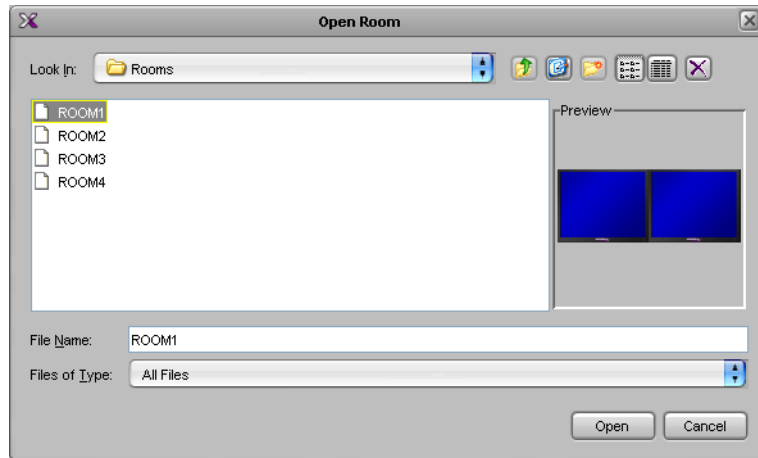
- A room name cannot exceed 7 characters.
 - A room can only be saved once every display has been assigned an output head (see [Adding Displays](#) on page 148).
-

Opening Rooms

To open an existing room

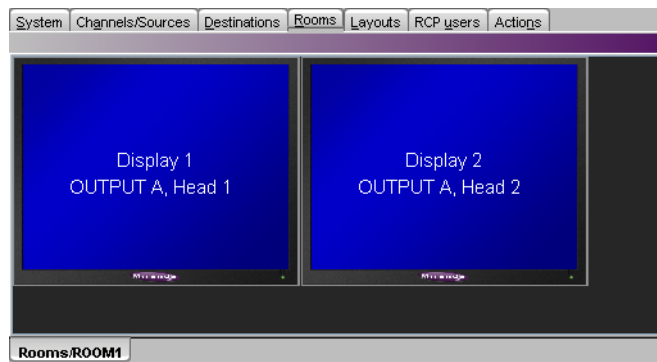
- 1 Click the **Rooms** tab in the main window.
- 2 On the **File** menu, click **Open**.

The **Open Room** window appears.



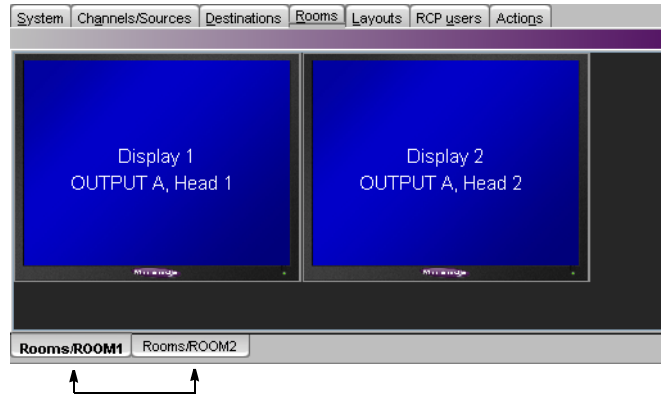
- 3 Select the room you want to open, and then click **Open**.

The selected room appears in the **Rooms** tab.



Notes

- When you have more than one room open, you can switch from one to another by clicking the tabs at the bottom of the window.



Closing Rooms


To close a room

- On the **File** menu, click **Close**. Alternatively, click the toolbar's Close button .

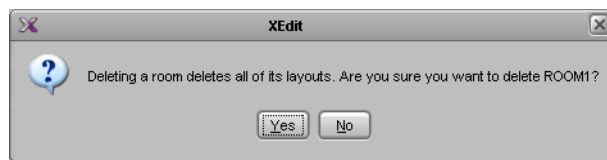
Deleting Rooms

Before deleting a room, make sure you have exported any layouts you might want to save from that room (see [Exporting Layouts](#) on page 182), or that you have copied them to another room (see [Copying Layouts](#) on page 179).

To delete a room

- 1 Open the room you want to delete (see [Opening Rooms](#) on page 147).
- 2 On the **File** menu, click **Delete**. Alternatively, click the toolbar's Delete button .

The system prompts you to confirm.




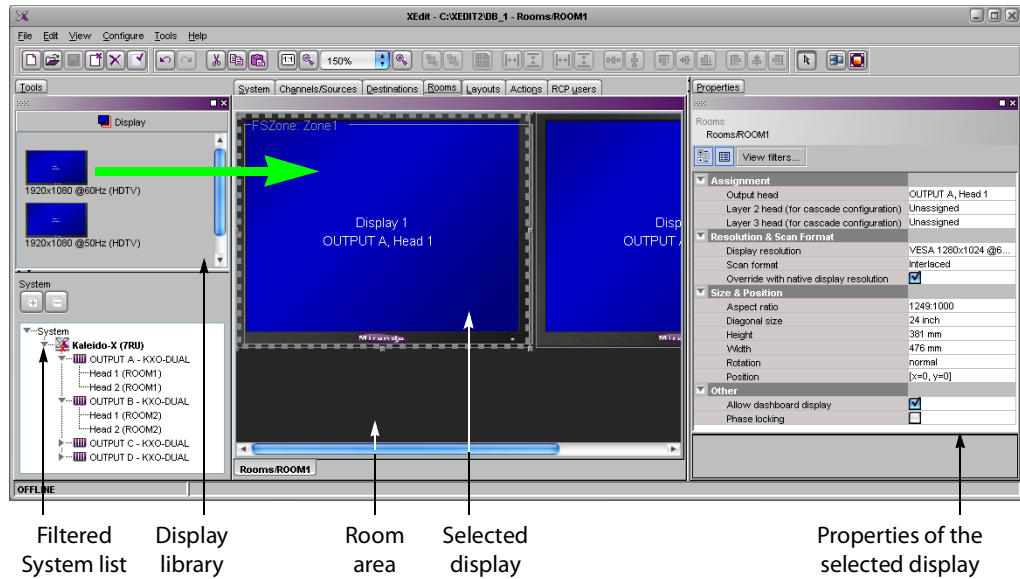
- 3 Click **Yes** to proceed.

The room and all the layouts that were associated with it are removed from your system configuration.

Adding Displays

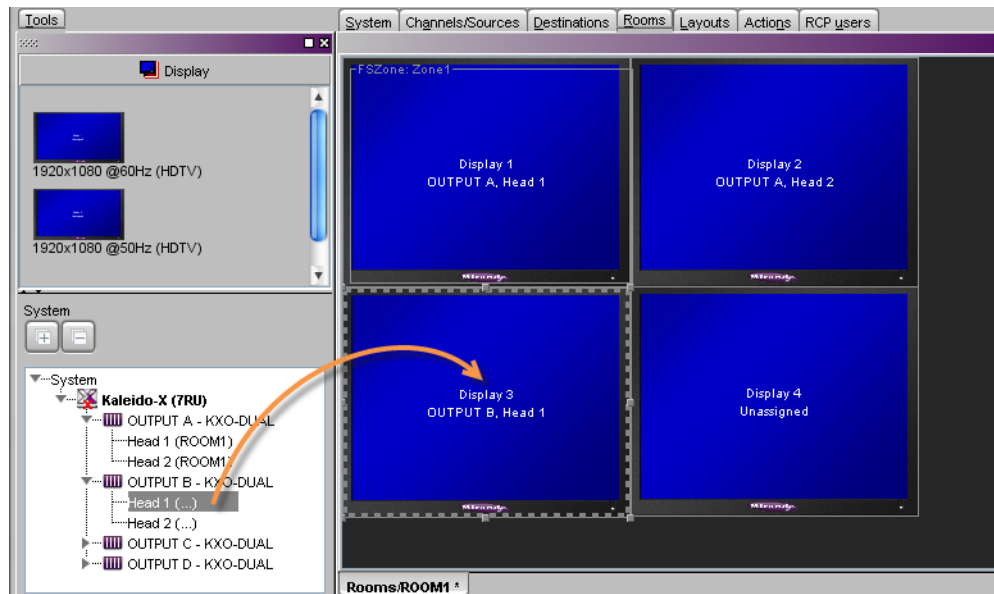
To add a display to a room

- 1 Select a display from the display library and drag it onto the room area.
Alternatively, click the toolbar's Display button , and then click the room area to add a custom display.

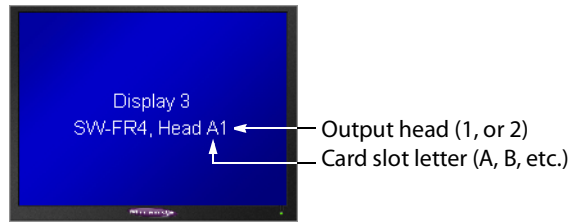


Note: All currently open display libraries appear on the **Tools** pane. Custom display libraries are stored separately from the XEdit workspace.
See [Managing Display Libraries](#) on page 161 for details.

- Expand the filtered System list on the **Tools** pane, and then drag the appropriate output head onto the display in the **Rooms** tab.

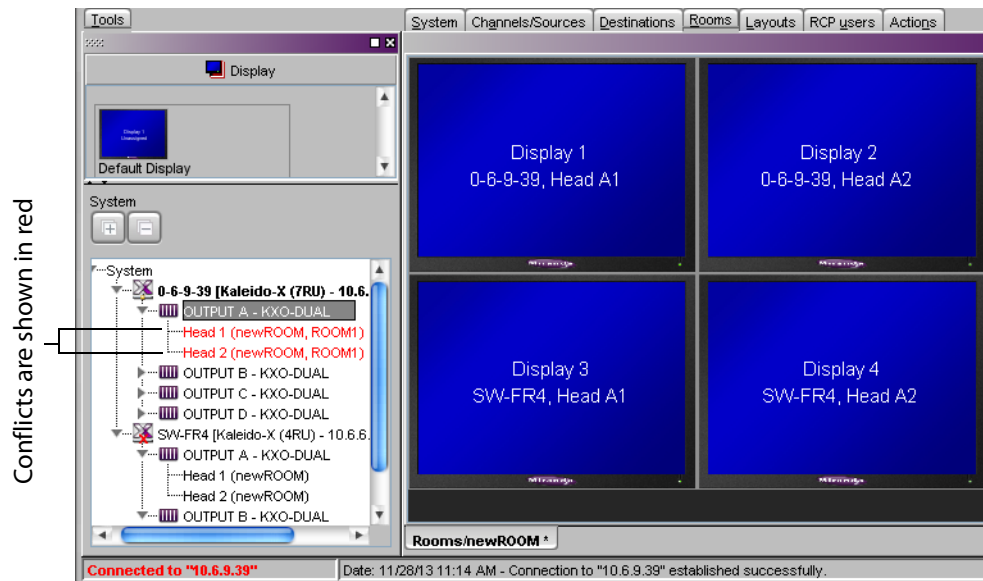


The name of the output head is indicated on the display.



One output head cannot be assigned to more than one display at a time. When different displays are assigned the same output head, if the displays are part of the same room, then XEdit will issue an error message and prevent you from saving the room until the head assignment is corrected.

However, to facilitate room management, XEdit will let you assign the same head to displays that are located *in different rooms*, but such *conflicting assignments will be marked in red* in the filtered System list displayed on the **Tools** pane, and should be resolved by removing a conflicting display (see [Removing Displays](#) on page 151), or by deleting the conflicting room (see [Deleting Rooms](#) on page 148).



IMPORTANT

Conflicting head assignments

Neglecting to resolve conflicting head assignments could result in distorted layout elements on the monitor wall (which would happen, for example, if the same output head is assigned to two displays with different resolutions).

To prevent this from happening, open the old room configuration, and look for red *Head* elements in the filtered System list that appears at the bottom of the **Tools** pane. Clear the unwanted head assignments, either by removing the corresponding displays from the room layout (see [Removing Displays](#) on page 151), or by completely deleting the old room configuration if you do not need it anymore (see [Deleting Rooms](#) on page 148).

- 3 On the **File** menu, click **Save**.

The updated room configuration is saved.

Removing Displays

Before removing a display, you might consider copying layout parts associated with this display to other display areas (see [Display layout](#) on page 165).

To remove a display from a room

- 1 Open the room that contains the display you want to remove (see [Opening Rooms](#) on page 147).
- 2 If there is a full screen zone associated with this display, click it, and then press Delete on your keyboard to remove it.
- 3 Click the display and then press Delete on your keyboard.
- 4 On the **File** menu, click **Save**.


The updated room configuration is saved.

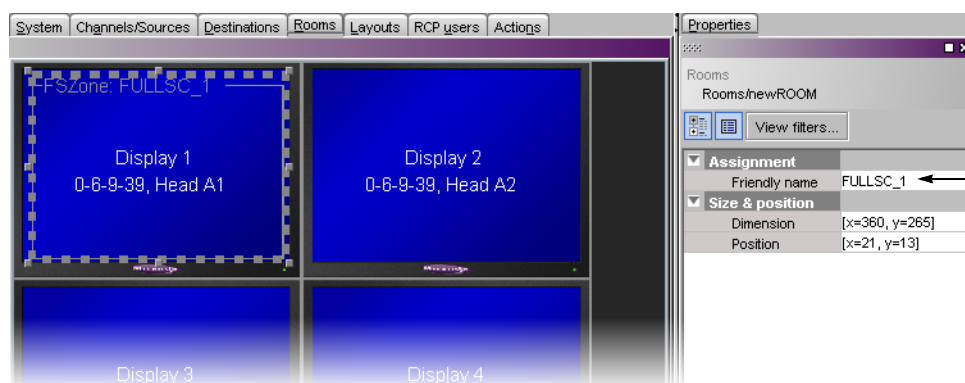
Adding Full Screen Zones

Notes

- Adding full screen zones to a room is optional.
- Do not span a full screen zone across more than one display; use spanned video monitors instead. See [Spanning](#) on page 170 for more information.

To add a full screen zone to a room

- 1 Click the Full screen zone button  in the toolbar, and then click the room area to create the full screen zone.
- 2 Position and resize the zone as appropriate.
- 3 In the **Properties** pane, click the **Friendly name** box, and then type a name for the zone.



- 4 Press Enter on your keyboard to validate the new name, and then click **Save** on the **File** menu.

The room configuration is saved.

Removing Full Screen Zones

Before removing a full screen zone, make sure there are no *full screen layouts* associated with this zone in your system configuration. If there are still full screen layouts for this zone, then XEdit will issue an error message and prevent you from saving the room. See [Deleting Layouts](#) on page 176.

To remove a full screen zone from a room

- 1 Open the room that contains the full screen zone you want to remove (see [Opening Rooms](#) on page 147).
- 2 Click the full screen zone, and then press Delete on your keyboard.
- 3 On the **File** menu, click **Save**.

The updated room configuration is saved.

Configuring Displays

The monitor wall driven by your Kaleido multiviewer system may include displays of various shapes and sizes, each with its specific characteristics. The displays you add to your rooms in XEdit must be configured to match the attributes of their physical counterparts. The Kaleido Software includes a set of predefined resolutions that cover most standard displays. Any custom resolutions you add to this set will be available throughout the system, and can be reused when configuring any display in any room.

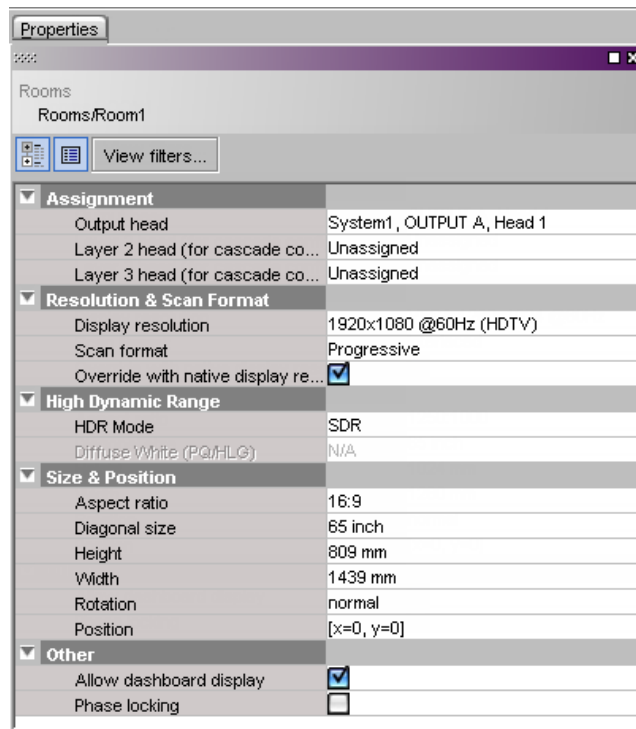
You can manually configure display resolutions in two ways: either globally, from the **Tools** menu, or by clicking a specific display in a room.

In addition to monitor wall displays, your system can include other monitors connected to the multiviewer's monitoring outputs (one for each output head). The monitoring output format on a given head depends on the resolution configured for the corresponding multiviewer output, and, in the case of a 1080-line resolution, on the selected scan format (interlaced, progressive) for this output head.

Viewing Room Display Properties

To view the properties for one of the displays in a room

- 1 Click the display whose properties you want to view.
- 2 Review the attributes and values that appear in the **Properties** pane.



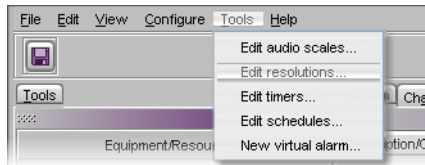
Configuring Custom Resolutions from the Tools Menu

To create a custom display resolution from the Tools menu

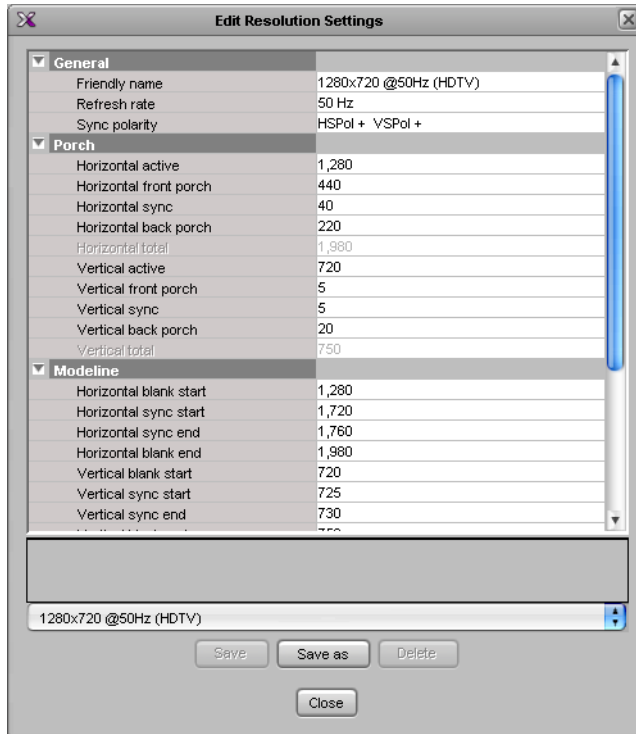
- 1 On the **Tools** menu, click **Edit resolutions**.

Setting Up Rooms

Configuring Custom Resolutions from the Tools Menu



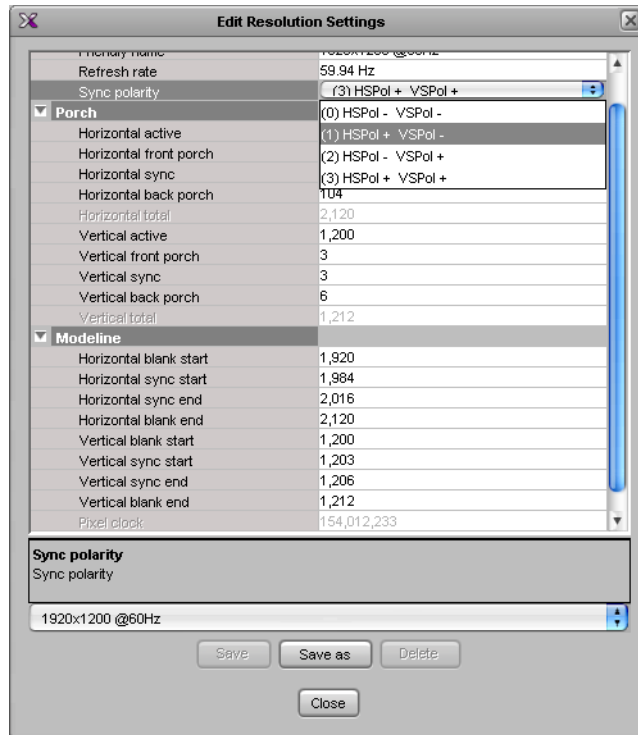
The **Edit Resolution Settings** window appears.



- 2 Select the resolution you want to customize (or the one on which you want to base a new resolution), from the list at the bottom of the window.

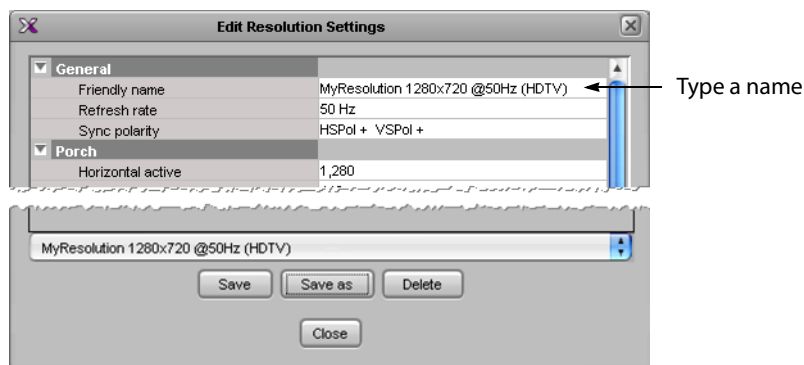
Note: When you modify one of the default resolutions, you can only save your changes as a new resolution. On the other hand, custom resolutions can be tweaked and saved repeatedly until the final configuration is achieved. However, make sure that the active width and active height values you specify match those of one of the default resolutions, otherwise your custom resolution will be ignored.

- 3 Under either the **Porch** or the **Modeline** section—depending on whether you prefer to specify front porch, back porch, sync, and active values, or blank start, sync start, sync end and blank end—, set the refresh rate and other timing parameters so that they match those of the physical display you need to configure.



Note: In XAdmin's **Status and Options** page, these parameters are listed under the corresponding output card information, according to the blank/sync start/end modeline system, and with the sync polarity expressed as a number between 0 and 3. See *Viewing a Multiviewer's Status Information* in the multiviewer's *Installation & Service Manual* for more information.

- 4 Type a name for the new resolution in the **Friendly name** box, and then click **Save as** to close the **Edit Resolution Settings** window. Alternatively, if you are modifying an existing custom resolution, you can click the **Save** button.

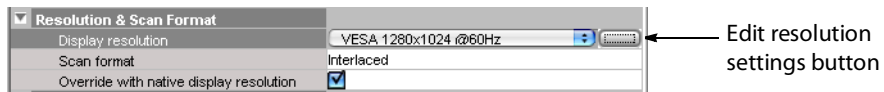


Configuring a Custom Resolution from a Specific Display in a Room

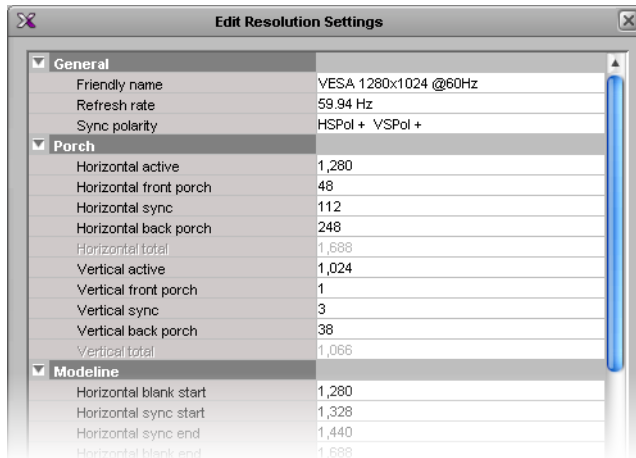
To configure a custom resolution from a specific display in a room

- 1 Click the display whose resolution you want to configure.

- Click the **Display resolution** box in the **Properties** pane, and then click the button that appeared on the right side of the resolution presets.



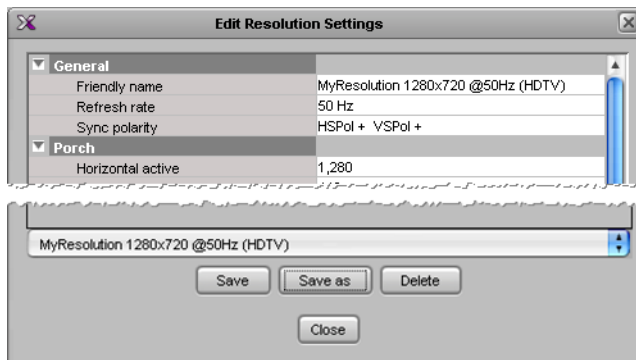
The **Edit Resolution Settings** window appears.



- Under either the **Porch** or the **Modeline** section, depending on whether you prefer to specify front porch, back porch, sync, and active values; or blank start, sync start, sync end and blank end, set the refresh rate and other timing parameters so that they match those of the physical display you need to configure.

Note: In XAdmin's **Status and Options** page, these parameters are listed under the corresponding output card information, according to the blank/sync start/end modeline system, and with the sync polarity expressed as a number between 0 and 3. Refer to *Viewing a Multiviewer's Status Information* in the multiviewer's *Installation & Service Manual* for more information. See [Related Documentation](#), on page 11.

- Type a name for the new resolution in the **Friendly name** box, and then click **Save as** to close the **Edit Resolution Settings** window. Alternatively, if you are modifying an existing custom resolution, you can click the **Save** button.

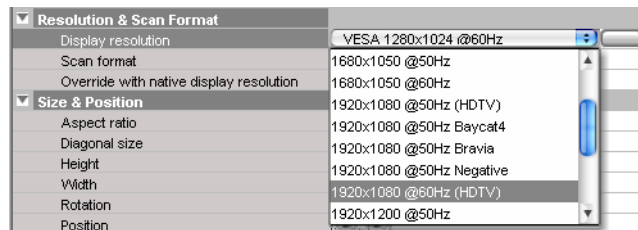


- On the **File** menu, click **Save**.

Changing Room Display Resolutions

To change the resolution for a display in a room

- 1 Click the display you want to configure.
- 2 In the **Properties** pane, expand the **Display resolution** list, and then select the appropriate resolution from the list.



For example, to configure a Kaleido-IP X320 / X120 multiviewer's display for a UHD display DVI / HDMI output, select **UHDTV-1** from the **Display resolution** list.

Note: Even when a Kaleido-IP X320 / X120 multiviewer's display output is set to UHD output resolution, the maximum streaming output resolution is HD (1920 × 1080p).

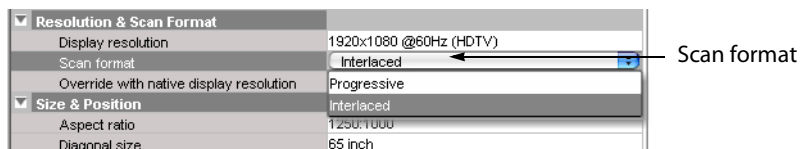
- 3 On the **File** menu, click **Save**.

Scan Format

The scan format parameter determines if the video output is to be in interlaced or progressive scan format.

To configure the scan format

- 1 In the Room area, click the display associated with the multiviewer output head whose properties you want to configure.
- 2 Click the **Scan format** box, and then select the appropriate scan format: **Progressive** or **Interlaced**.



- 3 On the **File** menu, click **Save**.

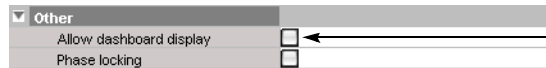
\Disabling the Dashboard

A room can be configured to prevent the dashboard from appearing on specific displays. For instance, in a production control room, or if the multiviewer is used in the studio backdrop you may not want the dashboard to pop up, regardless of alarm conditions.

Note: Make sure the dashboard remains enabled on a least one display, in a room where alarm conditions can be monitored, since it is your only way to be notified in case of a card booting in offline mode, a duplicate IP address, a defective fan, a power supply alarm, etc.

To disable the dashboard for a specific display

- 1 Click the display on which you do not want the dashboard to appear, and then clear the **Allow dashboard display** check box in the **Properties** pane.



- 2 On the **File** menu, click **Save**.

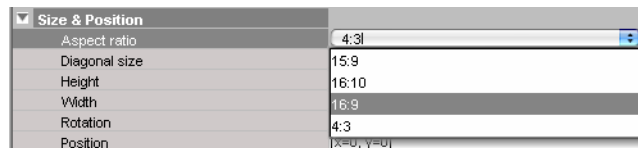
Changing a Display's Aspect Ratio

Notes

- It is important to properly set the aspect ratio of a display, since this will affect the proportions of every component you will use to create layouts for this room. For instance, if the aspect ratio of a display does not match the aspect ratio of the actual display in the physical room, then a video window inside a layout will show distorted images.
 - If you change the display aspect ratio later in the process, layouts created before the change will be broken.
-

To change the aspect ratio of a display in a room

- 1 Click the display whose aspect ratio you want to set.
- 2 In the **Properties** pane, expand the **Aspect ratio** list, and then select the appropriate aspect ratio preset from the list.



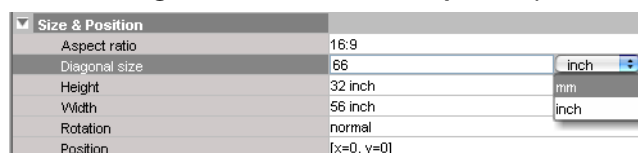
Alternatively, type the ratio directly in the box.

- 3 On the **File** menu, click **Save**.

Changing a Display's Diagonal Size

To change the diagonal size of a display in a room

- 1 Click the display whose size you want to configure.
- 2 Click the **Diagonal size** box in the **Properties** pane.

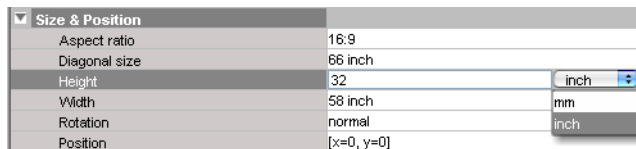


- 3 Select the appropriate unit of measurement from the list that appears inside the **Diagonal size** box, and type the size.
- 4 On the **File** menu, click **Save**.

Changing a Display's Height

To change the height of a display in a room

- 1 Click the display whose height you want to configure.
- 2 Click the **Height** box in the **Properties** pane.

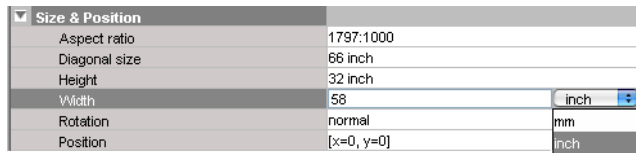


- 3 Select the appropriate unit of measurement from the list that appears inside the **Height** box and type the height.
- 4 On the **File** menu, click **Save**.

Changing a Display's Width

To change the width of a display in a room

- 1 Click the display whose width you want to configure.
- 2 Click the **Width** box in the **Properties** pane.

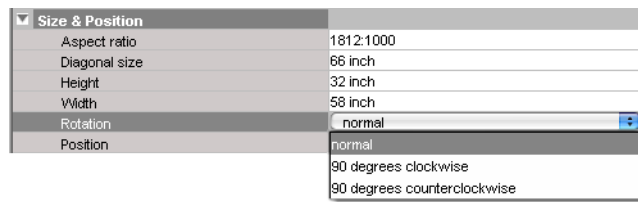


- 3 Select the appropriate unit of measurement from the list that appears inside the **Width** box and type the width.
- 4 On the **File** menu, click **Save**.

Changing a Display's Rotation

To change the rotation setting for a display in a room

- 1 Click the display you want to configure.
- 2 In the **Properties** pane, expand the **Rotation** list, and then select the configuration that matches the way the actual display is mounted in the physical room:
 - normal
 - rotated 90 degrees clockwise
 - rotated 90 degrees counterclockwise



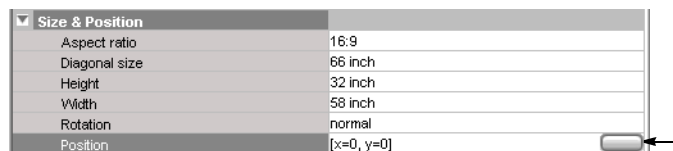
- 3 On the **File** menu, click **Save**.

If you already had created layouts for the room associated with the display whose rotation setting you just changed, you may need to adjust layout elements in these layouts (see [Creating Layouts](#) on page 165).

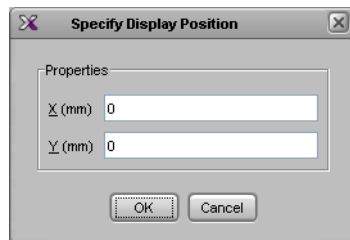
Changing a Display's Position

To change position of a display in a room

- 1 Click the display whose position you want to configure.
- 2 Click the **Position** box in the **Properties** pane, then click the button that appears inside the box.



The **Specify Position** window appears.



- 3 Type the appropriate values in the **X (mm)**, and **Y (mm)** boxes, and then click **OK**.
The values appear in the **Position** box.
- 4 On the **File** menu, click **Save**.

Managing Display Libraries

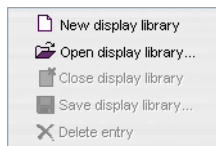
The default display library includes configurations for the most popular display models. You can also create your own display configurations, and add them to custom display libraries. All open display libraries appear on the **Tools** pane. The default display library is always open. Custom display libraries are stored separately from the XEdit workspace, and must be opened explicitly.

Creating Custom Display Libraries

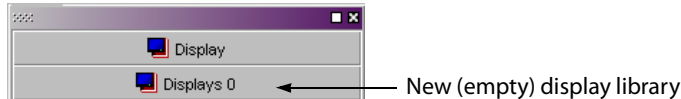
To create a custom display library

- 1 Click the **Rooms** tab in the main window.
- 2 On the **File** menu, click **New**. Alternatively, click **Open** to open an existing room.
- 3 On the **File** menu, click **New display library**.

Alternatively, right-click anywhere inside the **Tools** pane's display library area, and then click **New display library** on the menu.

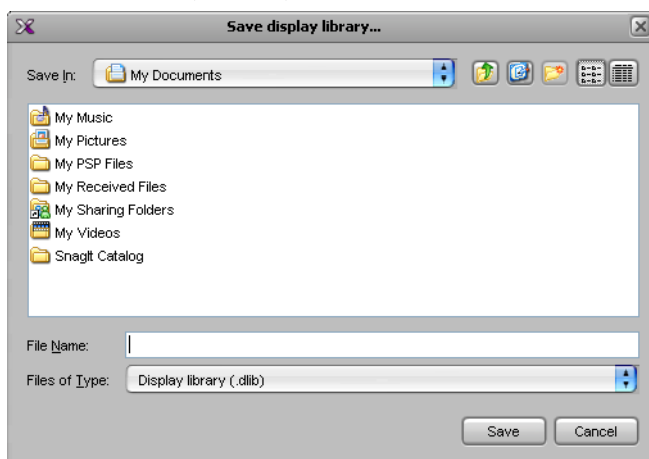


The new display library appears below the default display library area on the **Tools** pane.



- 4 Right-click anywhere in the display library area, and then click **Save Display Library** on the menu.

The **Save Display Library** window appears.




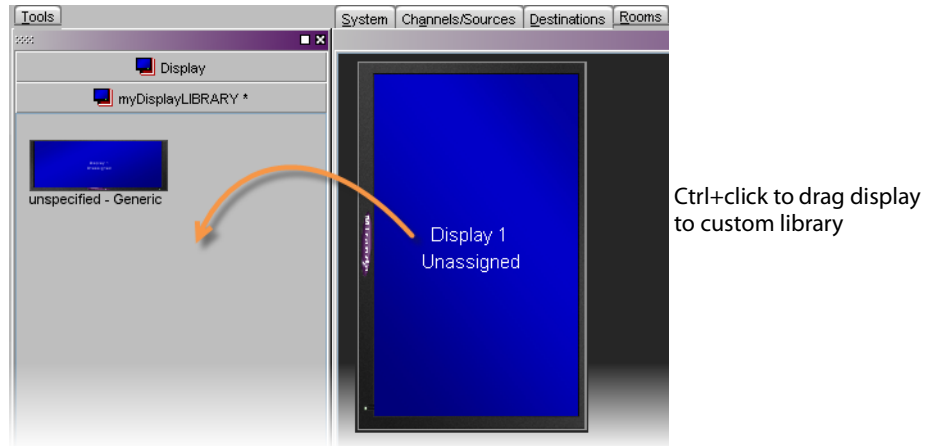
- 5 Type a name for the new custom display library, and then click **Save**.

Custom display libraries are stored separately from the XEdit workspace. They have a `.dlib` extension.

Adding Displays to Custom Libraries

To add a display to a custom display library

- 1 Click the Display button  on the toolbar, and then click the room background to add a display. Alternatively drag a display from a display library onto the room, or choose a display within an existing room.
- 2 Customize the display as needed, and then drag it onto the display library *while holding the Ctrl key*.

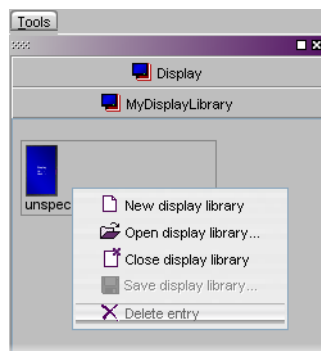


Note: It is not possible to further customize a display once it is inside a library. Should you need to do so, drag the display to the room area, apply the required changes, and then Ctrl+drag the modified display to the display library. You can then remove the obsolete display from the library.

Removing Displays from Custom Libraries

To remove a display from a custom library

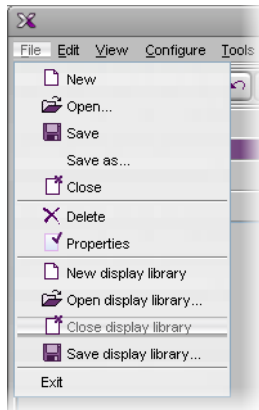
- Click the display you want to remove and then press Delete.
- Alternatively, right-click its icon and then click **Delete entry** on the menu.



Closing Display Libraries

To close a display library

- Once the custom library is saved, you can right-click in the library area, and then click **Close display library** on the menu.
- Alternatively, click **Close display library**, on the **File** menu.



Opening Display Libraries

To open a custom display library

- On the **Tools** pane, right-click anywhere in the display library area, and then click **Open display library** on the menu.
- Alternatively, click **Open display library**, on the **File** menu.

Note: It is possible to have multiple custom libraries open at the same time.

9 Creating Layouts

Introduction

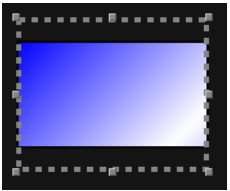
This section describes layout elements and their purposes, and provides detailed configuration instructions.

Key Concepts

Layouts and Layout Elements

Layout elements

Term	Description
Layout	<p>A <i>layout</i> is a visual grouping of monitors that appear on displays within a room. A layout includes different types of monitors in a variety of placements and sizes. There are two types of layouts: <i>room layouts</i>, and <i>full screen layouts</i>. See Managing Layouts on page 172.</p> <p>Note: Before creating layouts, you may want to review your room configurations. Should a display be rotated in a room (see Changing a Display's Rotation on page 159), some layout elements in your existing room layouts may require adjustments.</p>
Display layout	<p>In a <i>room layout</i>, the parts that cover the room displays can be managed separately. You can consider each of these parts as a <i>display layout</i>. You can duplicate a display layout to another display area within the same layout, or to any other layout, in any room within your system. You can mix and match individual display layouts to create a new room layout.</p> <p>Use the Copy layout to feature, to build a display layout library from your most useful display layouts. See Copying Layouts on page 179. If your system does not include a single-display room, you might consider momentarily creating one for this purpose. Alternatively, copy your display layouts, one by one, to <i>Display 1</i>, in separate room layouts. Once you have isolated a display layout to a separate room layout, consider exporting this room layout as a file, so you can reuse it in other multiviewer systems. See Exporting Layouts on page 182, Importing Layouts, on page 182, and Rearranging Layouts Across Displays, on page 180.</p>
Monitor	<p>A <i>monitor</i> is an element that is part of a layout. The Kaleido Software supports several types of layout elements (such as clocks, video monitors, audio monitors, UMDs, time code monitors, etc.), as well as composite monitors. All layout elements, except for the video monitors and subtitling monitors are <i>graphical</i> layout elements. See Adding Monitors to a Layout on page 183.</p>

Term	Description
Video monitor	<p>A <i>video monitor</i> is a layout element used to define an area for displaying a video signal. It is represented in XEdit by the boundary box made visible by clicking the element.</p> <p>Within a video monitor, the <i>video window</i> is the active area where the video signal is displayed, possibly including closed captions or teletext. The <i>video window</i> is represented in XEdit by the blue rectangle inside a video monitor. The video window does not necessarily cover the complete video monitor's area. See Configuring Video Monitors on page 191.</p> 
Composite monitor	<p>A <i>composite monitor</i> is a group of primary elements that can be seen as a single object within a layout. Composite monitors typically include a video window, one or more audio level meters, and a UMD with two tallies.</p>
Time code monitor	<p>A <i>time code monitor</i> displays the Ancillary Time Code (ATC) from an HD video signal, or the time code found in an embedded SDI video signal, part of the vertical interval of an analog signal (VITC), or other external Linear Time Code (LTC). This monitor also supports time code information from external providers (see Configuring logical sources based on external alarm providers on page 81). Time code monitors can be used for monitoring the duration of programs. See Configuring Time Code Monitors on page 216.</p>
Timer	<p>A <i>timer</i> can be slaved to a production timer, controlled from the Kaleido-RCP2 (with start, stop and reset control through GPI inputs), and/or used for monitoring the duration of programs.</p> <p>Three <i>timer modes</i> are available: (1) UP: timer counts up starting from zero up to a preset time, (2) DOWN: timer counts down from a preset time to zero, and (3) REMAINING: timer counts down from the current time until it reaches a preset time.</p> <p>A <i>timer monitor</i> is based on a timer defined within the Kaleido Software. Timers are defined and configured in XEdit. Timer monitors can be configured directly on the monitor wall. See Configuring Timers on page 218.</p>
Audio monitor	<p>An <i>audio monitor</i> (also called <i>audio level meter</i> or <i>ALM</i>) is a graphical layout element that provides a visual representation of sound. See Configuring Audio Monitors, on page 207, and Configuring Audio Scales, on page 212.</p>
Loudness monitor	<p>A <i>loudness monitor</i> is a graphical layout element that provides a visual representation of the perceived loudness of an audio program. It provides two measures (short-term, and momentary loudness) per audio program. See Configuring Loudness Monitors on page 210.</p>
UMD	<p>An <i>under monitor display (UMD)</i> has a <i>text label</i> that can be static or dynamically updated by a peripheral device. It can also have <i>left and right tally indicators</i>. The UMD typically indicates the name of the video source seen in a video monitor. See Configuring UMDs on page 224.</p>
Alarm monitor	<p><i>Alarm monitors</i> help you see the status of global and virtual alarms, but their use is not limited to this type of alarms. When any alarm level is assigned to an alarm monitor, the status of this alarm is shown. When using the global alarm at the text label level, the alarm monitor displays the text value of the alarm, which is a readable name. See Configuring Alarm Monitors, on page 231 and Alarm latch, on page 311 for more information.</p>

Term	Description
Subtitling monitor	<p>A <i>subtitling monitor</i> defines an area for displaying subtitles extracted from a video signal. By using a subtitling monitor you can monitor subtitling from a specific DVB or SCTE 27 stream, independently from the associated video stream. This requires the <i>CC/XDS</i> option to be enabled (see the multiviewer's <i>Installation & Service Manual</i> for more information). See Configuring Subtitling Monitors on page 235.</p> <p>Note: With the current version of the Kaleido Software, the subtitling monitor supports DVB and SCTE 27 subtitles, from Kaleido-IP sources only.</p>
Metadata monitor	<p>A <i>metadata monitor</i> defines an area for displaying XDS, or digital content advisory descriptor (CAD) information compliant with CEA-766-D, extracted from a video signal. This requires the <i>CC/XDS</i> option to be enabled (see the multiviewer's <i>Installation & Service Manual</i> for more information). See Configuring Metadata Monitors on page 240.</p>
V-chip monitor	<p>The <i>V-chip monitor</i> provides a visual indication of the V-chip rating from the CC (608) metadata in an SD video signal, or from the CC (608) legacy caption data, when such data is present within an HD video signal. This requires the <i>CC/XDS</i> option to be enabled (see the multiviewer's <i>Installation & Service Manual</i> for more information). See Configuring V-Chip Monitors, on page 242.</p>
Clock	<p>A <i>clock</i> is the visual representation of time in a video or display. It can be based on a reference LTC signal or on the multiviewer system time. See Configuring Clocks on page 244.</p>
Monitor library	<p>A <i>monitor library</i> is a collection of predefined layout elements. Monitors from a library can be used to help construct a layout. Default monitor libraries are available from XEdit's Tools pane. You can also create your own libraries. See Managing Monitor Libraries on page 259.</p> <p>Note: As of version 7.40 of the Kaleido Software, two new 16:9, and 4:3 composite monitor libraries with <i>proportional elements</i> are available. In these libraries, the primary monitors within each composite have all their dimensions defined as a percentage, which allows intuitive resizing, whereas, in the legacy <i>maximum video area</i> libraries, some primary monitors have fixed height or width, to allow more space for the video window. The new composite monitors with proportional elements suit most purposes. It is preferable to always use them, unless you specifically require monitors with fixed dimensions.</p>

Aspect Ratio

Aspect ratio information can be encoded within a video signal following different standards: AFD 2016, AFD VI, or WSS. The Kaleido Software may use this information to render the video raster in the target video window on the monitor wall.

Term	Description
AFD VI	Active format description encoded in the video index.
AFD 2016	Active format description encoded in the ancillary data (according to the SMPTE ST 2016 standard).

Term	Description
WSS	Wide Screen Signaling.
Video raster	Video signal that is displayed inside the video monitor on a monitor wall.

The aspect ratio of video displayed on the monitor wall can be automatically adjusted. With multiple video players (monitors) on a monitor wall, in multiple formats/aspect ratios, this makes it easy to switch from one format to another in the same player. Automatic adjustment can be accomplished in two ways:

- **Video monitor slaved to input:** A video monitor can be slaved to the input format such that the video monitor will change its aspect ratio according to the input signal type (for example, SD, HD, DVI).
- **Video raster follows AFD/WSS:** A video monitor can be configured so that WSS, AFD VI, or AFD 2016 metadata is used to crop (and/or add black bars to) the video signal, giving the video raster the correct aspect ratio.

This metadata can be reported as text inside a UMD. Its presence can also be made available in alarms as well as through SNMP traps.

See [Configuring Automatic Aspect Ratios](#) on page 197, for more information.

Note: Aspect ratio decoding can also be configured for each multiviewer input, based on decoded AFD or WSS metadata when such information is available within the input signal (see [Calibrating Aspect Ratio Decoding](#) on page 105).

Cropping Mode

This feature applies to:

Kaleido-IP X320 / X120	Kaleido-IP VM
●	

The display of a video signal can be cropped to remove unwanted portions, or to zoom in on a specific portion of the image. In XEdit, you can configure a video monitor to display signals in underscan or overscan mode (see [Video Cropping/Zooming](#) on page 196).

Underscan: When a video window is in underscan mode, it displays the full signal without cropping any of the image.

Overscan: When a video window is in overscan mode, it displays a selected area of the image, typically zoomed and cropped to fit the window. By default, the overscan mode crops the left, right, top and bottom margins by 5% each.

Changing the underscan/overscan mode dynamically

It is possible to dynamically change the overscan/underscan mode based on the current feed assigned to a video monitor. For example, you can change logical sources in a video monitor using Gateway commands, where a video source requires the monitor to be in overscan mode but a graphics source requires the monitor to be in underscan mode to avoid cropping the image. A custom action script can make the monitor change its scan

mode depending on the format detected. For information on how to create such a script, contact Technical Support ([Grass Valley Technical Support](#), on page 360).

Custom overscan

The amount of overscan applied can be customized to some extent, which will depend on the original signal resolution, relative to the size of the video window where the image is displayed. Excessive cropping may result in a loss of video image on the monitor wall. Likewise, when a layout has several monitors with heavy cropping settings on the same display head, some video windows may turn blank.

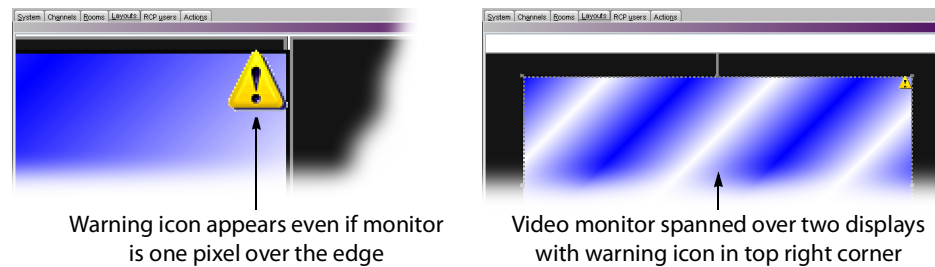
The examples listed below may be used as guidelines. Unless specified otherwise, these are based on a *1080p display resolution*. Displays with a lower resolution can afford more cropping.

Spanning

This feature applies to:

Kaleido-IP X320 / X120	Kaleido-IP VM
●	

Graphical layout elements (UMDs, audio monitors, etc.) and video monitors can be made to span across multiple heads, on up to 4 displays, portrait or landscape, in any combination. On displays that fit perfectly side by side, this gives the impression of having one large screen. When any layout element is spanned across displays, an icon automatically appears in the top right corner.



To avoid pixel cropping on spanned monitors, you must position room displays so that there is no gap between them. Use XEdit's **Remove horizontal space** and/or **Remove vertical space** buttons to make sure your displays are perfectly positioned for spanning.

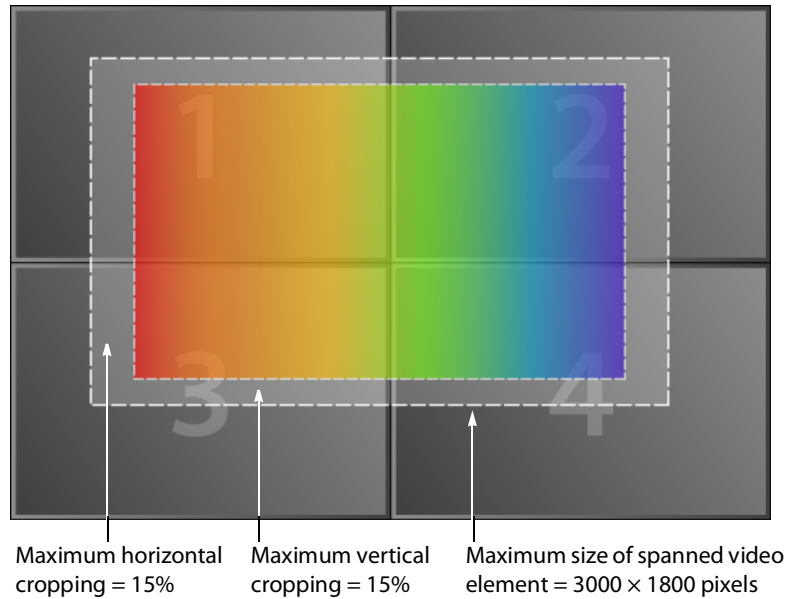
You must also ensure that each display has the same pixel-per-inch (or -per-mm) ratio, calculated as horizontal resolution (pixels) divided by display width (inches or mm) and vertical resolution divided by display height. Ideally, you should use displays that have the same physical size and resolution.

The figure below shows two displays properly sized and positioned for monitor spanning.

Display	Assignment	Size & Position	Horizontal Ratio (pixels/mm)	Vertical Ratio (pixels/mm)
Display 1 OUTPUT A, Head 1	Output head: OUTPUT A, Head 1 Layer 2 head (for cascade configuration): Unassigned Layer 3 head (for cascade configuration): Unassigned	Default DVIRGBHV resolution: VESA 1600x1200 @60Hz Use detected monitor resolution: <input checked="" type="checkbox"/> SDI Resolution: Interlaced Aspect ratio: 4:3 Diagonal size: 1000 mm Height: 600 mm Width: 800 mm Rotation: normal Position: [x=0, y=0]	Horizontal: 1600 pixels ÷ 800 mm = 2 pixels/mm	Vertical: 1200 pixels ÷ 600 mm = 2 pixels/mm
Display 2 OUTPUT A, Head 2	Output head: OUTPUT A, Head 2 Layer 2 head (for cascade configuration): Unassigned Layer 3 head (for cascade configuration): Unassigned	Default DVIRGBHV resolution: 1366x768 @60Hz Use detected monitor resolution: <input checked="" type="checkbox"/> SDI Resolution: Interlaced Aspect ratio: 16:9 Diagonal size: 784 mm Height: 384 mm Width: 683 mm Rotation: normal Position: [x=802, y=0]	Horizontal: 1366 pixels ÷ 683 mm = 2 pixels/mm	Vertical: 768 pixels ÷ 384 mm = 2 pixels/mm

Notes

- Monitors can extend outside the edge of a display, but not completely.
- The use of a mouse is not completely supported with spanned video monitors.
- Do not span a layout element beyond a maximum of 3000×1800 pixels. When spanning or scaling video monitors in a layout, avoid heavy cropping settings (generally avoid exceeding 15% in any direction).



Managing Layouts

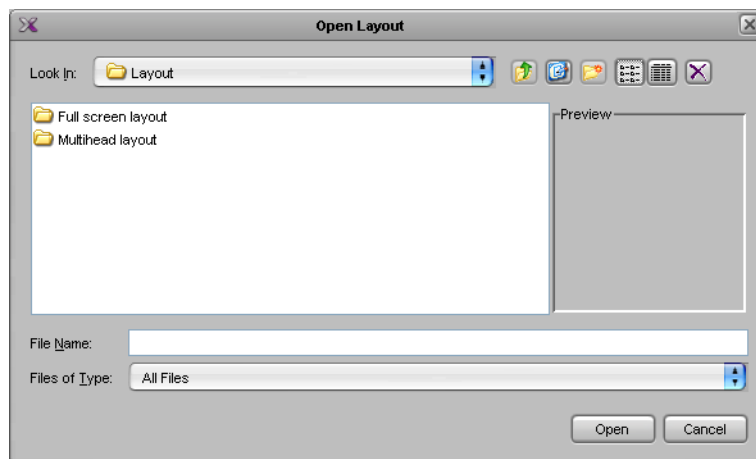
Note: Before creating or modifying a layout for a Kaleido-IP system, review the guidelines listed in *Network Considerations* in the multiviewer's *Installation & Service Manual* for more information.

Opening Layouts

To open an existing layout

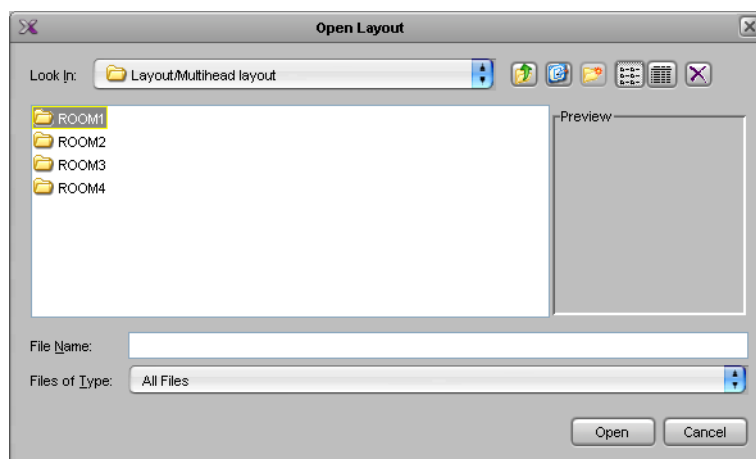
- 1 Click the **Layouts** tab.
- 2 On the **File** menu, click **Open**. Alternatively, click the toolbar's Open button .

The **Open Layout** window appears.

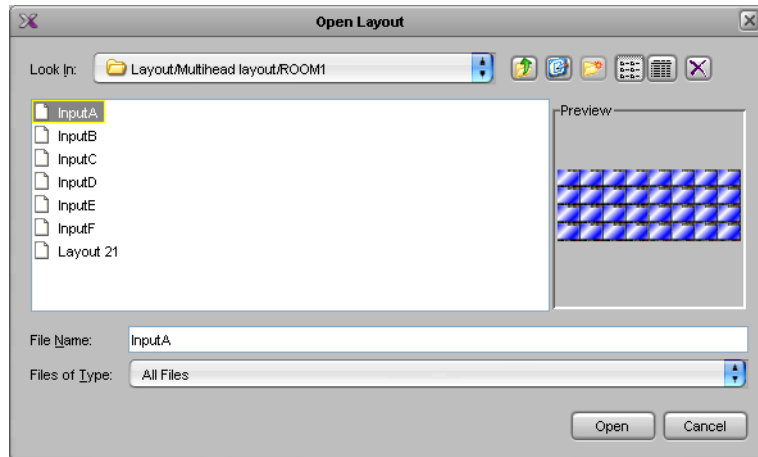


- Double-click **Full screen layout**, to open a full screen layout.
- Double-click **Multihead layout**, to open a room layout.

- 3 Double-click the appropriate room.



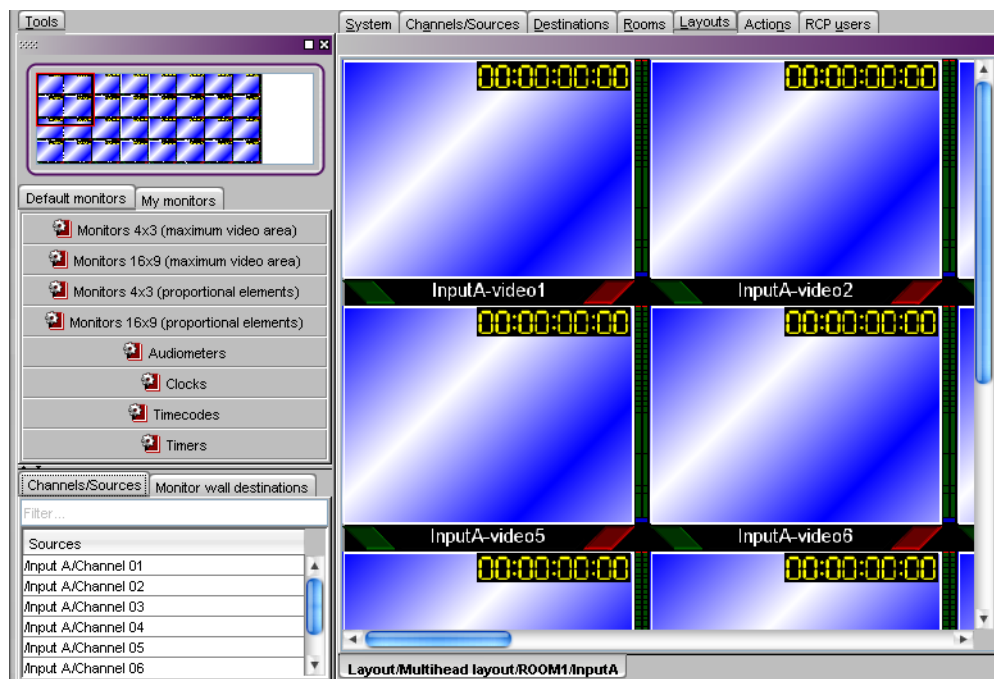
- 4 Click the layout you want to open.



5 If you want to open multiple layouts in a single operation, extend your selection by using the multi-selection Shift+click or Ctrl+click keyboard shortcuts.

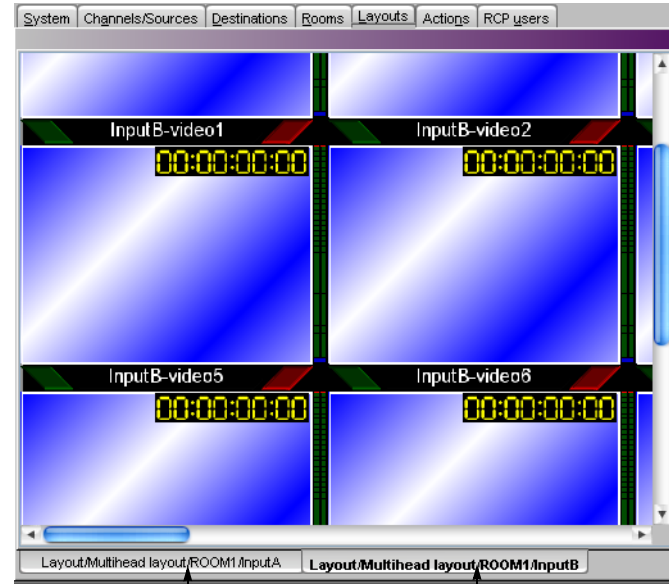
6 Click **Open**.

The selected layouts appear in the **Layouts** tab.



TIP

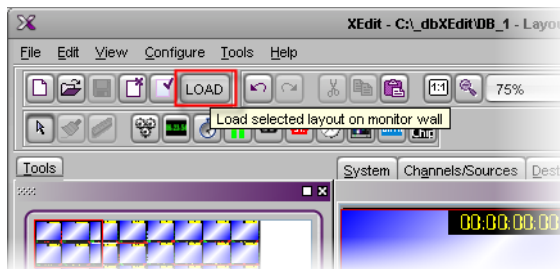
When you have opened more than one layout, you can switch from one to another by clicking the tabs at the bottom of the window.



Loading a Layout on the Monitor Wall

To load the current layout on the monitor wall, directly from XEdit, in online mode

- Click **LOAD** button on the toolbar.



The current layout appears on the monitor wall.

Closing Layouts

To close the current layout

- On the **File** menu, click **Close**. Alternatively, click the toolbar's Close button .

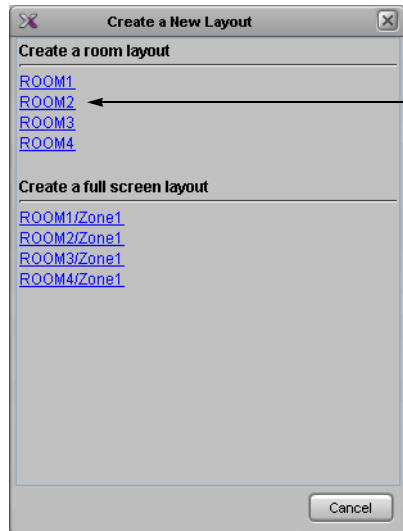
Creating Room Layouts

To create a room layout

- 1 Click the **Layouts** tab in the main window.
- 2 On the **File** menu, click **New**.

The **Create a New Layout** window appears. It lists all the existing rooms and full screen zones in your system.

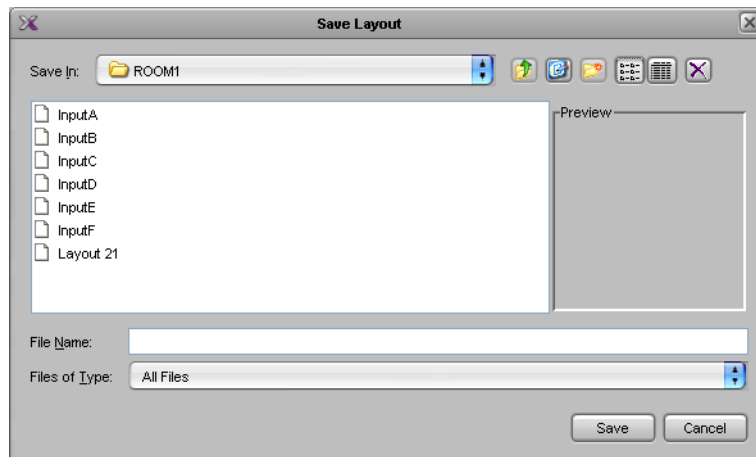
- 3 Click the name of the room where this layout will be displayed.



An empty layout appears.

- 4 Add at least one monitor to the layout (see [Adding Monitors to a Layout](#) on page 183).
- 5 Assign every monitor a logical source (see [Assigning Logical Sources or Monitor Wall Destinations to Monitors](#) on page 185).
- 6 On the **File** menu, click **Save**.

The **Save Layout** window appears.



- 7 Type a name for the layout, and then click **Save**.

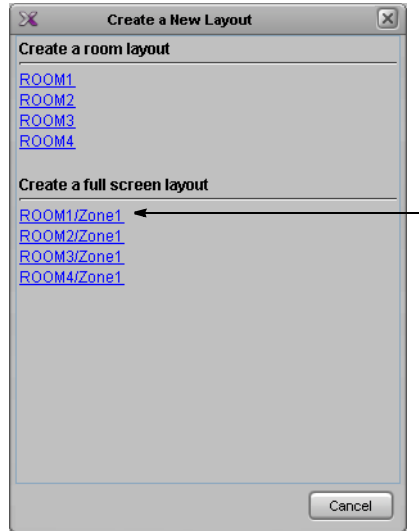
Creating Full Screen Layouts

To create a full screen layout

- 1 Click the **Layouts** tab in the main window.
- 2 On the **File** menu, click **New**.

The **Create a New Layout** window appears. It lists all the existing rooms and full screen zones in your system.

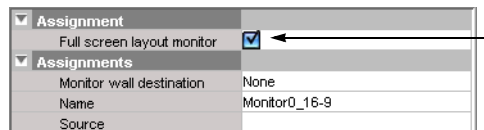
- 3 Click the name of the full screen zone in which this layout will be displayed.



An empty layout area appears.

- 4 Add at least one monitor to the layout (see [Adding Monitors to a Layout](#) on page 183).

If the full screen layout includes more than one composite monitor, you can designate one of them who will receive its source assignments from the monitor under the mouse pointer on the monitor wall, by selecting the **Full screen layout monitor** option in the **Properties** pane.



Make the appropriate assignments for the other elements in the layout (see [Assigning Logical Sources or Monitor Wall Destinations to Monitors](#) on page 185).

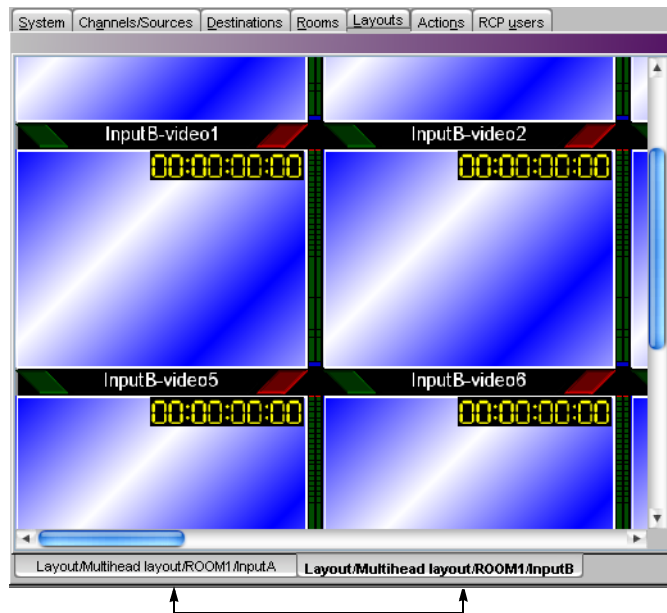
- 5 On the **File** menu, click **Save**.
The **Save Layout** window appears.
- 6 Type a name for the full screen layout, and then click **Save**.

Deleting Layouts

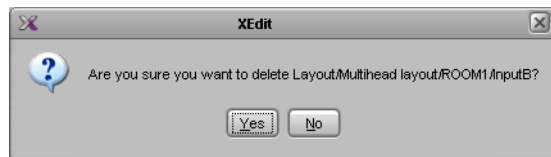
Deleting an open layout

To delete an open layout

- 1 If you have opened more than one layout (see [Opening Layouts](#) on page 172), select the layout you want to delete by clicking the appropriate tab at the bottom of the window.




- 2 On the **File** menu, click **Delete**.
The system prompts you to confirm.

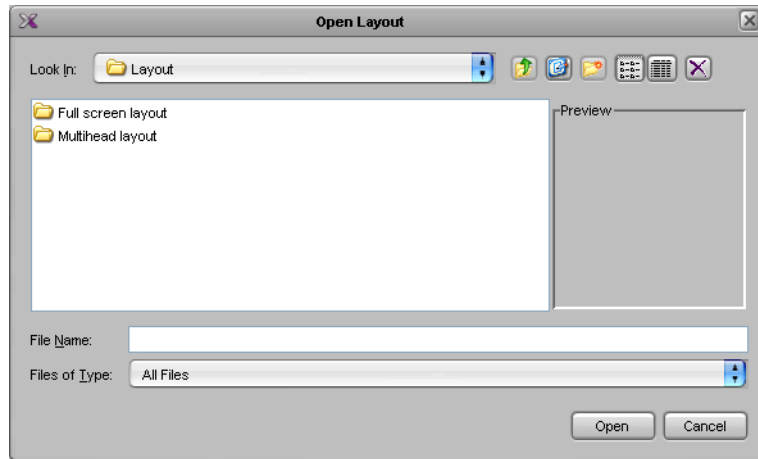


- 3 Click **Yes** to proceed.
The layout is removed from your system configuration.

Deleting layouts from the Open Layout window

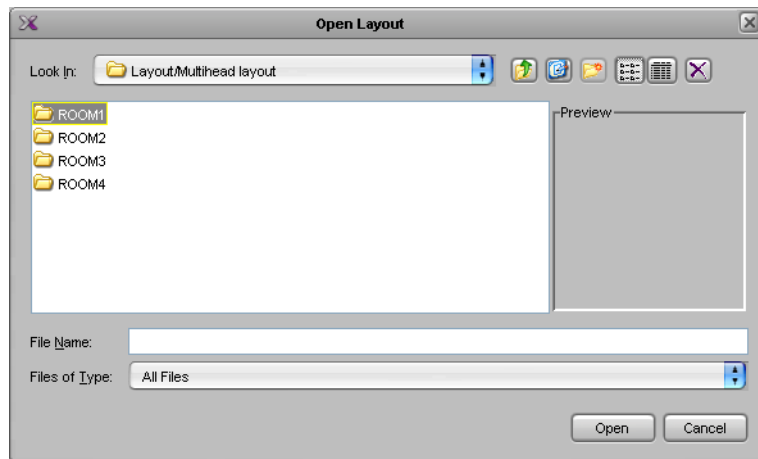
To delete layouts from the Open Layout window

- 1 Click the **Layouts** tab.
- 2 On the **File** menu, click **Open**. Alternatively, click the toolbar's Open button .
The **Open Layout** window appears.



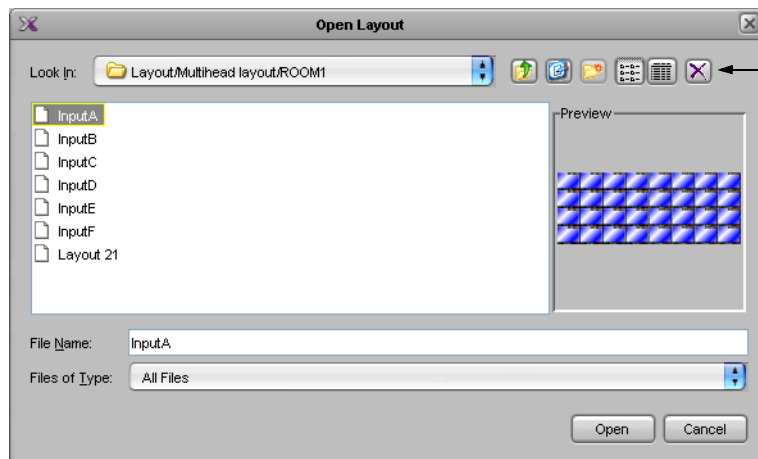
- Double-click **Full screen layout**, to delete a full screen layout.
- Double-click **Multihead layout**, to delete a room layout.

3 Double-click the appropriate room.




The layouts associated with the selected room appear.

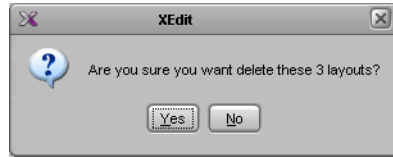
4 Click the layout you want to delete.



5 If you want to delete multiple layouts in a single operation, extend your selection by using the multi-selection Shift+click or Ctrl+click keyboard shortcuts.

6 Click the Delete button  on the toolbar.

The system prompts you to confirm.



7 Click **Yes** to proceed.

The selected layouts are removed from your system configuration.

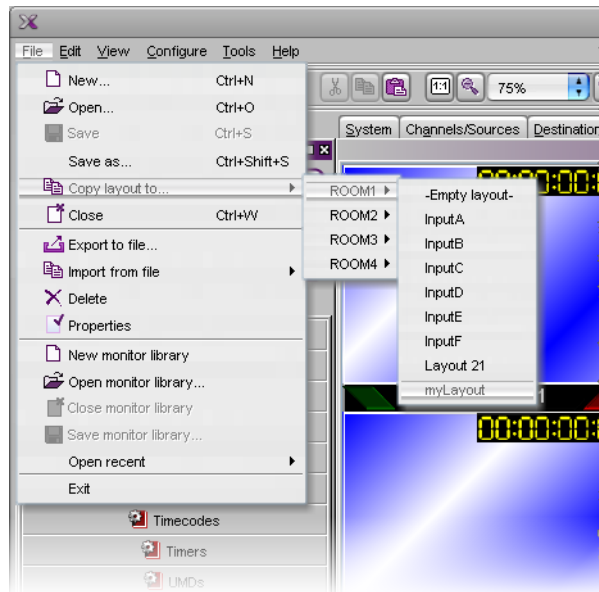
8 Click **Cancel** to close the **Open Layout** window.

Copying Layouts

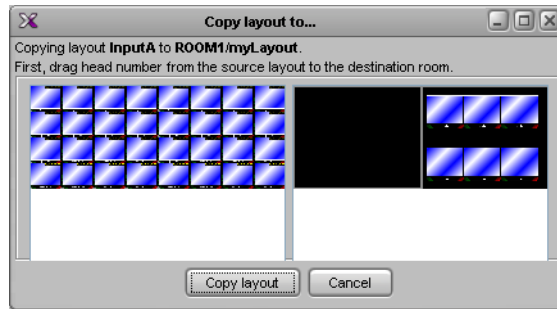
To copy a layout

1 Open the layout you want to duplicate.

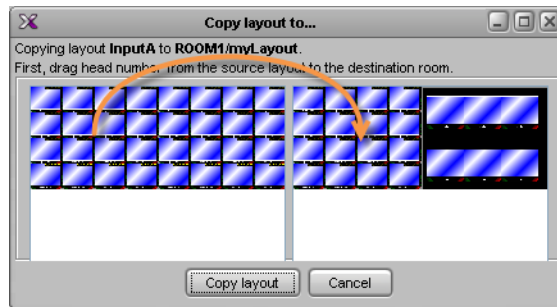
2 On the **File** menu, click **Copy layout to**, point to the appropriate room, and then either select an existing layout from the list, or click **Empty layout**.



A two-pane window appears. The left pane represents the source layout, and the right pane represents the destination layout.



- 3 Drag one head from the source pane to the destination pane.



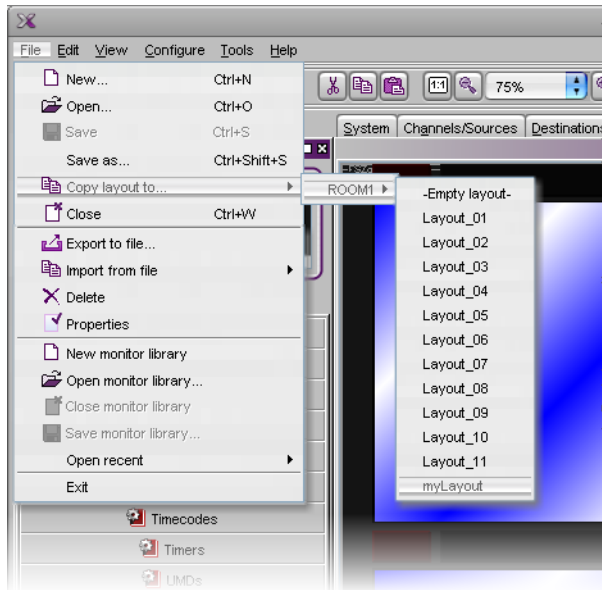
- 4 Repeat until every part of the source layout you want to copy has been dragged onto the appropriate head in the destination pane, and then click **Copy layout**.
 - If you selected an existing layout as your destination layout, the updated destination layout is automatically saved, and appears in the **Layouts** tab.
 - If you selected **Empty layout** as your destination layout, the **Save Layout** window appears.
 - In **Save Layout**, type a name for the new layout, and then click **Save**.
Alternatively, you can replace an existing layout with the new layout.

Rearranging Layouts Across Displays

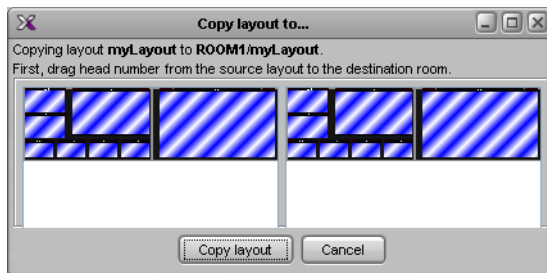
In a room layout, the parts that cover the room displays can be managed separately. You can consider each of these parts as a *display layout* (see [Display layout](#) on page 165). In some situations, you might want to move these parts around, within a room layout, or from one room layout to another. The following procedure describes how to swap two display layouts.

To rearrange a layout

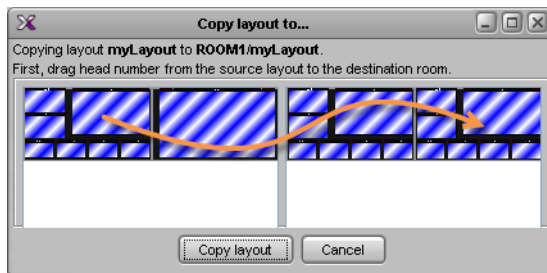
- 1 Open the layout you want to rearrange (see [Opening Layouts](#) on page 172).
- 2 On the **File** menu, click **Copy layout to**, point to the appropriate room, and then click the name of the current layout (that is, the layout you want to rearrange).



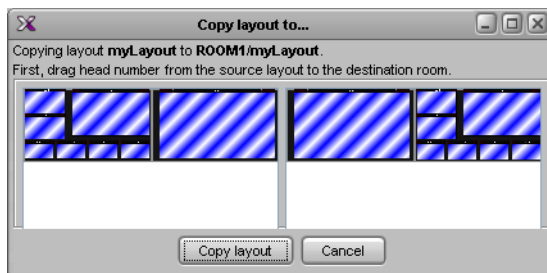
A two-pane window appears. The left pane represents the source layout, and the right pane represents the destination layout.



3 Drag one head from the source pane to a head in the destination pane.



4 Repeat until every part of the source layout you want to copy has been dragged to the appropriate head in the destination pane, and then click **Copy layout**.



Your rearranged layout is automatically saved, and appears in the **Layouts** tab.

Exporting Layouts

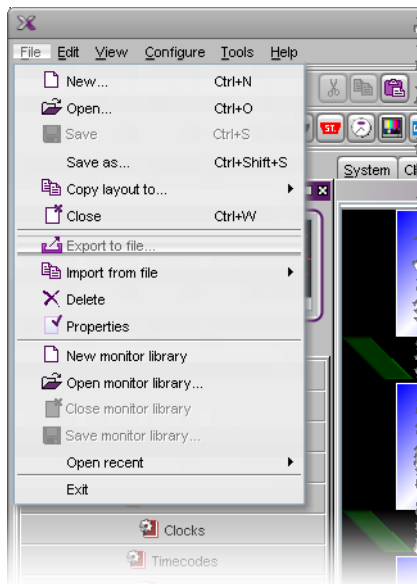
To export a room layout

- 1 Open the room layout you want to export (see [Opening Layouts](#) on page 172).

Note: XEdit does not support exporting full screen layouts.

If you have opened more than one layout, select the layout you want to export by clicking the appropriate tab at the bottom of the window.

- 2 On the **File** menu, click **Export to file**.



The **Export to File** window opens.

- 3 Navigate to the location where you want to save the layout file, change the file name, if necessary, and then click **Save**.

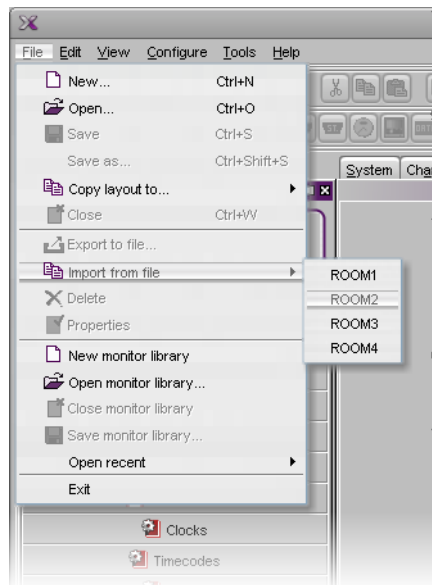
The layout is saved to your file system as a Kaleido Room Layout (KRL) file. You can use this file as a backup, or reuse it by importing it to another room or to another system.

Note: Logical source and monitor wall destination assignment are not exported.

Importing Layouts

To import a layout

- 1 On the **File** menu, point to **Import from file**, and then click the room into which you want to import the layout.



The **Import from File to Room** window opens.

- 2 Navigate to the Kaleido Room Layout (KRL) file you want to import, click it, and then click **Open**.

The layout appears in the **Layouts** tab.

If the number of displays in the target room (or their position), does not match the original room configuration, the imported layout is mapped to the target room's display areas, on a best effort basis. Layout elements associated with Display 1 in the originating room, appear on Display 1 in the target room, elements from Display 2 appear on the target room's Display 2 area, and so on.

- 3 Rearrange the different parts of your layout across the display areas, if needed (see [Rearranging Layouts Across Displays](#) on page 180).
- 4 Assign logical sources and monitor wall destinations to the monitors, if necessary (see [Assigning Logical Sources or Monitor Wall Destinations to Monitors](#) on page 185).
- 5 On the **File** menu, click **Save** to add the layout to the selected room.
Alternatively, use **Save as**, to save the layout under a different name.

Adding Monitors to a Layout

Monitor Limitations in a Layout


Notes

- When adding monitors to a layout, avoid overlapping graphical layout elements with one another. For example, making sure that there be no overlap between UMDs and audio monitors in a layout will ensure optimal performance.
- Before creating or modifying a layout for a **Kaleido-IP** system, review the guidelines listed in *Network Considerations* in the multiviewer's *Installation & Service Manual* for more information.

Notes (continued)

- In the case of the **Kaleido-IP** multiviewers, every *output head* supports up to 64 video monitors, across both the current layout and a full screen layout when used.
-

To add monitors to a layout

- 1 Drag components from the monitor libraries onto the layout, or create custom components, using the toolbar buttons ().

Note: All open monitor libraries appear on the **Tools** pane. See [Monitor library](#) on page 167.

- 2 Resize, move and configure the monitors until you achieve the layout you want.

For detailed configuration instructions on the different monitor types, see:

- [Configuring Video Monitors](#), on page 191
- [Configuring Audio Monitors](#), on page 207
- [Configuring Loudness Monitors](#), on page 210
- [Configuring Time Code Monitors](#), on page 216
- [Configuring Timers](#), on page 218
- [Configuring UMDs](#), on page 224
- [Configuring Alarm Monitors](#), on page 231
- [Configuring Subtitling Monitors](#), on page 235
- [Configuring Metadata Monitors](#), on page 240
- [Configuring V-Chip Monitors](#), on page 242
- [Configuring Clocks](#), on page 244
- [Working with Composite Monitors](#), on page 249
- [Managing Monitor Libraries](#), on page 259

Removing Monitors

To remove a monitor from a layout

- Click the monitor you want to remove, and then press Delete on your keyboard.

TIP

To remove multiple monitors in a single operation, extend your selection by using the standard Ctrl+click keyboard shortcut.

Duplicating Monitors

To duplicate a monitor within a layout

- 1 Click the monitor you want to duplicate.
- 2 On the **Edit** menu, click **Duplicate**. Alternatively, press Ctrl+D.
A copy of the monitor is added to the layout.

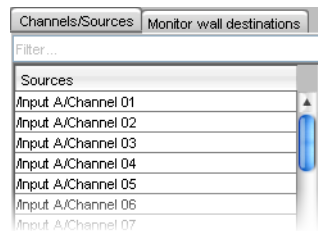
- 3 Move the new monitor to the appropriate position on the layout.
- 4 Press Ctrl+D again, and repeat until the number of copies of the monitor are added to the layout.

The new copies are automatically positioned at intervals matching the relative positions of the original monitor and its first duplicate.

Assigning Logical Sources or Monitor Wall Destinations to Monitors

When you load a layout to the monitor wall, monitors that are not configured with a logical source assignment may be blank (until you manually set the assignment) but, if a monitor was configured as a monitor wall destination, then it will remember its last source assignment (if any). Keep in mind that, if two monitors are assigned the *same* monitor wall destination, they will both reflect source assignments made to any of them during operation. You may want to keep track of already assigned monitor wall destinations, if this is something you want to avoid, and carefully review any layouts you create or modify based on elements from other layouts.

The **Tools** pane includes lists from which you can make assignments by dragging logical sources and monitor wall destinations onto monitors (you do not need to select the monitor first).



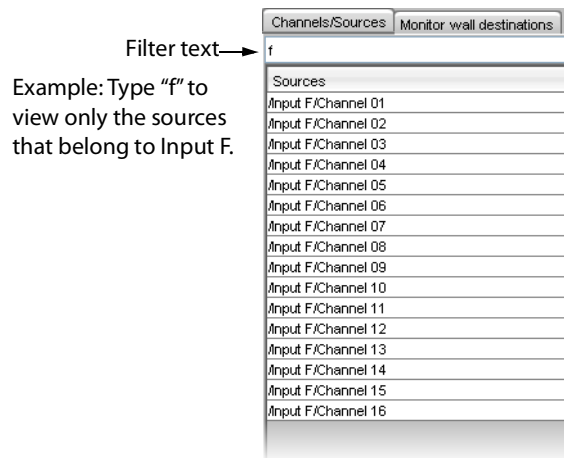
To assign a logical source to a monitor

- Select a logical source from the **Channels/Sources** list, on the **Tools** pane, and then drag it onto the appropriate monitor.

To assign a monitor wall destination to a monitor

- Select a destination from the **Monitor wall destinations** list, on the **Tools** pane, and then drag it onto the appropriate monitor.

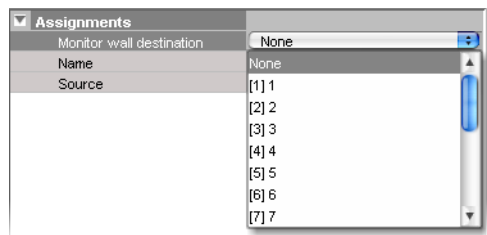
Type in the filter box located above the **Channels/Sources**, and **Monitor wall destinations** lists, to hide sources or destinations that do not match the filter text or regular expression.



When assigning logical sources or monitor wall destinations to monitors in a layout, it may happen that the selection migrates to an adjacent element from the **Channels/Sources** or **Monitor wall destinations** list during the drag-and-drop operation. Once you selected a logical source or monitor wall destination from the corresponding list, dragging the selected element horizontally until the pointer exits the **Tools** pane, or performing a slower drag-and-drop may help.

To assign different monitor wall destinations to *individual* components within a composite monitor

- 1 Click the composite monitor.
The current assignments for this composite appear in the **Properties** pane.
- 2 Make sure **Monitor wall destination** is set to *None*.



- 3 Double-click the composite monitor to unlock it.
- 4 Click a component you want to configure as a monitor wall destination, within the unlocked composite.
- 5 In the **Properties** pane, click the **Monitor wall destination** box, and then select the appropriate destination from the list.
- 6 Repeat from [step 4](#) until you have made the required assignments for this composite.
- 7 Click outside the composite monitor to lock it.


Automatically Populating a Grid-Type Layout

Use the *Auto-layout* tool to quickly create a layout containing a grid of up to 256 identical composites. To use the *Auto-layout* tool, you first add a monitor to the layout. This first monitor is resized and replicated until the grid area is populated with the specified number

of monitors, spread over the area delimited by the upper left corner of the current monitor and the bottom right corner of the current head.

By assigning a channel or a Monitor Wall Destination to the first monitor, the channel number or monitor wall destination number will automatically increment as each monitor is added to the layout. If the current number of channels (as set in the **Channels/Sources** tab, see [Creating and Configuring Logical Sources](#), on page 72) is insufficient for the number of monitors to be created by auto-layout, the remaining monitors will use the last available channel in the list.

To automatically populate a grid-type layout

- 1 Add a first monitor to the layout (see [Adding Monitors to a Layout](#), on page 183, and [Working with Composite Monitors](#), on page 249). Assign a channel number or a Monitor Wall Destination to the first monitor. See [Assigning Logical Sources or Monitor Wall Destinations to Monitors](#), on page 185.
- 2 Position the monitor so that its upper left corner marks the location where you want to start populating the grid.
- 3 Click the monitor, and then click the Auto-layout button  on the toolbar.
- 4 In the **Auto-Layout** window, type the total number of monitors you want to add to the layout, and then click **OK**.

Note: To undo this action, you will need to press Ctrl+Z twice: once to remove the copies, and then once more to restore the first monitor's initial size.

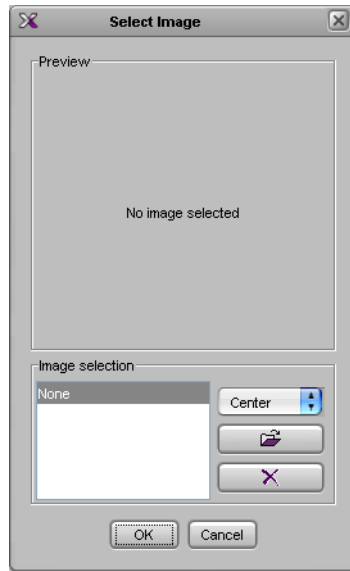
Selecting a Background Image for a Layout


For some purposes, you may want to display a layout's elements layered over a specific static image.

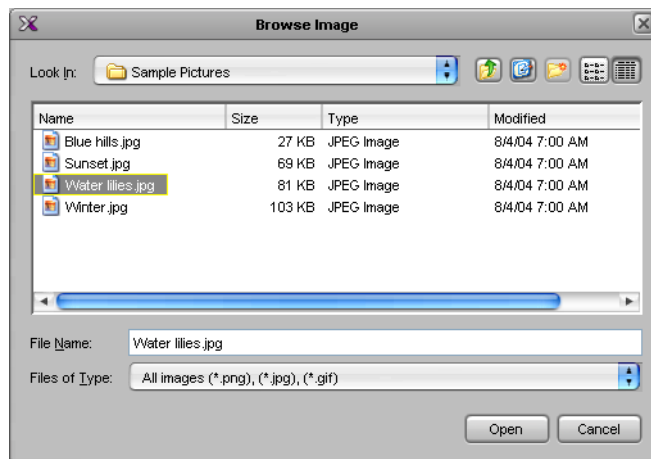
To select a background image for a layout

- 1 Click the **Layouts** tab, and open the layout whose background you want to set.
- 2 Click the display background on the layout.
- 3 In the **Properties** pane, click the **Background image** box, under **Appearance**, and then click the button that appeared at the end of the box.

The **Select Image** window appears.



- 4 If the image you want to use is not already listed in **Select Image**, then click the Open button  to open the **Browse Image** window. Locate the image, select it, and then click **Open**.

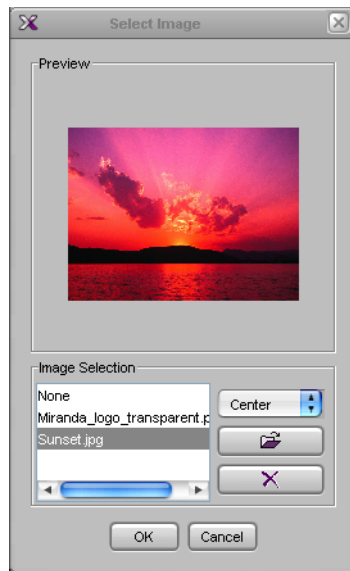


The image is imported into the database.

Notes

- The maximum size for each image is 256 KB, and the maximum overall size for all images is 10 MB. The image can be in PNG, GIF, or JPEG format. Images can be used on multiple layouts and only need to be imported to the database once.

- 5 In **Select image**, select the image from the **Image selection** list, and then click **OK**.



The image appears in the layout background.

Zooming and Panning a View

To adjust the portion of a layout or room that is shown in the main window

- Press and hold the Ctrl key, then press the plus key (+) to zoom in or the minus key (-) to zoom out.
- Press and hold the Ctrl key, then rotate the mouse wheel to zoom in or out.
- Type the zoom factor you want to apply (in the range of 2% to 1600%) directly in the zoom box.
- Press and hold the spacebar, then click and drag to pan.
- Use the scroll bars at the right side and bottom of the **Layouts** or **Rooms** tab.
- In the case of a layout view, click and drag the layout navigator's red rectangle on the **Tools** pane.

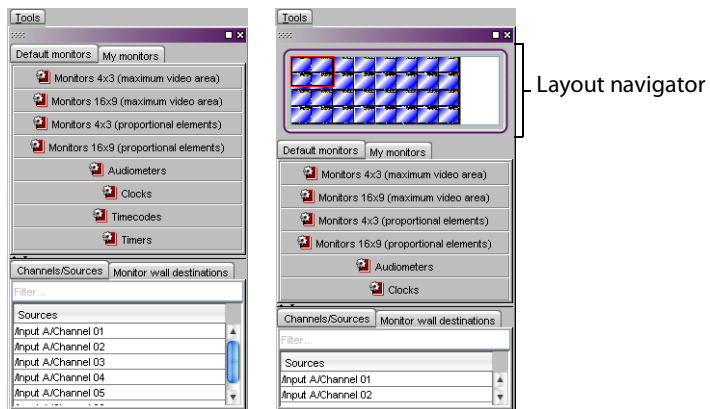
Showing and Hiding the Layout Navigator

To show or hide the layout navigator

- On the **View** menu, click **Navigator**. Alternatively, press Ctrl+Shift+N.
The layout navigator will appear on the **Tools** pane if it was hidden, and vice versa.

Creating Layouts

Showing and Hiding the Layout Navigator



Configuring Video Monitors

In XEdit, you can configure several properties for a video monitor in a layout.

To configure a video monitor

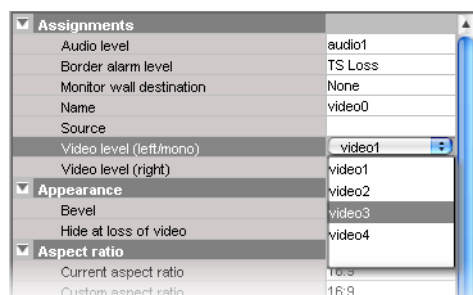
- 1 In XEdit, click the **Layouts** tab, and then open a layout.
- 2 Unlock the appropriate composite monitor if applicable (see [Unlocking a Composite Monitor](#) on page 254).
- 3 Click the video monitor you want to configure.
- 4 To pre-assign a logical source to be monitored by default, to configure a video monitor as a monitor wall destination, or to configure reporting behaviors, see:
 - [Assigning Logical Sources or Monitor Wall Destinations to Monitors](#), on page 185.
 - [Setting Monitored Levels for a Video Monitor](#), on page 191.
 - [Setting a Video Monitor's Text Mode](#), on page 201.
 - [Configuring a Video Monitor's Alarm Reporting Behavior](#), on page 199.
 - [Configuring a Video Monitor's Source Reporting Behavior](#), on page 200.
- 5 To configure dimensions, and resizing behavior, see:
 - [Resizing a Video Monitor](#), on page 192.
 - [Setting a Video Monitor's Aspect Ratio](#), on page 192.
 - [Adding Safe Area Markers](#), on page 193.
 - [Adding a Custom Safe Area Image](#), on page 193.
 - [Video Cropping/Zooming](#), on page 196.
 - [Configuring Automatic Aspect Ratios](#), on page 197.
- 6 Click outside the composite monitor to lock it, if applicable.
- 7 On the **File** menu, click **Save**.

Setting Monitored Levels for a Video Monitor

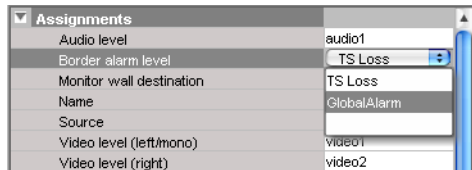
When a system's logical sources include more than one level under a given category, the first level is selected by default for monitoring. In the case of a video monitor, you may change the default assignments for video, audio, and alarm levels.

To change the default levels selected for a video monitor

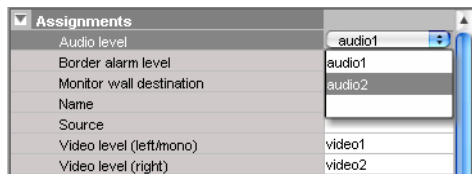
- 1 If your system's logical sources include more than one video level (such as to monitor 3D stereoscopic signals), select the ones you want to monitor from the **Video level (left/mono)**, and **Video level (right)** lists.



- 2 To monitor a different alarm level, or the source's global alarm, select the appropriate level from the **Border alarm level** list.



- 3 If you want the default *Monitor audio* action associated with this video monitor to use a different audio level, select a level from the **Audio level** list.



Resizing a Video Monitor

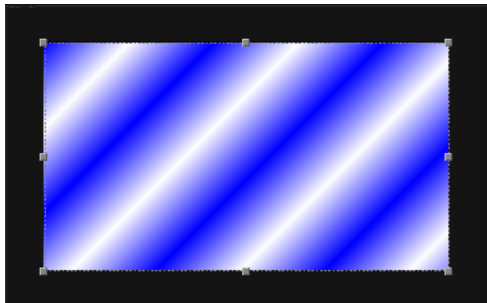
To resize a video monitor

- Drag any of the corner handles, inwards or outwards.
The video monitor, and the associated video window, will become smaller or larger, and they will both keep their aspect ratio.
- Drag any of the side handles, inwards or outwards.
The bounds of the video monitor will change, while the video window will still keep its aspect ratio.
- Change the aspect ratio property of the video monitor. See [Setting a Video Monitor's Aspect Ratio](#) below.
The video monitor will keep its bounds, and the video window will be resized to fill as much of the video monitor area as possible, given the new aspect ratio. Certain multiviewer models have limitations as to the minimum allowed monitor size. See [Monitor Limitations in a Layout](#), on page 183.

Setting a Video Monitor's Aspect Ratio

To set a video monitor's aspect ratio

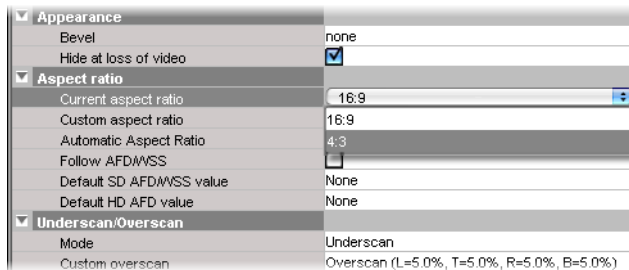
- 1 Click the video monitor whose aspect ratio you want to configure.



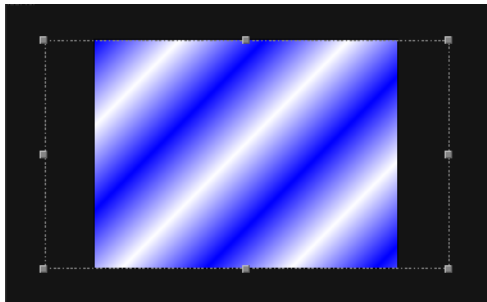
Video monitor with an aspect ratio of 16:9

Note: Double-click the video monitor, if it is part of a composite monitor.

- 2 In the **Properties** pane, click the **Current aspect ratio** box, and then select the appropriate aspect ratio from the list.



The selected aspect ratio is applied to the video window, within the video monitor.



Video window's aspect ratio changed to 4:3, within a 16:9 video monitor

To set a custom aspect ratio for a video monitor

- 1 In the **Properties** pane, click the **Custom aspect ratio** box.
The box becomes editable.
- 2 Type the appropriate aspect ratio, and then press Enter.
The new aspect ratio is applied to the video window, within the video monitor, and it is added to both the **Current aspect ratio**, and **Custom aspect ratio** lists.

Note: The custom values are appended to the **Custom aspect ratio** list on an ongoing basis. They can then be applied to other monitors in other layouts. **Current aspect ratio** only lists the current custom ratio, if any, in addition to the default 16:9, and 4:3 values.

Adding Safe Area Markers

To add safe area markers for a video monitor in a layout

- In the **Properties** pane, select the appropriate options, under **Safe area markers**.

Adding a Custom Safe Area Image

XEdit allows you to superimpose an image, such as a brand graphics, on top of a video monitor in such a way that a video signal will show through the transparent areas in the

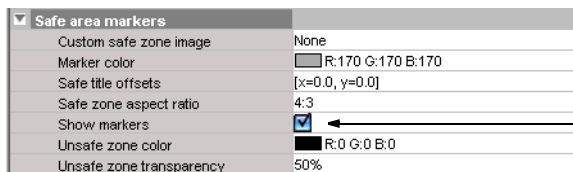
graphics. This is accomplished by adding a free-form safe area image to the video monitor. The image can be in PNG, GIF, or JPEG format.

Notes

- The maximum **size** for each image is 256 KB, and the maximum overall size for all images is 10 MB. Images can be used on multiple layouts and only need to be imported to the database once.
- To ensure that the **aspect ratio** of the imported image is preserved, you should position the graphics on a fully transparent background with the same aspect ratio as the video monitor on which it is to appear.

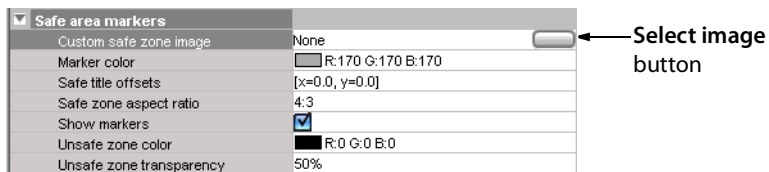
To add a free-form safe area image to a video monitor

- 1 In the **Properties** pane, select the **Show markers** check box, under **Safe area markers**.



- 2 Click the **Custom safe zone image** box.

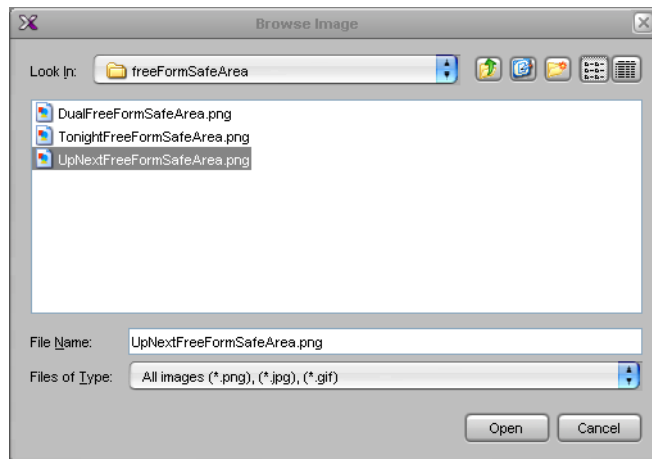
A button appears inside the box.



- 3 Click the button to open the **Select Image** window.

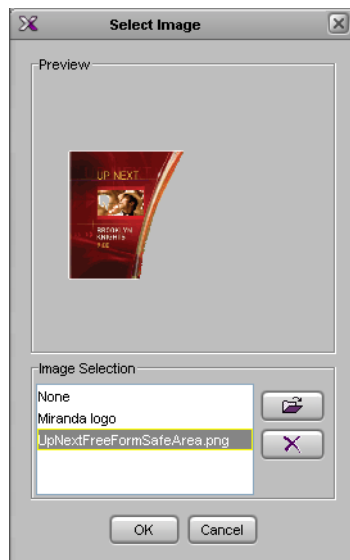


- 4 If the image you want to use is not already listed in **Select Image**, then click the **Open** button to open the **Browse Image** window. Locate the image, select it, and then click **Open**.

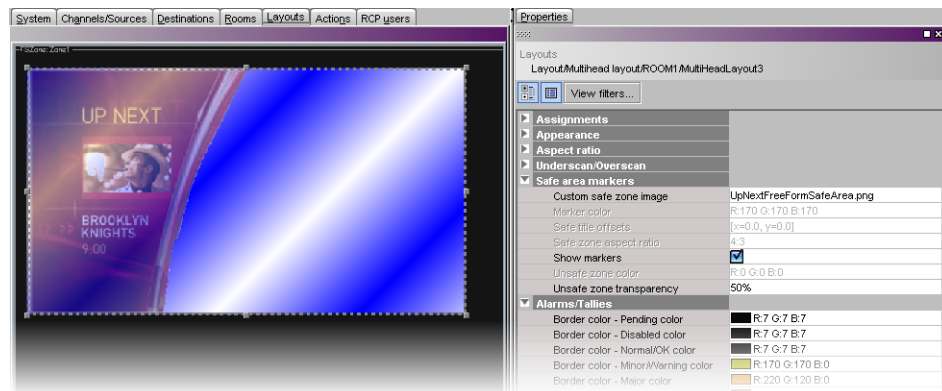


The image is imported into the database.

- 5 In **Select image**, select the image from the **Image selection** list, and then click **OK**.



- 6 The image appears on the video monitor.



- 7 To adjust the transparency level of the image, click the **Unsafe zone transparency** box, then move the slider or type a transparency value directly in the box. At 0% the

portions of the image that correspond to the unsafe area are opaque; at 100% the entire image is transparent.

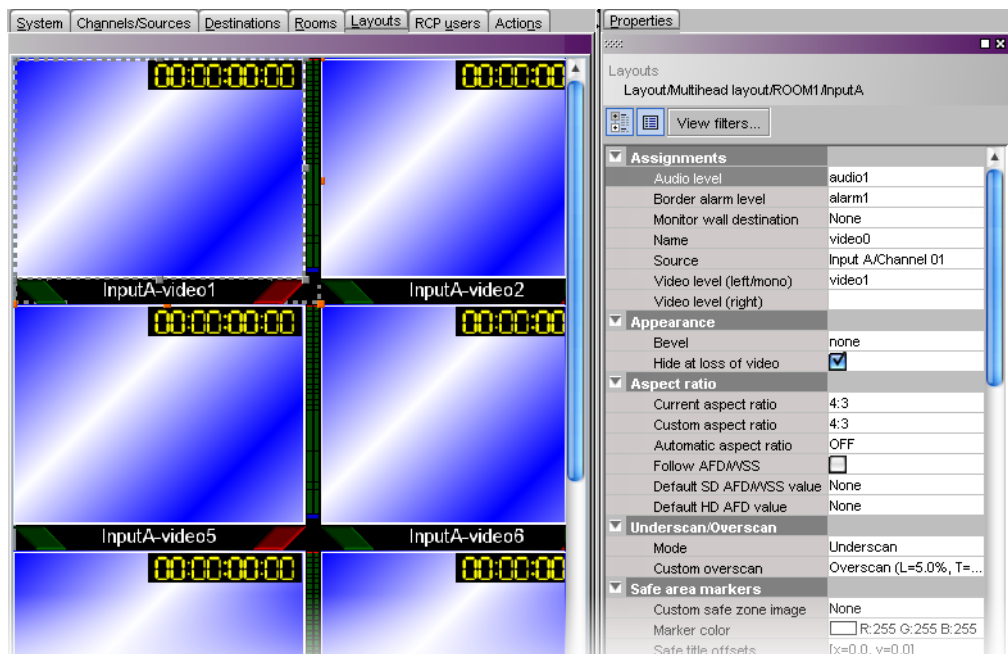
Note: When a custom safe zone image is selected, the following attributes are not available: **Marker color**, **Safe title offsets**, **Safe zone aspect ratio**, and **Unsafe zone color**.

Video Cropping/Zooming

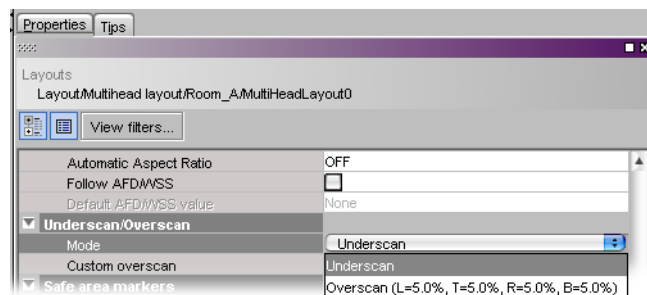
Kaleido-IP X320 / X120	Kaleido-IP VM
<input type="radio"/>	<input type="radio"/>

To set the underscan/overscan properties of a video monitor

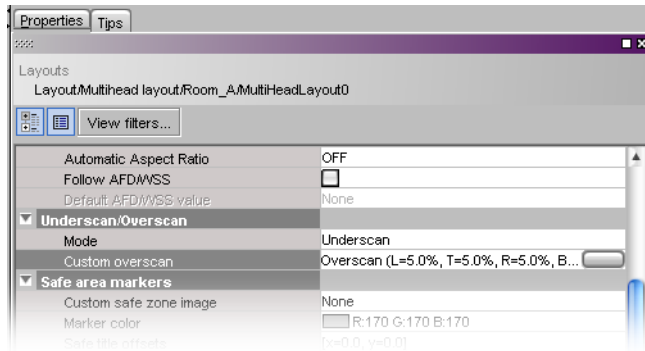
- 1 In the **Properties** pane, scroll down to the **Underscan/Overscan** section.



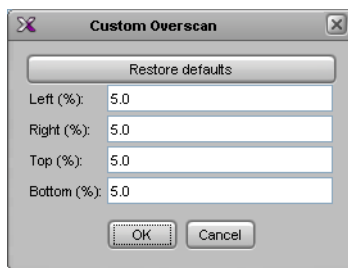
- 2 In the **Mode** list, select **Underscan** (to display the entire video signal) or **Overscan** (to display a cropped video signal).



- 3 To specify custom crop settings, click in the white area to the right of **Custom overscan**, then click the button that appears.



- 4 In the **Custom Overscan** window, specify new percentage values for **Left**, **Right**, **Top**, and **Bottom** overscan margins, then click **OK**.



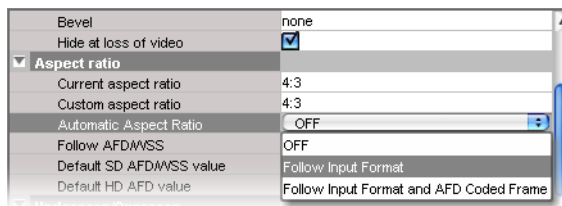
Note: Generally avoid exceeding 15% in any direction. You can click **Restore defaults** to enter the default overscan values (left, right, top and bottom = 5%). Safe title area and aspect ratio markers follow the video signal (for example, if the safe title is within 5% of top, left, right and bottom, then when the video is in default overscan mode, the safe title will not appear).

When the layout is loaded on the monitor wall, the updated overscan/underscan properties become available.

Configuring Automatic Aspect Ratios

To slave a video monitor to the input signal aspect ratio

- In the **Properties** pane, select the appropriate value from the **Automatic Aspect Ratio** list.



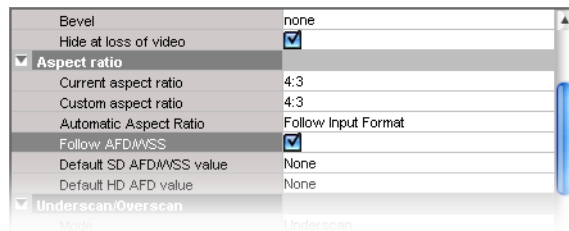
- The default value is **OFF**.
- If the **Automatic Aspect Ratio** property is set to **Follow Input Format**, then the video monitor will change its aspect ratio based on the input feed's format.

- If the **Automatic Aspect Ratio** property is set to **Follow Input Format and AFD Coded Frame**, then the video monitor will change its aspect ratio according to the AFD coded frame. If there is no AFD present, the default value for the current format will be used (see [Configuring the default aspect ratio for HD and SD signals](#) on page 198):
 - the default HD AFD value, if the input is HD;
 - the default SD AFD/WSS value if the input is not HD;
 - if the default value for the current input format is **None**, then the video monitor will change its aspect ratio based on the input feed's format.

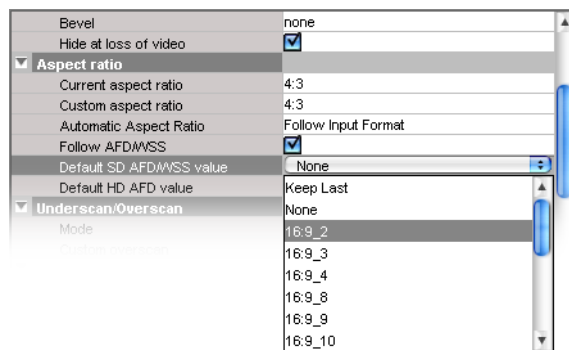
Configuring the default aspect ratio for HD and SD signals

To have a video raster follow a video signal's AFD/WSS metadata

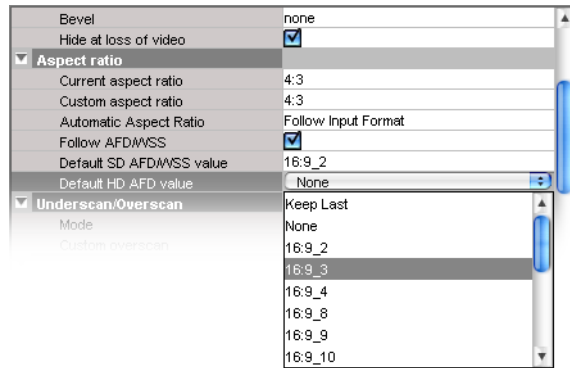
- 1 Click to put a check mark in the box labeled **Follow AFD/WSS**.



- 2 In the **Default SD AFD/WSS value** list, select the aspect ratio to use when there is no AFD or WSS in an SD signal. Select **Keep Last** to have the video window maintain the last decoded AFD or WSS value if the signal is paused.



- 3 In the **Default HD AFD value** list, select the aspect ratio to use when there is no AFD or WSS in an SD signal. Select **Keep Last** to have the video window maintain the last decoded AFD value if the signal is paused.



Configuring a Video Monitor's Alarm Reporting Behavior

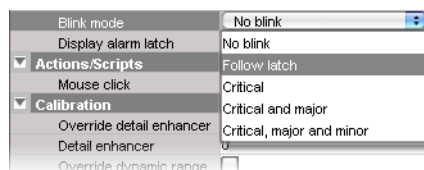
To prevent users from missing temporary alarms on the monitor wall, monitors that are capable of displaying an alarm status (such as video monitors, subtitling monitors, UMDs, alarm monitors) can be configured with a latching mechanism. An alarm latch will keep the error state visible until someone acknowledges the associated alarm. Video monitors can provide alarm status information through their borders' color and blinking behavior, and show the latched state as small indicators in each corner of the video window. See also: [Configuring a Video Monitor's Source Reporting Behavior](#), on page 200.

To set the alarm reporting features for a video monitor

- 1 In the **Properties** pane, scroll down to the **Alarms/Tallies** section.



- 2 Set the appropriate border color scheme and associated thickness attributes.
- 3 Click the **Blink mode** box, and then select the appropriate blinking behavior, for your purposes.



- 4 The Kaleido multiviewer supports the following blinking modes:

Blink mode	Description
Off	The status indicator will never blink.
Follow Latch	The status indicator's blinking will follow the latch status. The indicator will blink until someone unlatches the alarm.
Critical	The status indicator will blink when the current status is critical.
Critical or Major	The status indicator will blink when the current status is critical or major.
Critical, Major and Minor	The status indicator will blink when the current status is critical, major or minor.

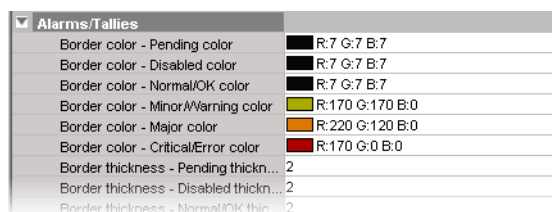
- 5 Select the **Display alarm latch** check box to enable the latched status indicators in each corner of the video window.

Configuring a Video Monitor's Source Reporting Behavior

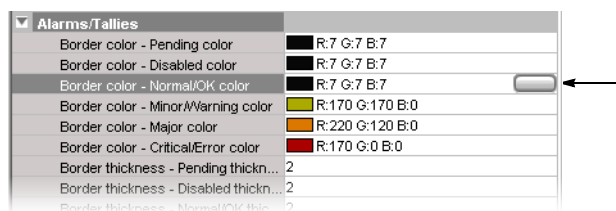
To help you distinguish which sources are currently active on the monitor wall, monitors that are capable of displaying an alarm status (such as video monitors, subtitling monitors, UMDs, alarm monitors) can have their borders, background or text configured to appear in a specific color, based on their current source. Video monitors can provide this information through their borders' color. See also: [Configuring a Video Monitor's Alarm Reporting Behavior](#), on page 199.

To configure a video monitor's border colors for source reporting

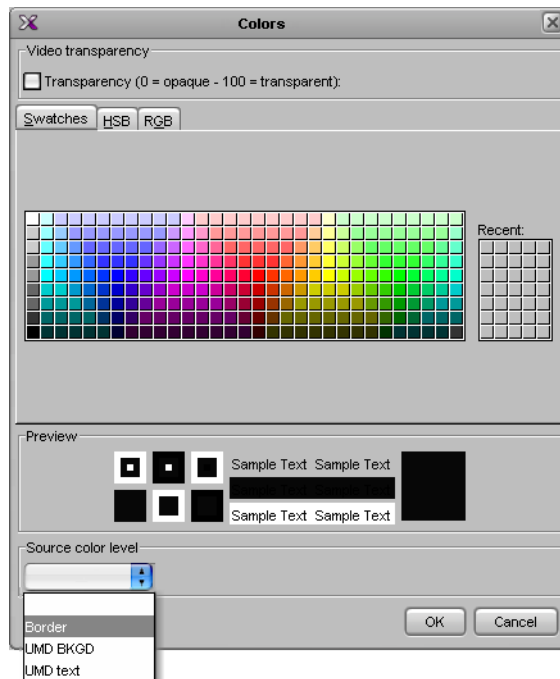
- 1 In the **Properties** pane, scroll down to the **Alarms/Tallies** section.



- 2 Set the border thickness attributes as necessary.
- 3 Click the border color box for an alarm state you want associated with a distinctive color, based on the monitor's current source.
- 4 Click the button that appeared at the end of the box.

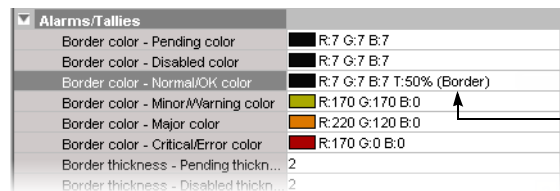


- 5 In **Colors**, select the appropriate level from the **Source color level** list. See [Configuring color level assignments](#) on page 82, for more information.



- 6 Set the color's transparency as necessary.
- 7 Set the color to be used for sources whose color levels might not be defined, by clicking the tab that corresponds to the color space you want to use, and then choose a color (see [Configuring a Video Monitor's Alarm Reporting Behavior](#) on page 199, for more information).
- 8 Click **OK** to close the color picker window.

In the **Properties** pane, the name of the selected source-based color level appears next to the fallback color (and transparency, if used).



- 9 Repeat from [step 3](#) for the remaining colors you want to set.

Setting a Video Monitor's Text Mode

Notes

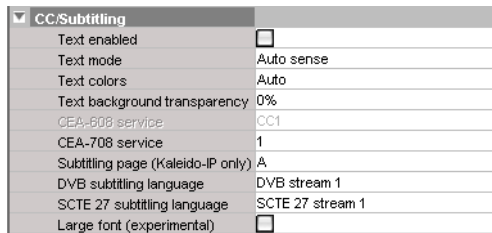
- Closed captioning/subtitled text services can be enabled by purchasing the *CC/XDS* option. This requires the *CC/XDS* option to be enabled (see the multiviewer's *Installation & Service Manual* for more information).

Notes (continued)

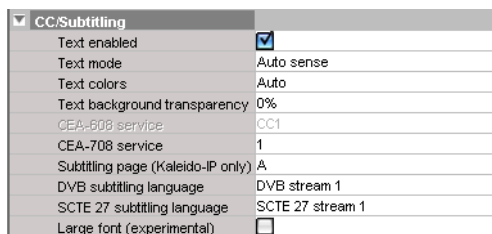
- The Kaleido-IP supports extraction of CC/subtitling and XDS data (1 license/program). It is not possible to enable or verify the *CC/XDS* option in XAdmin's Status and Options page, for this multiviewer model. Contact Technical Support for activation and configuration instructions ([Grass Valley Technical Support](#), on page 360).

To set the subtitling properties of a video monitor

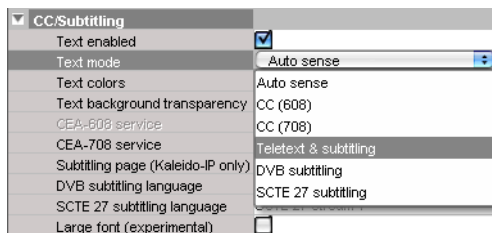
- 1 In the **Properties** pane, scroll down to the **CC/Subtitling** section.



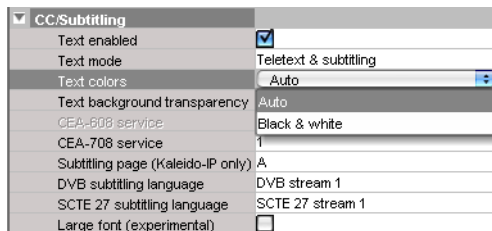
- 2 Select the **Text enabled** check box.



- 3 Select a value from the **Text mode** list.

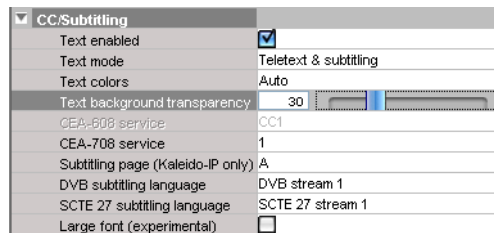


- 4 Select the appropriate option from the **Text colors** list.



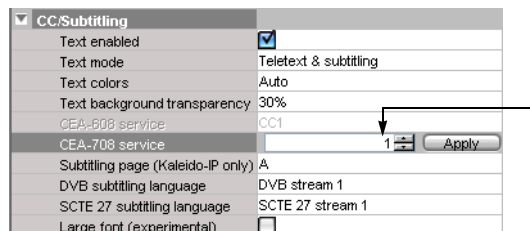
- **Auto:** To display text in colors, as defined in the signal.
- **Black & white:** To display white characters against a black background, regardless of what is specified in the signal.

- 5 To adjust the transparency level of the text background, click the **Text background transparency** box, and then move the slider, or type a transparency value directly in the box.



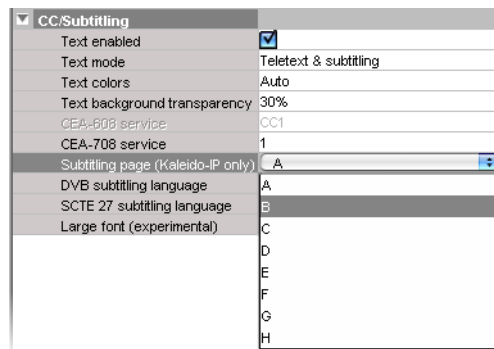
At 0% the text will appear against an opaque background; at 100% the fully transparent background will let the text appear directly against the video. This applies to CEA-608, CEA-708 captions, WST, ST 2031, and RDD 8/OP-47 text.

- Specify a CEA-708 service value, if necessary, and then click **Apply**.

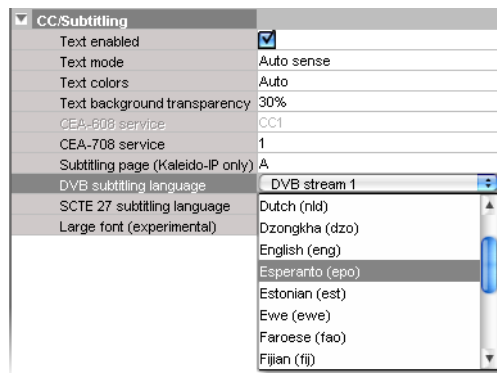


- In the case of a Kaleido-IP, if you want to pre-select a specific DVB teletext subtitling language for this monitor, select a page from the **Subtitling page** list.

Make sure the selected page is configured (see [Configuring Teletext/Subtitling Page Selection for a Kaleido-IP](#) on page 107). For other multiviewer models, make sure page A remains selected.



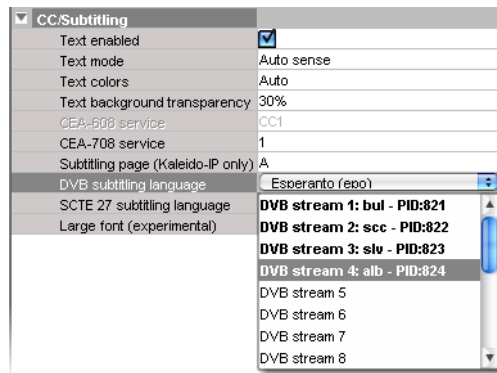
- If you want to pre-select a specific DVB subtitling language for this monitor, click to expand the **DVB subtitling language** list and then select the appropriate language or DVB stream you want to monitor.



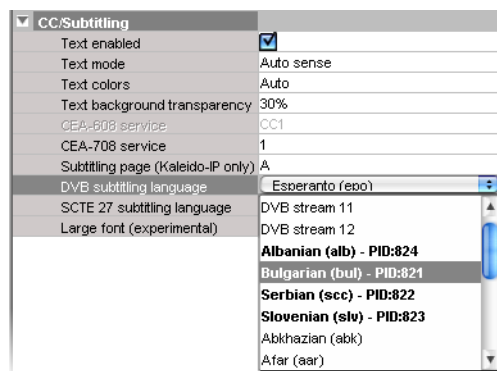
The list of subtitling streams and languages contains the following:

- A series of DVB streams identified by their relative number: **DVB stream 1** to **DVB stream 12**. Choose from this series if you want to always monitor the third available subtitling stream, for example.
- A list of all supported languages, in alphabetical order based on the English name, which is followed with the corresponding ISO 639-2 alpha-3 code. Choose from this series if you want to monitor subtitling in a specific language.

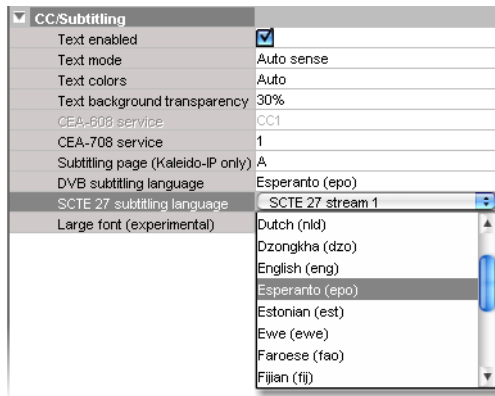
When XEdit is connected to the multiviewer, the available languages are indicated in bold text. The ISO 639-2 alpha-3 code for each available language, and the corresponding PID appear in the list of relative subtitling streams.



Then, following **DVB stream 12**, for each of the currently available languages, the name, the 3-letter code, and the corresponding PID appear in bold text before the list of all supported languages.



- 9 If you want to pre-select a specific SCTE 27 subtitling language for this monitor, click to expand the **SCTE 27 subtitling language** list and then select the appropriate language or SCTE 27 stream you want to monitor.



The list of subtitling streams and languages contains the following:

- A series of SCTE 27 streams identified by their relative number: **SCTE 27 stream 1** to **SCTE 27 stream 12**. Choose from this series if you want to always monitor the third available subtitling stream, for example.
- A list of all supported languages, in alphabetical order based on the English name, which is followed with the corresponding ISO 639-2 alpha-3 code. Choose from this series if you want to monitor subtitling in a specific language.

When XEdit is connected to the multiviewer, the available languages are indicated in bold text. The ISO 639-2 alpha-3 code for each available language, and the corresponding PID appear in the list of relative subtitling streams.

Then, following **SCTE 27 stream 12**, for each of the currently available languages, the name, the 3-letter code, and the corresponding PID appear in bold text before the list of all supported languages.

Notes

- The current version of the Kaleido Software supports foreground colors for teletext (WST, OP-47) only. Closed captions (CC, DTVCC) will appear in white against a black background.
 - If you do not need teletext to be displayed in colors, then you may find that selecting **Black & white** will improve your system's performance.
 - In the case of the Subtitling (WST) text services, the Kaleido-IP supports decoding of up to eight preset pages (page A to page H) per video signal on the monitor wall. The other multiviewer models support decoding of a single preset page (for example, page A) per video signal.
 - In the case of CEA-608, only CC1 subtitles can be decoded.
 - The current version of the Kaleido Software supports DVB and SCTE 27 subtitles, from Kaleido-IP sources only.
-

- 10 If you want to see CC/subtitling text in a larger, more readable font size, select the **Large font (experimental)** check box.

Creating Layouts

Setting a Video Monitor's Text Mode

CC/Subtitling	
Text enabled	<input checked="" type="checkbox"/>
Text mode	Auto sense
Text colors	Auto
Text background transparency	30%
CEA-608 service	CC1
CEA-708 service	1
Subtitling page (Kaleido-IP only)	A
DVB subtitling language	Esperanto (epo)
SCTE 27 subtitling language	Esperanto (epo)
Large font (experimental)	<input checked="" type="checkbox"/>

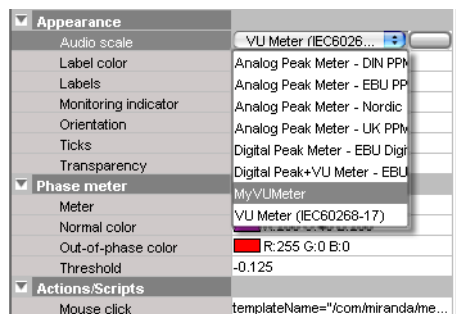
Note: The large font option is in a beta stage, and works best with an aspect ratio of 16:9.

Configuring Audio Monitors

Note: To decode Dolby E audio metadata, the *Dolby E* option is required. This requires this option to be enabled (see the multiviewer's *Installation & Service Manual* for more information).

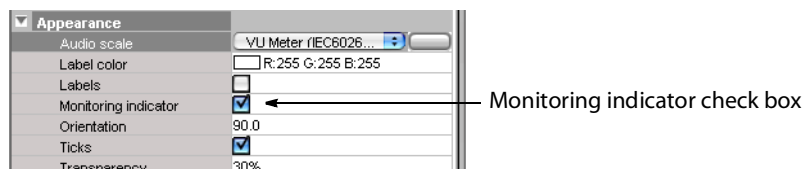
To configure an audio monitor

- 1 In the **Layouts** tab, click the audio monitor you want to configure.
- 2 In the **Properties** pane, click the **Audio scale** box, under **Appearance**, and then select the appropriate audio scale from the list.

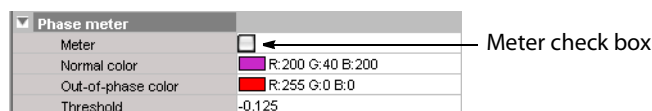


Note: See [Configuring Audio Scales](#) on page 212 for more information.

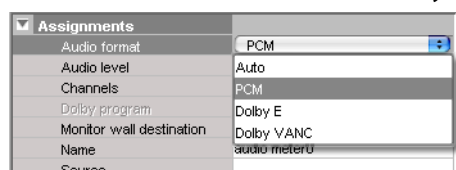
- 3 The **Monitoring indicator** check box is selected by default. When enabled, a color-keyed rectangle is shown below the VU meter that is the same color set for the display from which the audio is being monitored. To set a display's color, see [Calibrating the Audio Monitoring Color](#), on page 113. See also [Triggering Audio Monitoring by Using the mouse, the RCP-200, or the Kaleido-RCP2](#), on page 342. Clear the check box to remove this rectangle.



- 4 If you want your audio monitor to include a stereo phase meter: under **Phase meter**, select the **Meter** check box, and then configure the threshold and colors as needed.



- 5 Under **Assignments**, click the **Audio format** box, and then select the appropriate format from the list: Auto, PCM, Dolby E or Dolby VANC.

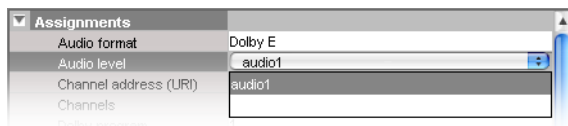


By default, audio monitors added to a layout by using the toolbar button have this attribute set to *Auto*.

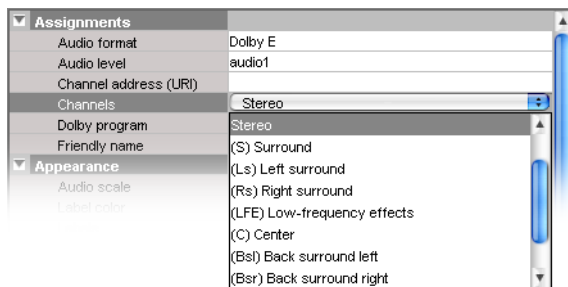
Notes

- If the actual audio source assigned to this audio monitor is not of the same format configured here, then the audio data will not be shown.
 - In the case of a Kaleido-IP, the current version of the Kaleido Software does not support audio monitors configured to monitor PCM audio signals. For every audio monitor in your layout, the **Audio format** property should be set to **Auto**.
-

6 Choose an **Audio level**.



7 Choose a value from the **Channels** list to indicate which channel to display.



- If the **Audio format** is set to **PCM**, then the available choices are *(L) Left*, *(R) Right*, and *Stereo*.
 - If the **Audio format** is set to **Auto**, **Dolby E** or **Dolby VANC**, then the available choices are *(L) Left*, *(R) Right*, *Stereo*, *(S) Surround*, *(Ls) Left surround*, *(Rs) Right surround*, *(LFE) Low-frequency effects*, *(C) Center*, *(Bsl) Back surround left*, *(Bsr) Back surround right*, *(Le) Left extra*, and *(Re) Right extra*.
- 8 If your monitoring purposes may involve decoding Dolby E audio metadata, then select the appropriate program number (1–8) from the **Dolby program** list.

Note: The number of programs included in a Dolby E metadata bitstream depends on the program configuration. For example, a Dolby E stream with the 7.1 program configuration only has one program available for selection in its metadata bitstream; a 5.1+2 stream has two programs; a 8x1 stream has eight program selections possible.

- 9 Make the appropriate assignments (see [Assigning Logical Sources or Monitor Wall Destinations to Monitors](#) on page 185).
- 10 Set the other attributes, as needed (see [Creating Actions](#) on page 261 for more information).

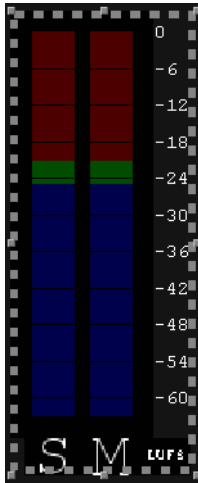
▼ Assignments	
Audio format	PCM
Audio level	audio1
Channels	Stereo
Dolby program	1
Monitor wall destination	None
Name	audio meter0
Source	Input_A/Channel 01
▼ Appearance	
Audio scale	VU Meter (IEC60268-17)
Label color	<input type="checkbox"/> R:255 G:255 B:255
Labels	<input checked="" type="checkbox"/>
Monitoring indicator	<input checked="" type="checkbox"/>
Orientation	90.0
Ticks	<input checked="" type="checkbox"/>
Transparency	30%
▼ Phase meter	
Meter	<input checked="" type="checkbox"/>
Normal color	<input type="checkbox"/> R:200 G:40 B:200
Out-of-phase color	<input type="checkbox"/> R:255 G:0 B:0
Threshold	-0.125
▼ Actions/Scripts	
Mouse click	templateName="/com/miranda/me...

11 On the **File** menu, click **Save**.

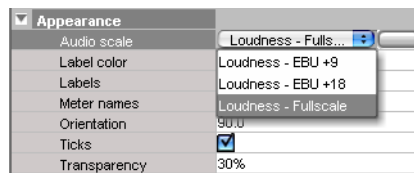
Configuring Loudness Monitors

To configure a loudness monitor

- 1 In XEdit, click the **Layouts** tab, and then open a layout.
- 2 Unlock the appropriate composite monitor if applicable (see [Unlocking a Composite Monitor](#) on page 254).
- 3 Click the loudness monitor you want to configure.



- 4 In the **Properties** pane, click the **Audio scale** box, under **Appearance**, and then select the appropriate audio scale from the list.



Three predefined audio scales are available for loudness monitors:

- Full scale (default)
- EBU +9
- EBU +18

Note: The audio scales applicable to loudness monitors have fixed upper and lower limits. Only the colors can be changed (see [Configuring Audio Scales](#) on page 212).

- 5 Choose the **Audio level** you want to monitor.



- 6 Make the appropriate source and destination assignments (see [Assigning Logical Sources or Monitor Wall Destinations to Monitors](#) on page 185).
- 7 Set other attributes, as needed (see [Creating Actions](#) on page 261 for more information).

▼ Assignments	
Audio level	audio1
Monitor wall destination	None
Name	loudness0
Source	
▼ Appearance	
Audio scale	Loudness - Fullscale
Label color	<input type="checkbox"/> R:255 G:255 B:255
Labels	<input checked="" type="checkbox"/>
Meter names	<input checked="" type="checkbox"/>
Orientation	90.0
Ticks	<input checked="" type="checkbox"/>
Transparency	30%
▼ Actions/Scripts	
Mouse click	

8 On the **File** menu, click **Save**.

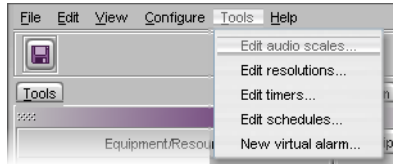
Configuring Audio Scales

You can configure audio scales in two ways: either globally, from the **Tools** menu, or by clicking a specific audio monitor in a layout.

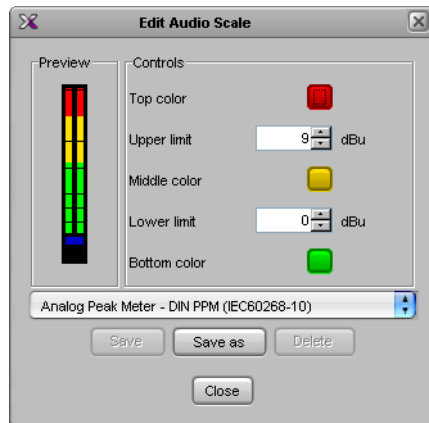
Configuring Audio Scales from the Tools Menu

To configure an audio scale from the Tools menu

- 1 On the **Tools** menu, click **Edit audio scales**:



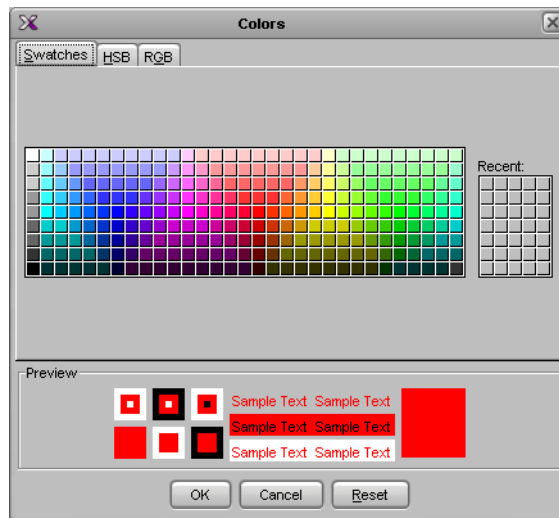
The **Edit Audio Scale** window appears.



- 2 Select the audio scale you want to customize (or the one on which you want to base a new audio scale), from the list at the bottom of the window.

Note: When you modify one of the default audio scales, you can only save your changes as a new audio scale. On the other hand, custom audio scales can be tweaked and saved repeatedly until the required configuration is achieved.

- 3 Click one of the **Top color**, **Middle color**, or **Bottom color** buttons, depending on the part of the audio scale you want to configure.
The color picker window appears.

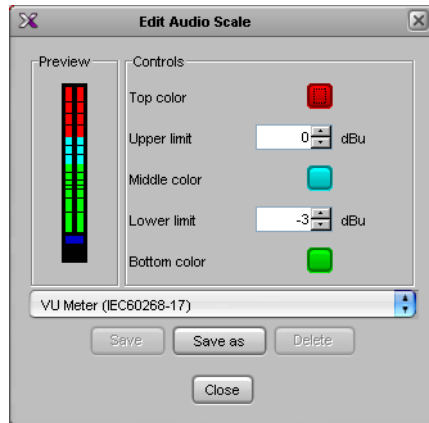


- 4 In **Colors**, click the tab that corresponds to the color space you want to use, and then choose a color.
Swatches in the selected color appear under **Preview**.
- 5 Click **OK** to close the color picker window.
In **Edit Audio Scale**, the corresponding button and the corresponding part of the audio monitor preview show the selected color.
- 6 Repeat this procedure until all three colors are set.
- 7 Enter the audio thresholds in **Upper limit** and **Lower limit**.
- 8 Type a name for the new audio scale in the box at the bottom, and then click the **Save as** button. Alternatively, if you are modifying an existing custom audio scale, you can click the **Save** button.

Configuring an Audio Scale from a Specific Audio Monitor

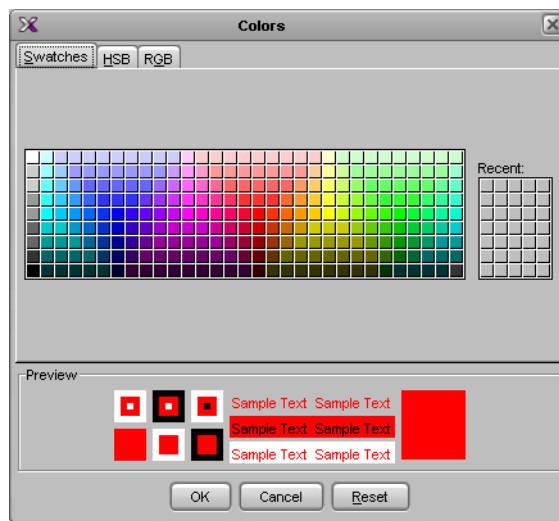
To configure an audio scale from a specific audio monitor

- 1 In the **Layouts** tab, click the audio monitor you want to configure.
- 2 In the **Properties** pane, click the **Audio scale** box, under **Appearance**, and then click the button that appeared at the end of the box.
The **Edit Audio Scale** window appears.



- 3 Click one of the Top color, Middle color, or Bottom color buttons, depending on the part of the audio scale you want to configure.

The color picker window appears.



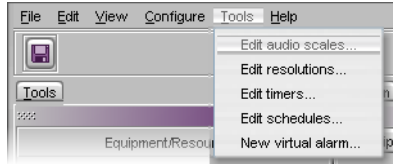
- 4 In **Colors**, click the tab that corresponds to the color space you want to use, and then choose a color.
Swatches in the selected color appear under **Preview**.
- 5 Click **OK** to close the color picker window.
In **Edit Audio Scale**, the corresponding button and the corresponding part of the audio monitor preview show the selected color.
- 6 Repeat this procedure until all three colors are set.
- 7 Enter the audio thresholds in **Upper limit** and **Lower limit**.
- 8 Type a name for the new audio scale in the box at the bottom, and then click the **Save as** button.

Note: When you modify one of the default audio scales, you can only save your changes as a new audio scale. On the other hand, custom audio scales can be tweaked and saved repeatedly until the required configuration is achieved.

Removing Audio Scales from the System

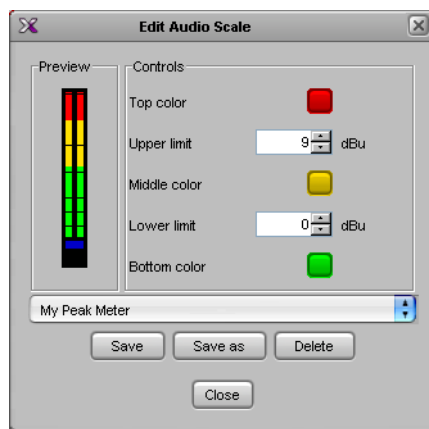
To remove a custom audio scale from the system

- 1 On the **Tools** menu, click **Edit audio scales**.



The **Edit Audio Scale** window appears.


- 2 In **Edit Audio Scale**, select the custom scale you want to remove, from the list at the bottom of the window, and then click **Delete**.



Note: The default audio scales cannot be removed from the system.

Configuring Time Code Monitors

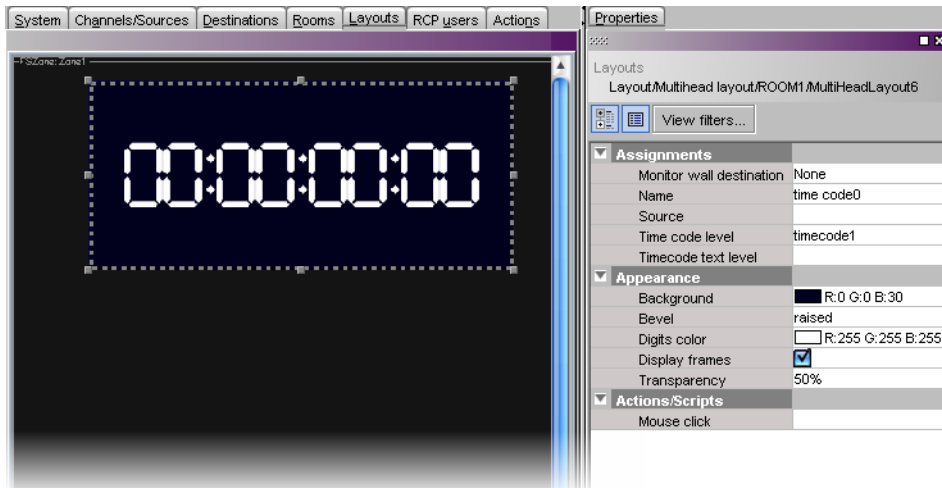
To configure a time code monitor in a layout

- 1 To add a time code monitor to a layout, click the “Time code monitor” button  on the toolbar, and then click and drag to draw a time code monitor on the layout.

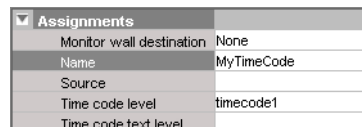
Alternatively, you can drag a time code monitor from a monitor library to the layout.

- 2 Click the time code monitor you want to configure.

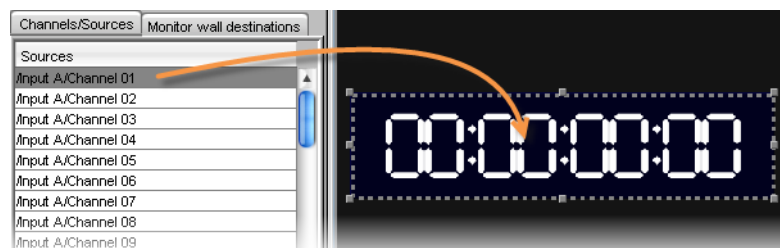
The time code’s attributes appear in the **Properties** pane.



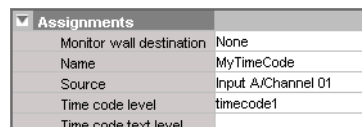
- To replace the default name, type a new name in the **Name** box.



- If you want to assign a logical source, drag the appropriate element from the **Channels/Sources** list that appears on the **Tools** pane, to the time code monitor.

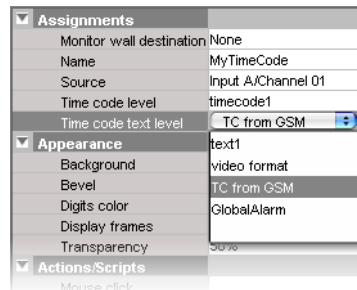


The selected logical source’s name appears in the **Source** box.



Note: The first time code level applies by default. If your system’s logical sources include more than one time code level, select the one you want to apply from the **Time code level** list.

- If you want to assign time code information from an external provider (see [Configuring logical sources based on external alarm providers](#) on page 81), then select the appropriate text level from the **Time code text level** list.



If the time code monitor is configured with both a time code level and a text level, it will show the most recently updated value (for example, if the multiviewer received time code data, followed by a text update from the GSM, then the monitor will display the GSM alarm text). If a text value from the GSM does not meet the supported formats, then the value is ignored. The supported formats are:

- HH:MM:SS (showing the hours, minutes, and seconds, as 2-digit values)
- HH:MM:SS:FF (showing the hours, minutes, seconds, and frames, as 2-digit values)
- HH:MM:SS;FF (showing the hours, minutes, seconds, and drop frames, as 2-digit values)

Note: With the current implementation of this feature, you may observe a 200-270 ms delay, depending on your multiviewer system topology, and on the network load.

Configuring Timers

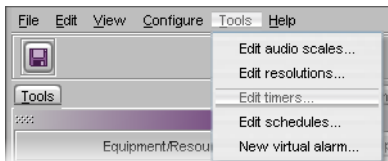
Building a countdown timer involves defining the timer itself (name, behavior, time reference, etc.), and then creating one or more timer monitors to display the timer on a monitor wall. Timers can be created, modified, deleted, added to a layout, assigned to logical sources, rooms or individual RCP users, and controlled from the Kaleido-RCP2.

Note: In addition to timer monitors, Gateway commands (see [Gateway](#) on page 263) can be used to interact with timers. Refer to the *Kaleido Remote Control Protocol (Gateway) User's guide*. See [Related Documentation](#), on page 11.

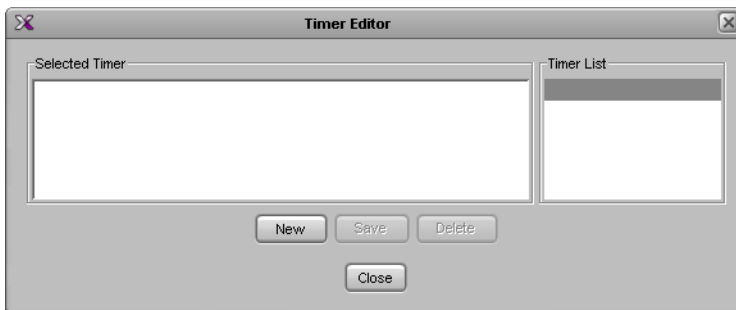
Adding Timers to the System

To define a timer

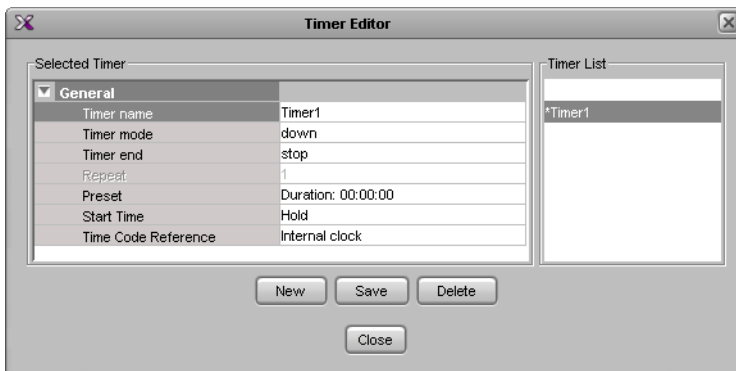
- 1 On the **Tools** menu, click **Edit timers**.



- 2 In **Timer Editor**, click **New**.



- 3 Type a name for your new timer in the **Timer name** box.



- 4 Choose the appropriate mode, from the **Timer mode** list.

General	
Timer name	Timer1
Timer mode	down
Timer end	up
Repeat	down
Preset	remaining
Start Time	Hold
Time Code Reference	internal clock

- **Up:** The timer counts up starting from zero up to the Preset time.
- **Down:** The timer counts down from the Preset time to zero.
- **Remaining:** The timer counts down from the current time until it reaches the Preset time. This mode is a one-shot mode—the timer will not automatically restart the next day at the same start time. To restart it, you must either reset the timer monitor on the monitor wall, or set and specify a new start time.

5 Choose what happens when the timer reaches the end of its countdown period, from the **Timer end** list.

General	
Timer name	Timer1
Timer mode	down
Timer end	stop
Repeat	stop
Preset	overrun
Start Time	loop
Time Code Reference	internal clock

- **Loop:** The timer restarts and repeats its cycle (not available with the **Remaining** timer mode).
- **Stop:** The timer stops.
- **Overrun:** The timer counts through its specified end point, and then continues (when **Overrun** is specified, the timer always counts up).

6 If you chose **Loop** as a timer end mode, specify the number of times the loop should repeat.

General	
Timer name	Timer1
Timer mode	down
Timer end	loop
Repeat	1
Preset	Duration: 00:00:00
Start Time	Hold
Time Code Reference	Internal clock

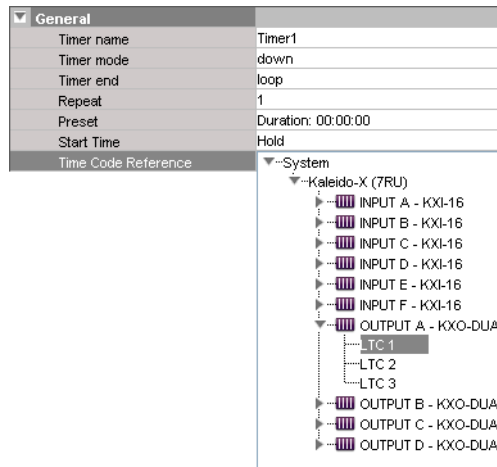
7 Specify a **Preset** duration.

General	
Timer name	Timer1
Timer mode	down
Timer end	loop
Repeat	1
Preset	Duration:00:00:00
Start Time	Hold
Time Code Reference	Internal clock

8 Specify a **Start** time.

General	
Timer name	Timer1
Timer mode	down
Timer end	loop
Repeat	1
Preset	Duration: 00:00:00
Start Time	Hold 6/5/08 6:20 PM
Time Code Reference	Hold Time

- Choose a synchronization source from the **Time code reference** list— either an embedded time code signal from a video source, an LTC input (if available), or the internal clock time (default).

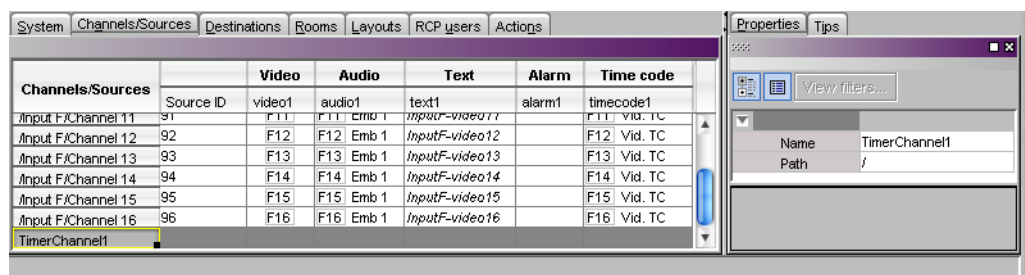


IMPORTANT

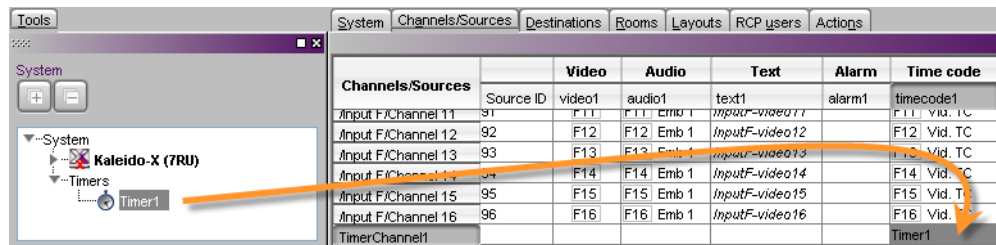
Before setting a timer's start time in XEdit, review the following:

- If the selected time code reference *includes time zone information*, then make sure that the PC that has XEdit is configured for the same time zone.
- If the selected time code reference *does not include time zone information*, or you chose to bind the timer to the multiviewer's *internal clock*, then the multiviewer's system time will apply.

- Click **Save** to save your new timer and close the **Timer Editor** window.
- Under the **Channels/Sources** tab, create a new logical source to associate with the timer, and name it.




- Click a cell in the time code level of the new logical source, and drag the timer you want to assign to this logical source from the filtered System list that appears on the **Tools** pane, to the selected cell in the sources table.

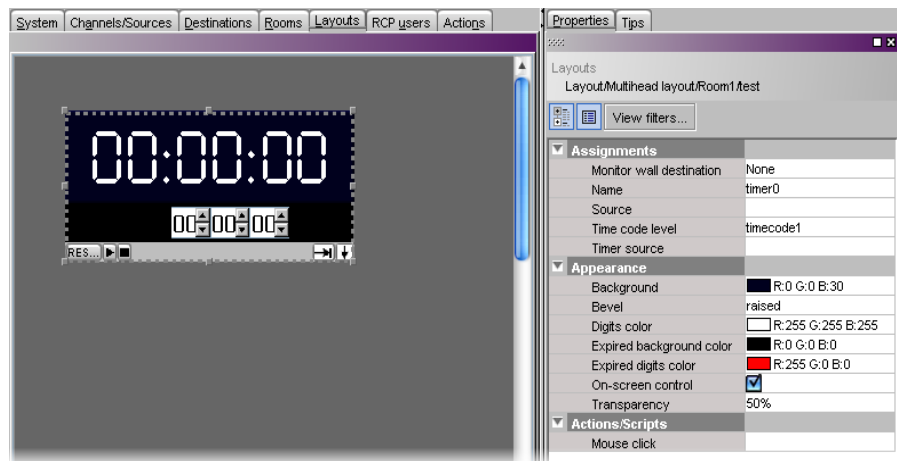


13 Click Save.

Adding a Timer Monitor to a Layout

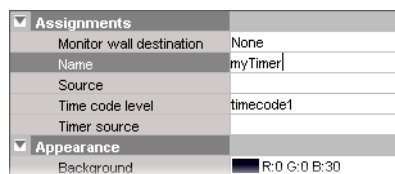
To create a timer monitor

- 1 In XEdit, open a layout and click the Timer button .
- 2 Click and drag to draw a timer monitor on the layout.

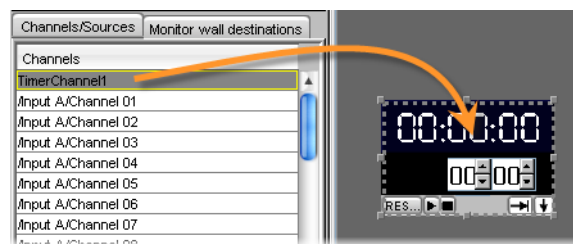


Alternatively, you can drag a timer monitor from the Timers library to the layout. The timer's attributes appear in the **Properties** pane.

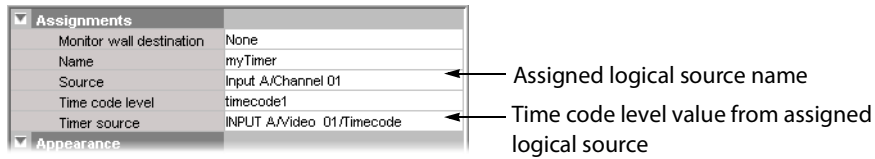
- 3 Replace the default name, by typing a new name in the **Name** box.



- 4 If you want to assign a logical source, drag the appropriate element from the **Channels/Sources** list that appears on the **Tools** pane, to the timer monitor.

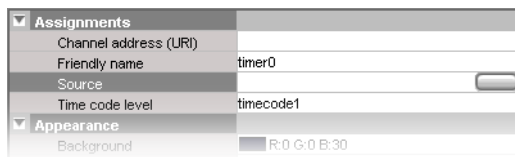


The selected logical source's name appears in the **Source** box, and the **Timer source** box shows the value of the corresponding time code level.



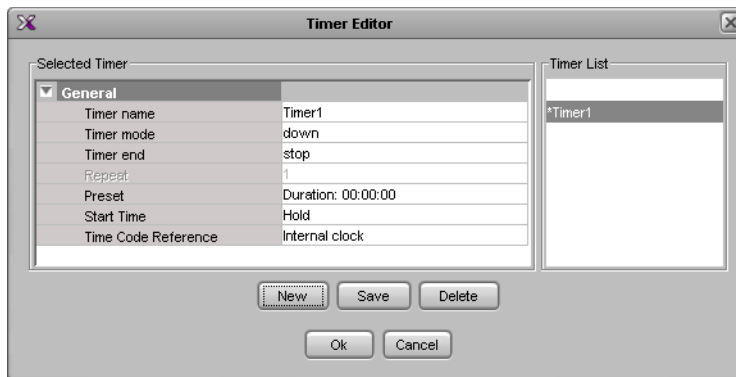
Note: The first time code level applies by default. If your system's logical sources include more than one time code level, select the one you want to apply from the **Time code level** list.

5 Click the button beside **Timer source**.



The **Timer Editor** window appears.

6 Choose a timer (see [Configuring Timers](#) on page 218) from the **Timer List**.

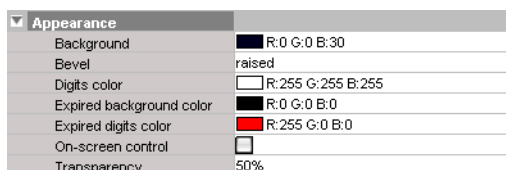


It is also possible to assign a timer to a timer monitor by dragging an existing logical source (containing a timer assignment) to the monitor.

Note: Each timer monitor is assigned to exactly one timer. Multiple timer monitors can be assigned to the same timer. Start/stop/reset or mode changes applied to one monitor affect all other monitors assigned to the same timer.

7 Click **Save**.

8 Modify the timer's **Appearance** properties as needed.

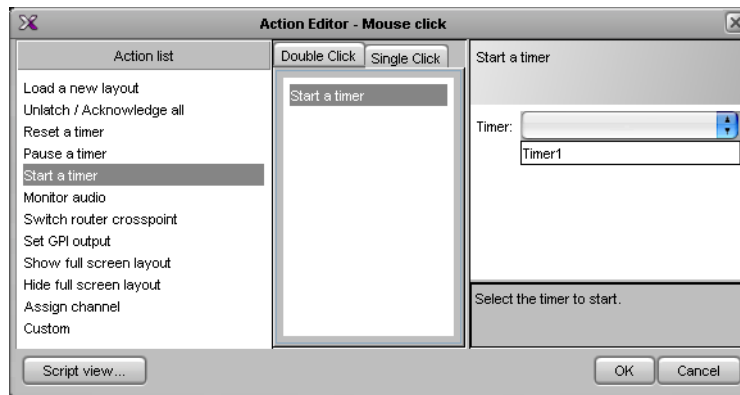


9 To attach an action to the timer, click the button beside **Mouse click**.



The **Action Editor** window appears.

- 10 Drag an action from the left pane to the middle pane, then specify the action's behavior in the right pane.



For more information on creating actions, see [Creating Actions](#), on page 261.

- 11 Click **OK** to save the action assignment and close the **Action Editor** window.
- 12 Click **Save** to save the layout with the new timer monitor.
- 13 Export the database to a Kaleido-IP multiviewer, and load the layout.

The interactive timer monitor appears on the monitor wall. See [Using Timers](#), on page 336, [Assigning a Timer to a Room](#), on page 279, and [Assigning a Timer to an RCP User](#), on page 284, for more information.

Configuring UMDs

UMDs can serve various purposes: in addition to displaying the name of the video source seen in a video monitor, they can report operational status and error conditions in real time, by showing dynamic alarm and text attributes associated with a source.

Note: UMDs configured to show static text are editable in XEdit, and on the monitor wall, whereas UMDs configured to show dynamic text are not editable.

To configure a UMD

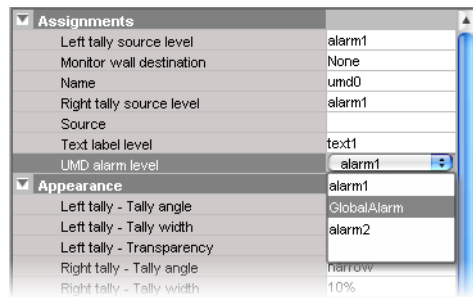
- 1 In XEdit, click the **Layouts** tab, and then open a layout.
- 2 Unlock the appropriate composite monitor if applicable (see [Unlocking a Composite Monitor](#) on page 254).
- 3 Click the UMD you want to configure.
- 4 To pre-assign a logical source to be monitored by default, to configure the selected UMD as a monitor wall destination, or to configure its reporting behaviors, see:
 - [Assigning Logical Sources or Monitor Wall Destinations to Monitors](#), on page 185.
 - [Setting Monitored Alarm and Text Levels for a UMD](#), on page 224.
 - [Configuring a UMD's Alarm Reporting Behavior](#), on page 225.
 - [Configuring a UMD's Source Reporting Behavior](#), on page 227.
- 5 To configure UMD text properties, see:
 - [Configuring Static UMD Text](#), on page 228.
 - [Configuring Dynamic UMD Text](#), on page 229.
 - [Setting the Text Font](#), on page 230.
- 6 Click outside the composite monitor to lock it, if applicable.
- 7 On the **File** menu, click **Save**.

Setting Monitored Alarm and Text Levels for a UMD

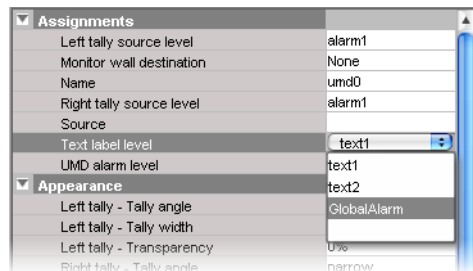
When a system's logical sources include more than one level under a given category, the first level is selected by default for monitoring. In the case of a UMD, you may change the alarm levels associated with the UMD itself, and with its left and right tallies, and the text level from which the UMD label will be retrieved.

To change the default alarm and text levels selected for a UMD

- 1 To monitor a different alarm level, or the source's global alarm, select the appropriate level from the **UMD alarm level** list.



- 2 To have the UMD report alarm text (or other dynamic text), select the level from the **Text label level** list.



See [Configuring Dynamic UMD Text](#) on page 229, for more information.

- 3 If you want to monitor tallies, select the levels from the **Left tally source level**, and **Right tally source level** lists.

See [Tally Interface Devices & Timer Systems](#) on page 287, for examples of such configurations.

Configuring a UMD's Alarm Reporting Behavior

To prevent users from missing temporary alarms on the monitor wall, monitors that are capable of displaying an alarm status (such as video monitors, subtitling monitors, UMDs, alarm monitors) can be configured with a latching mechanism. An alarm latch will keep the error state visible until someone acknowledges the associated alarm. For UMDs, the latch color can be set to follow the background or the text color configuration. See also: [Configuring a UMD's Source Reporting Behavior](#), on page 227.

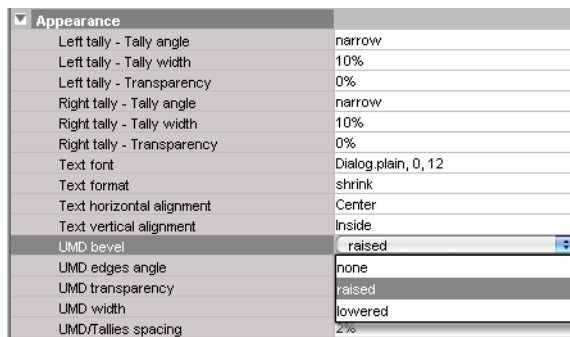
To set the alarm reporting features for a UMD (text and tallies)

- 1 In XEdit, open a layout, and click the UMD whose alarm reporting behavior you want to configure.

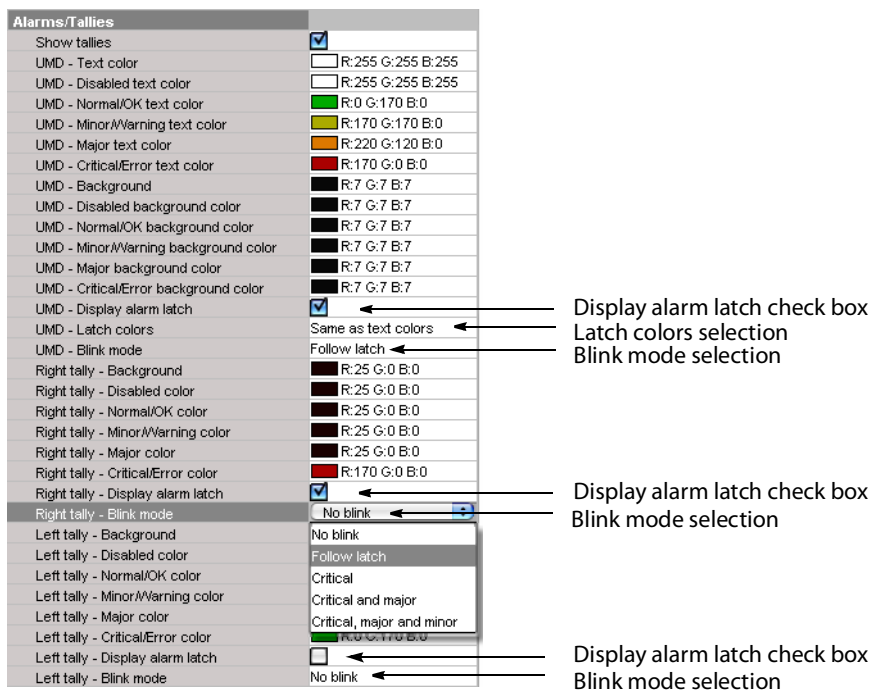
Note: Double-click the UMD, if it is part of a composite monitor.

- 2 If you want to use the UMD's alarm latching mechanism, make sure the UMD is configured with a bevel.

In the **Properties** pane, the **UMD bevel** attribute should be set to either *lowered*, or *raised*.



3 Scroll down to the **Alarms/Tallies** section, in the **Properties** pane, to set the appropriate text and background color scheme.



4 Click the **Blink mode** boxes, and then select the appropriate blinking behavior, for your purposes:

Blink mode	Description
Off	The status indicator will never blink.
Follow latch	The status indicator's blinking will follow the latch status. The indicator will blink until someone unlatches the alarm.
Critical	The status indicator will blink when the current status is critical.
Critical and major	The status indicator will blink when the current status is critical or major.
Critical, major and minor	The status indicator will blink when the current status is critical, major or minor.

- 5 Select the **Display alarm latch** check box to enable the latched status indicators.

Configuring a UMD's Source Reporting Behavior

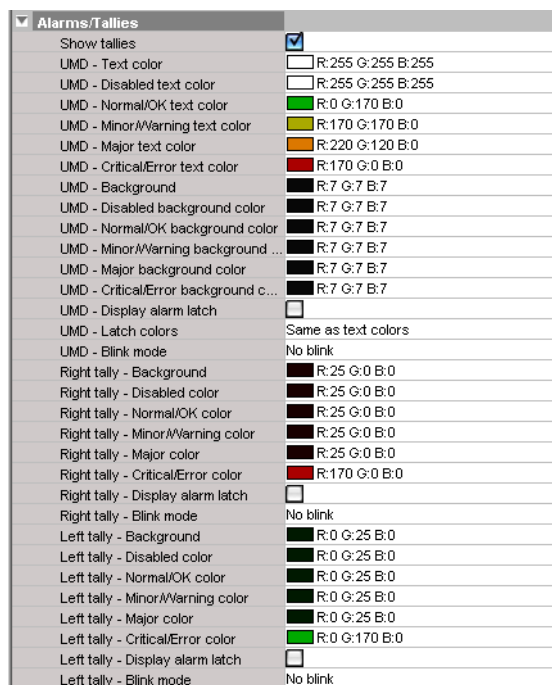
To help you distinguish which sources are currently active on the monitor wall, monitors that are capable of displaying an alarm status (such as video monitors, subtitling monitors, UMDs, alarm monitors) can have their borders, background or text configured to appear in a specific color, based on their current source. UMDs can provide this information through their text and background colors. See also: [Configuring a UMD's Alarm Reporting Behavior](#), on page 225.

To configure a UMD's background or text colors for source reporting

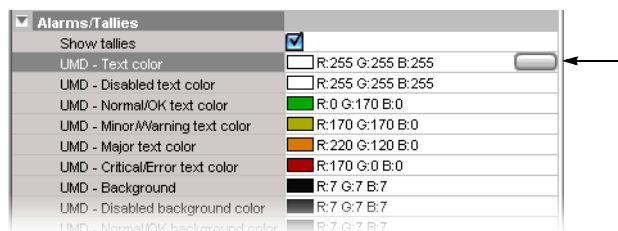
- 1 In XEdit, open a layout, and click the UMD whose source reporting behavior you want to configure.

Note: Double-click the UMD, if it is part of a composite monitor.

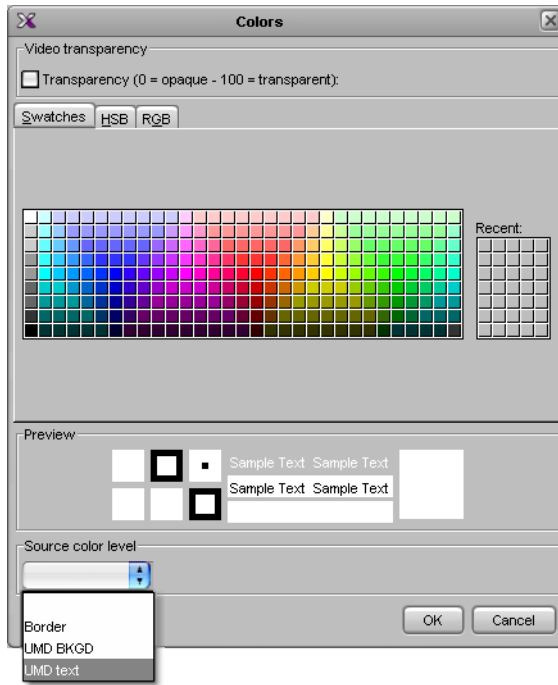
- 2 In the **Properties** pane, scroll down to the **Alarms/Tallies** section.



- 3 Click the text or background color box for a state you want associated with a distinctive color, based on the monitor's current source.
- 4 Click the button that appeared at the end of the box.

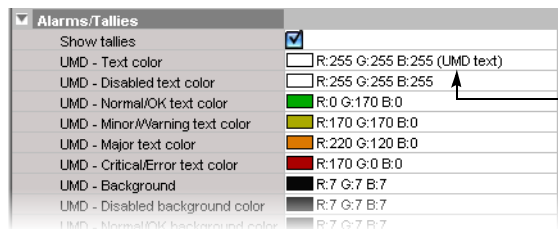


- 5 In **Colors**, select the appropriate level from the **Source color level** list. See [Configuring color level assignments](#) on page 82, for more information.



- 6 Set the color's transparency as necessary.
- 7 Set the color to be used for sources whose color levels might not be defined, by clicking the tab that corresponds to the color space you want to use, and then choosing a color (see [Configuring a UMD's Alarm Reporting Behavior](#) on page 225, for more information).
- 8 Click **OK** to close the color picker window.

In the **Properties** pane, the name of the selected source-based color level appears next to the fallback color (and transparency, if used).



- 9 Repeat from [step 3](#) for the remaining colors you want to set.

Configuring Static UMD Text

A UMD can show two types of static text:

- static text that you typed directly on a layout, in XEdit (see below), or on the monitor wall (see [Editing UMD Text](#) on page 330);
- static text associated with the current logical source assigned to the UMD, which you entered in the sources table.

In the first case, the static text is tied to a specific layout whereas, in the other case, the text is tied to a specific input signal.

To configure static text for a specific UMD in a layout

- 1 In the **Layouts** tab, double-click the UMD whose static text you want to set.
- 2 Make sure the appropriate input language and method are set in your operating system.
- 3 Type some text.

To configure static UMD text from the sources table

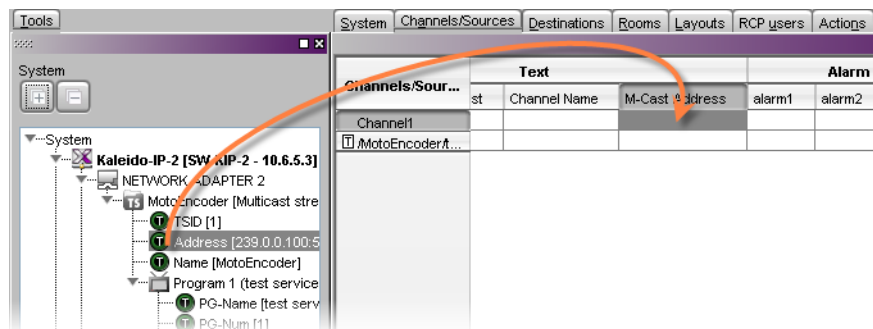
- 1 In the **Channels/Sources** tab, click the cell that corresponds to the appropriate text level of the logical source that is assigned to the UMD whose static text you want to set.
- 2 Type the new static text.

Configuring Dynamic UMD Text

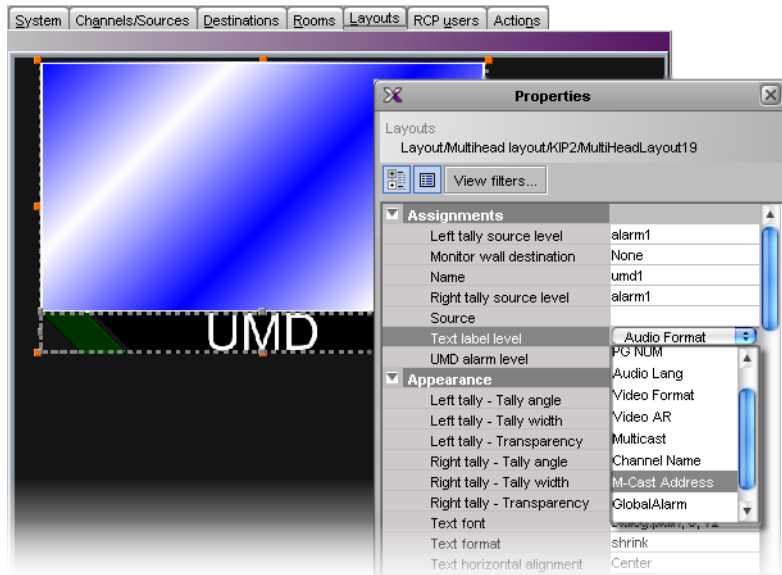
Assuming you have created logical sources (see [Creating and Configuring Logical Sources](#) on page 72) and a layout in XEdit, you can further configure UMDs in your layout to report dynamic text labels, associated with the sources you want to monitor.

To configure dynamic UMD text

- 1 In the **Channels/Sources** tab, click a cell that corresponds to the appropriate text level of a logical source.
- 2 In the filtered System list, navigate to the text element you want to monitor, and drag it onto the selected cell.



- 3 Make corresponding assignments to other logical sources by incremental copy, if necessary (see [Making Further Assignments by Incremental Copy](#) on page 83).
- 4 On the **File** menu, click **Save**.
Changes to the sources table are saved.
- 5 Click the **Layouts** tab, and then open the layout you want to configure.
- 6 Unlock the appropriate composite monitor if applicable (see [Unlocking a Composite Monitor](#) on page 254), and then click the UMD whose dynamic text reporting behavior you want to set.
- 7 In the **Properties** pane, click the **Text label level** box, and then select the text level you configured in [step 2](#).



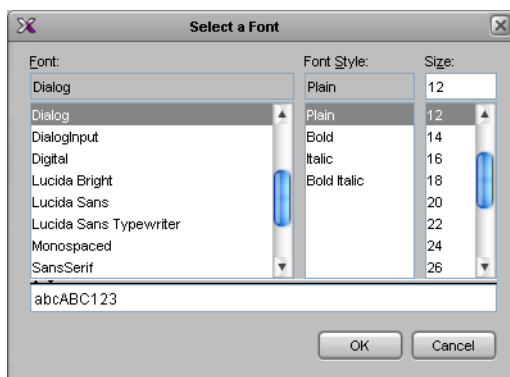
- 8 Click outside the composite to lock it, if applicable.
- 9 Repeat [step 6](#) – [step 8](#) until you have configured all UMDs that are to display dynamic text when this layout is loaded on the monitor wall.
- 10 On the **File** menu, click **Save**.

Setting the Text Font

To set the text font for a UMD in a layout

- 1 In the **Layouts** tab, click the UMD whose text font you want to set.
- 2 In the **Properties** pane, click the **Text font** box, under **Appearance**, then click the button that appeared at the end of the box.


The **Select a Font** window appears.



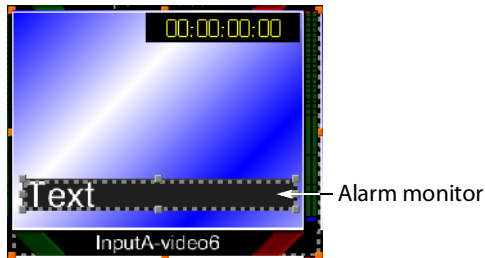
- 3 Select the appropriate values from the **Font**, **Font Style** and **Size** lists.
- 4 Click **OK**.

Configuring Alarm Monitors

To add an alarm monitor to a layout

- 1 Click the Alarm monitor button  on the toolbar, click the layout, and then move or resize the monitor as needed.

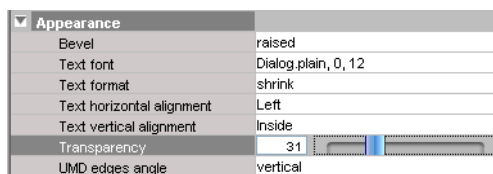
You may choose to layer this monitor on top of the video window within a composite. See [Working with Composite Monitors](#) on page 249, for instructions on how to add elements to a composite.



Note: On the monitor wall, an alarm monitor positioned over a video window has the following default behavior:

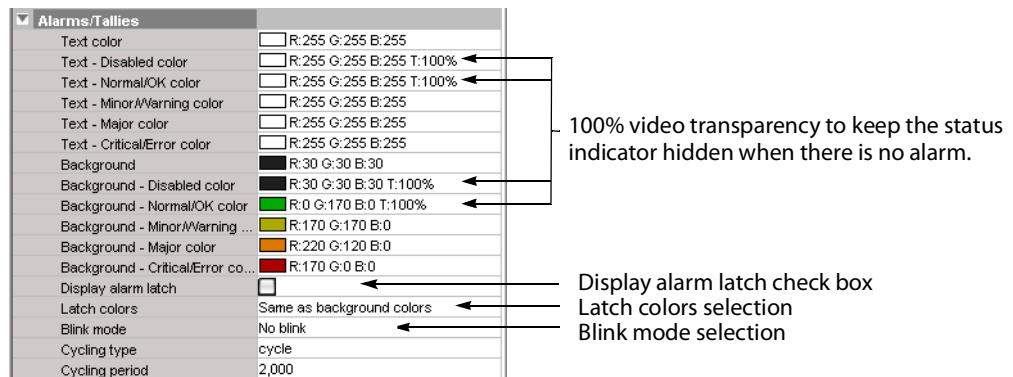
- If the source assigned to the alarm monitor is an active alarm (red), the alarm monitor is visible. The video transparency settings configured in XEdit for this alarm monitor apply to the part of the monitor that overlaps the video window.
- If the source assigned to the alarm monitor is an inactive alarm (green), the alarm monitor is not visible on the monitor wall. If the alarm monitor partially overlaps the video window, then the part of the monitor that does not cover the video window remains visible (green).

- 2 In the **Properties** pane, set the transparency attribute to the appropriate value for your purposes, by clicking the **Transparency** box, and then using the slider or typing a value directly into the box.



Set the other appearance attributes as necessary.

- 3 In the **Alarms/Tallies** section, set the appropriate color and video transparency scheme for the text and background, to achieve the required alarm reporting and source reporting behaviors (see [Configuring an Alarm Monitor's Source Reporting Behavior](#), on page 232, for details).



- 4 Click the **Blink mode** box, and then select the appropriate blinking behavior, for your purposes:

Blink mode	Description
Off	The status indicator will never blink.
Follow latch	The status indicator's blinking will follow the latch status. The indicator will blink until someone unlatches the alarm.
Critical	The status indicator will blink when the current status is critical.
Critical and major	The status indicator will blink when the current status is critical or major.
Critical, major and minor	The status indicator will blink when the current status is critical, major or minor.

- 5 To enable the latched status indicators, select the **Display alarm latch** check box, click the **Latch colors** box, and then select the appropriate color scheme for your purposes: either **Same as text colors**, or **Same as background colors**.
- 6 Choose from two display modes: **Cycle** and **Marquee**.
In cycle mode, the alarm monitor displays text from each alarm, one after the other. In marquee mode, the alarm text scrolls across the monitor. In addition, you can control the cycling speed and the scroll rate by setting the cycling period, in milliseconds.
- 7 Make the appropriate assignments (see [Assigning Logical Sources or Monitor Wall Destinations to Monitors](#) on page 185), and select the required alarm and text label levels, if necessary.

Assignments	
Alarm level	GlobalAlarm
Monitor wall destination	None
Name	text0
Source	
Text label level	GlobalAlarm

- 8 On the **File** menu, click **Save**.

Configuring an Alarm Monitor's Source Reporting Behavior

To help you distinguish which sources are currently active on the monitor wall, monitors that are capable of displaying an alarm status (such as video monitors, subtitling monitors, UMDs, alarm monitors) can have their borders, background or text configured to appear in

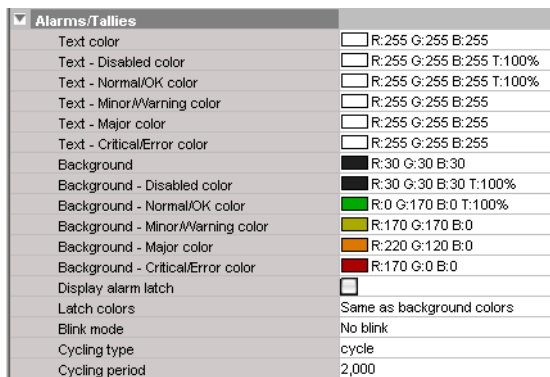
a specific color, based on their current source. Alarm monitors can provide this information through their text and background colors.

To configure an alarm monitor's background or text colors for source reporting

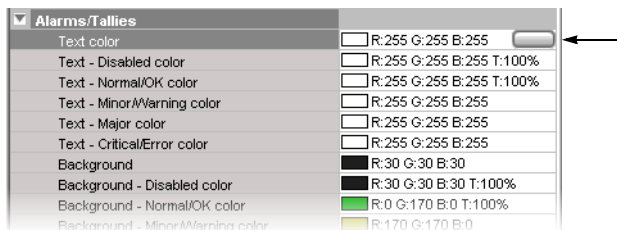
- 1 In XEdit, open a layout, and click the alarm monitor whose source reporting behavior you want to configure.

Note: Double-click the alarm monitor, if it is part of a composite monitor.

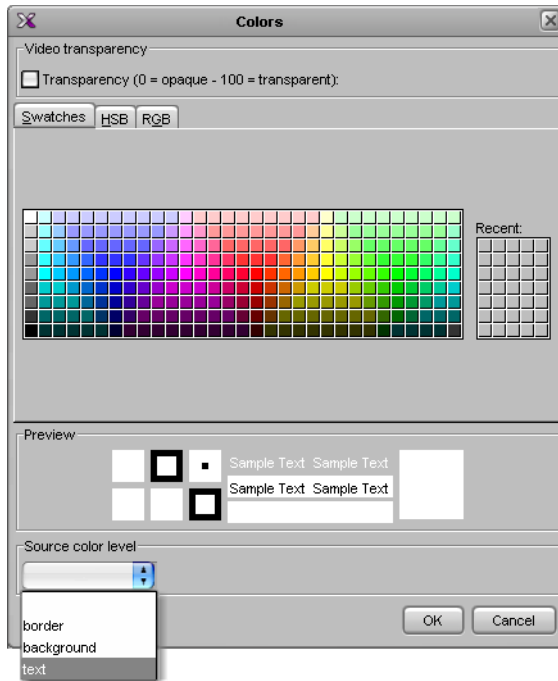
- 2 In the **Properties** pane, scroll down to the **Alarms/Tallies** section.



- 3 Click the text or background color box for a state you want associated with a distinctive color, based on the monitor's current source.
- 4 Click the button that appeared at the end of the box.

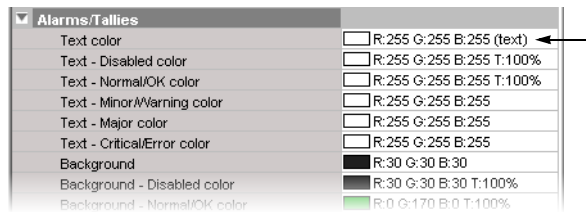


- 5 In **Colors**, select the appropriate level from the **Source color level** list. See [Configuring color level assignments](#) on page 82, for more information.



- 6 Set the color's transparency as required.
- 7 Set the color to be used for sources whose color levels might not be defined, by clicking the tab that corresponds to the color space you want to use, and then choosing a color.
- 8 Click **OK** to close the color picker window.


In the **Properties** pane, the name of the selected source-based color level appears next to the fallback color (and transparency, if used).



- 9 Repeat from [step 3](#) for the remaining colors you want to set.

Configuring Subtitling Monitors

To monitor subtitling from a DVB or SCTE 27 stream

- 1 To add a subtitling monitor, click the Subtitling monitor button  on the toolbar, click the layout, and then move or resize the monitor as needed.
- 2 Click the subtitling monitor you want to configure.



The subtitling monitor's attributes appear in the **Properties** pane.

Assignments	
Border alarm level	TS Loss
Monitor wall destination	None
Name	subtitling0
Source	
Video level	video1
Appearance	
Background color	R:0 G:0 B:0
Bevel	none
Hide at loss of subtitling	<input checked="" type="checkbox"/>
Aspect ratio	
Default aspect ratio	16:9
Custom aspect ratio	16:9
Alarms/Tallies	
Border color - Pending color	R:7 G:7 B:7
Border color - Disabled color	R:7 G:7 B:7
Border color - Normal/OK color	R:7 G:7 B:7
Border color - Minor/Warning color	R:170 G:170 B:0
Border color - Major color	R:220 G:120 B:0
Border color - Critical/Error color	R:170 G:0 B:0
Border thickness - Pending thickness	2
Border thickness - Disabled thickness	2
Border thickness - Normal/OK thickness	2
Border thickness - Minor/Warning thickness	2
Border thickness - Major thickness	2
Border thickness - Critical/Error thickness	2
Blink mode	No blink
Display alarm latch	<input type="checkbox"/>
Actions/Scripts	
Mouse click	
CC/Subtitling	
Text mode	Auto sense
DVB subtitling language	DVB stream 1
SCTE 27 subtitling language	SCTE 27 stream 1

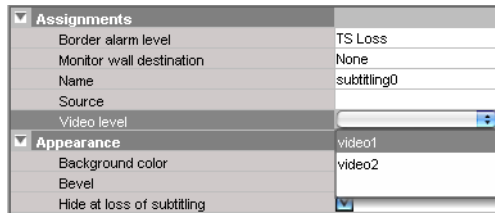
The first alarm level is selected by default for alarm reporting.

- 3 If you want to monitor a different alarm level, or the source's global alarm, select the appropriate level from the **Border alarm level** list.

Assignments	
Border alarm level	<input type="text" value="GlobalAlarm"/>
Monitor wall destination	TS Loss
Name	GlobalAlarm
Source	All Silent
Video level	
Appearance	
Background color	R:0 G:0 B:0

The first video level applies by default.

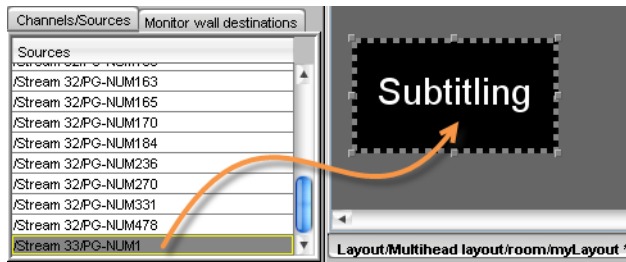
- 4 If your system's logical sources include more than one video level, select the one you want to monitor from the **Video level** list.



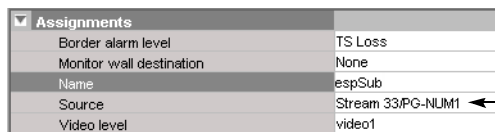
- 5 If you want to replace the default name, type a new name in the **Name** box.



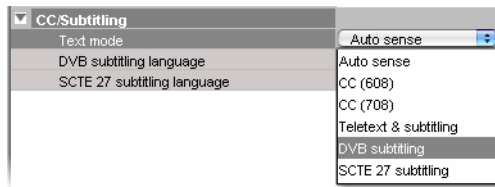
- 6 If you want to assign a logical source, drag the appropriate element from the **Channels/Sources** list that appears on the **Tools** pane, to the subtitling monitor.



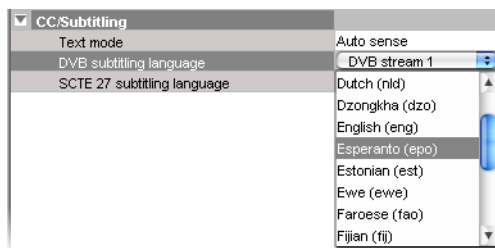
The selected logical source's name appears in the **Source** box.



- 7 If you want to pre-select a specific text mode for this monitor, select a value from the **Text mode** list (see [Teletext](#), [Subtitles](#), and [Closed Captions](#) on page 122).



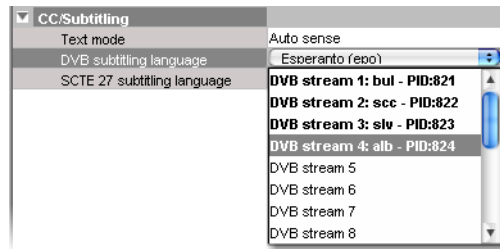
- 8 If you want to pre-select a specific DVB subtitling language for this monitor, click to expand the **DVB subtitling language** list, and then select the appropriate language or DVB stream you want to monitor.



The list of subtitling streams and languages contains the following:

- A series of DVB streams identified by their relative number: **DVB stream 1 to DVB stream 12**. Choose from this series if you want to always monitor the third available subtitling stream, for example.
- A list of all supported languages, in alphabetical order based on the English name, which is followed with the corresponding ISO 639-2 alpha-3 code. Choose from this series if you want to monitor subtitling in a specific language.

When XEdit is connected to the multiviewer, the available languages are indicated in bold text. The ISO 639-2 alpha-3 code for each available language, and the corresponding PID appear in the list of relative subtitling streams.



Then, following **DVB stream 12**, for each of the currently available languages, the name, the 3-letter code, and the corresponding PID appear in bold text before the list of all supported languages.



- 9 If you want to pre-select a specific SCTE 27 subtitling language for this monitor, click to expand the **SCTE 27 subtitling language** list, and then select the appropriate language or SCTE 27 stream you want to monitor.



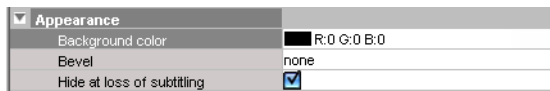
The list of subtitling streams and languages contains the following:

- A series of SCTE 27 streams identified by their relative number: **SCTE 27 stream 1 to SCTE 27 stream 12**. Choose from this series if you want to always monitor the third available subtitling stream, for example.
- A list of all supported languages, in alphabetical order based on the English name, which is followed with the corresponding ISO 639-2 alpha-3 code. Choose from this series if you want to monitor subtitling in a specific language.

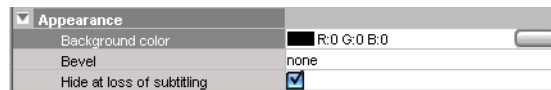
When XEdit is connected to the multiviewer, the available languages are indicated in bold text. The ISO 639-2 alpha-3 code for each available language, and the corresponding PID appear in the list of relative subtitling streams.

Then, following **SCTE 27 stream 12**, for each of the currently available languages, the name, the 3-letter code, and the corresponding PID appear in bold text before the list of all supported languages.

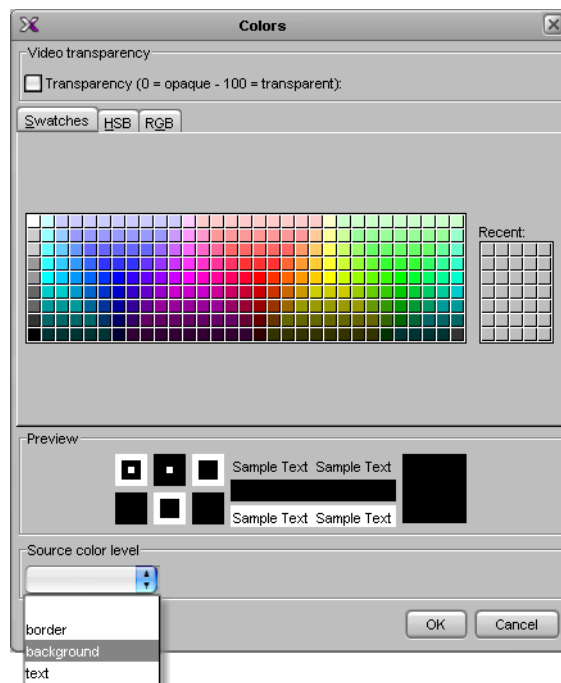
- 10 Modify the subtitling monitor's **Appearance** properties as needed.



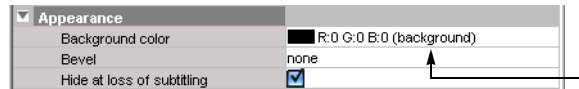
- 11 If you want to use the subtitling monitor's background color for source reporting:
 - a Click the **Background color** box, and then click the button that appeared at the end of the box.



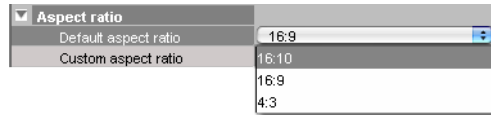
- b In **Colors**, select the appropriate level from the **Source color level** list. See [Configuring color level assignments](#) on page 82, for more information.



- c Set the color's transparency as required.
- d Set the color to be used for sources whose color levels might not be defined, by clicking the tab that corresponds to the color space you want to use, and then choosing a color.
- e Click **OK** to close the color picker window.
- f In the **Properties** pane, the name of the selected source-based color level appears next to the fallback color (and transparency, if used).

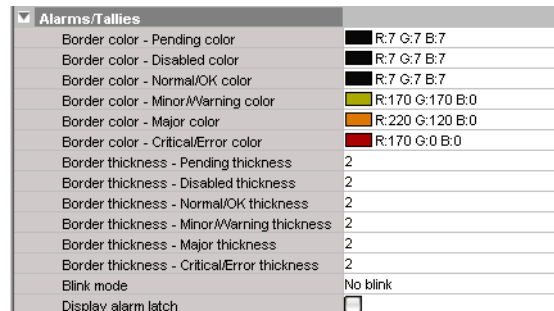


- 12 Change the **Default aspect ratio** as needed.



This value is used in the absence of aspect ratio information in the DVB or SCTE 27 subtitling stream, when the associated video stream is not decoded. When the video is decoded, the video signal's aspect ratio is used, in the absence of aspect ratio information in the subtitling stream. See [Setting a Video Monitor's Aspect Ratio](#) on page 192 for more information, including on selecting a custom aspect ratio.

- 13 See [Configuring a Video Monitor's Alarm Reporting Behavior](#), on page 199, and to [Configuring a Video Monitor's Source Reporting Behavior](#), on page 200, to configure the subtitling monitor's other alarm reporting, and source reporting features.




- 14 See [Creating Monitor Wall Actions](#), on page 264 to configure mouse-click actions for this subtitling monitor.

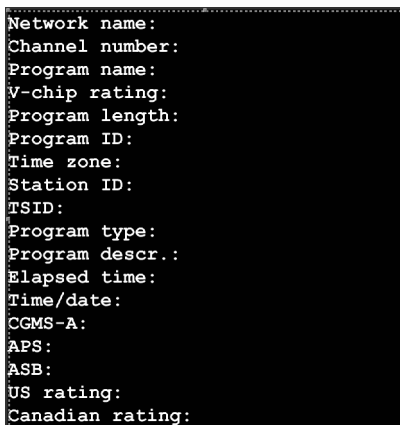


- 15 On the **File** menu, click **Save**.

Configuring Metadata Monitors

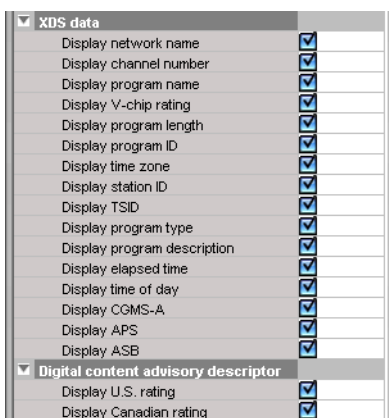
To monitor XDS data, or digital content advisory descriptor (CAD) information

- 1 Click the Metadata monitor button  on the toolbar, click the layout, and then move or resize the monitor as needed.

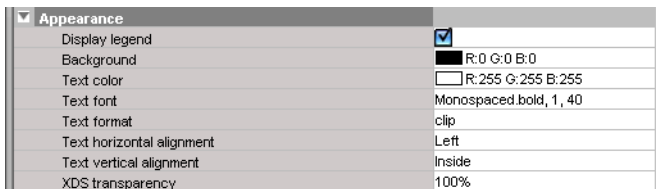


Alternatively, you may choose to layer this monitor on top of the video window within a composite. See [Working with Composite Monitors](#) on page 249, for instructions on how to add elements to a composite.

- 2 In the **Properties** pane, select the check boxes that correspond to the data elements you want the monitor to display.
 - XDS data: APS, ASB, CGMS-A; channel number; elapsed time; network name; program description, ID, name, length, and type; station ID; TSID; time/date; time zone; V-chip rating
 - CAD information: US rating, Canadian rating



- 3 You can also set appearance properties, including the font and size of the text labels, or choose not to display the labels by clearing the **Display legend** check box.



The selected monitor is updated accordingly in the layout.

- 4 Make the appropriate assignments (see [Assigning Logical Sources or Monitor Wall Destinations to Monitors](#) on page 185), and select a video level, if necessary.

Assignments	
Monitor wall destination	None
Name	metadata display0
Source	
Video level	video1


- 5 Click the Save button on the toolbar.

Configuring V-Chip Monitors

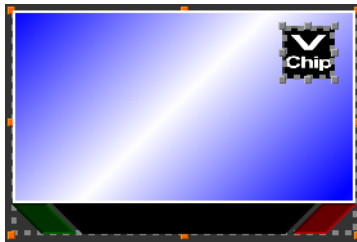
A V-chip monitor provides a visual indication of the V-chip rating from the CC (608) metadata in an SD video signal, or from the CC (608) legacy caption data when such data is present within an HD video signal.

Note: Extraction of CC (608) captions and CC (608) legacy captions is available with the *Extraction of CC, Subtitling and XDS metadata* option (CC/XDS). This requires this option to be enabled (see the multiviewer's *Installation & Service Manual* for more information).

To add a V-chip monitor to a layout

- 1 Click the V-chip monitor button  on the toolbar, click the layout, and then move or resize the monitor as needed.

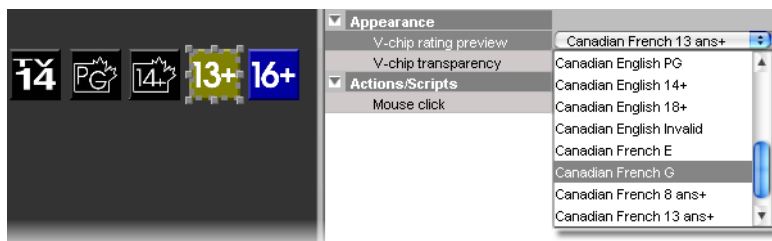
You may choose to layer this monitor on top of the video window within a composite. See [Working with Composite Monitors](#) on page 249, for instructions on how to add elements to a composite.



- 2 In the **Properties** pane, set the transparency attribute to the appropriate value for your purposes, by clicking the V-chip transparency box, and then using the slider or typing a value directly into the box.

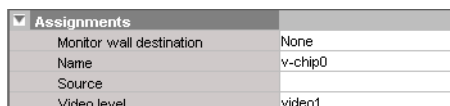


- 3 If you want to preview the logo associated with a specific V-chip rating, select it from the **V-chip rating preview** list. For example:





Note: As its name implies, the V-chip rating preview is only a preview, and its value is not saved with the layout.

- 4 Make the appropriate assignments (see [Assigning Logical Sources or Monitor Wall Destinations to Monitors](#) on page 185), and select a video level if necessary.




5 On the **File** menu, click **Save**.

Notes

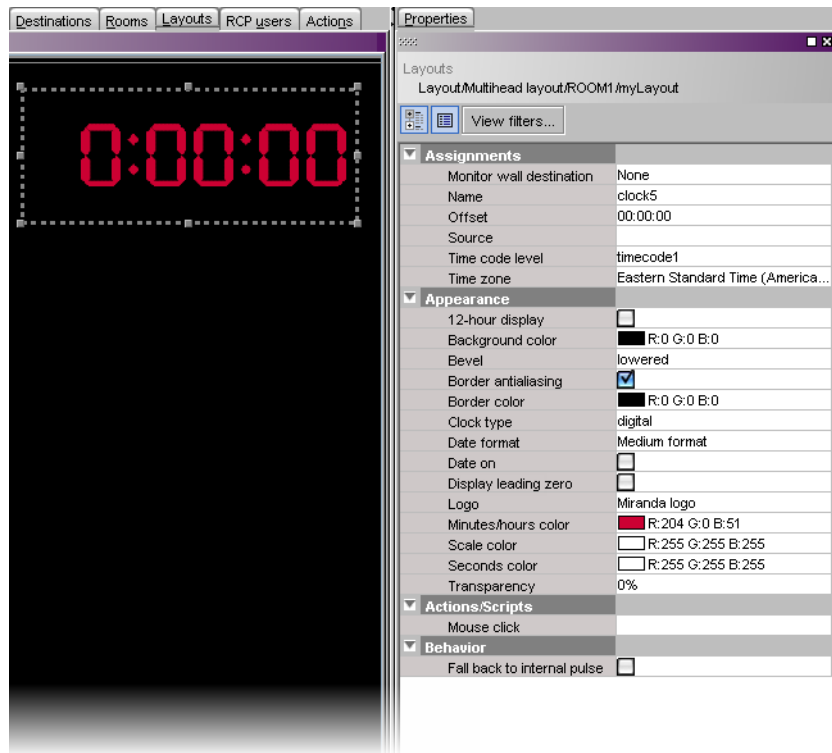
- Unlike alarms, the V-chip rating associated with a video signal that is currently monitored on the monitor wall is not relayed to the XEdit user interface, when working in online mode.
 - The V-chip monitor uses the holding time configured with the **XDS filtering** calibrations for the associated video source (see [Calibrating Metadata Holding Time](#) on page 107). Once the specified holding time has expired, the V-chip monitor displays the N/A logo ().
 - When V-chip data cannot be extracted from the current video signal, the V-chip monitor displays the N/A logo ().
-

Configuring Clocks

In addition to the default combo-type clock that can be added to a layout by using the Clock button  on the toolbar, the predefined monitor library includes a selection of analog and digital clocks.

To configure a clock

- 1 In the **Layouts** tab, click the clock you want to configure.

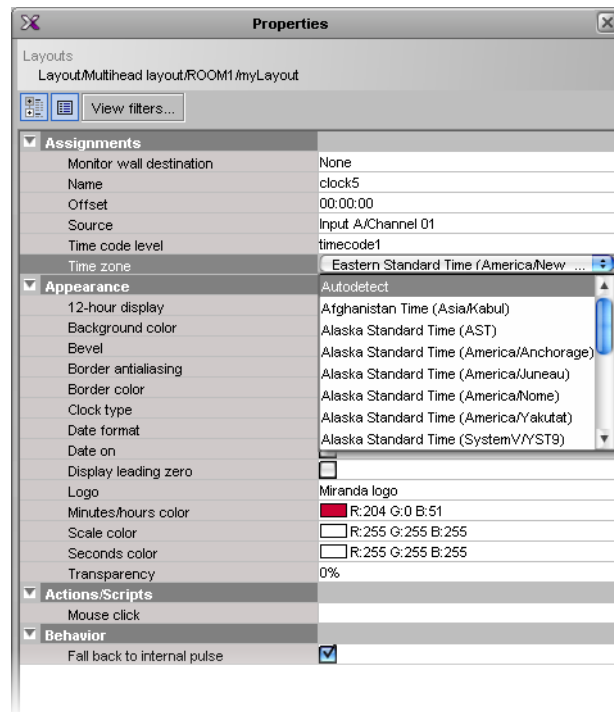


- 2 In the **Properties** pane, make the appropriate assignments:

- Determine the time source (see [Assigning Logical Sources or Monitor Wall Destinations to Monitors](#) on page 185), and select a time code level if necessary.

Assignments	
Monitor wall destination	None
Name	clock5
Offset	00:00:00
Source	Input A/Channel 01
Time code level	timecode1
Time zone	Eastern Standard Time (America...

- Select the appropriate time zone for your purposes.



If you select **Autodetect**, then the clock will use the time zone from the assigned source, if possible.

- 3 If the clock is bound to an LTC or DVITC time code, and you want it to momentarily use the multiviewer's internal clock for reference should the assigned time code become unavailable, then select **Fall back to internal pulse**.



When a clock configured with this option loses its time reference, it will not stop but keep working to the beat of the multiviewer internal clock instead.

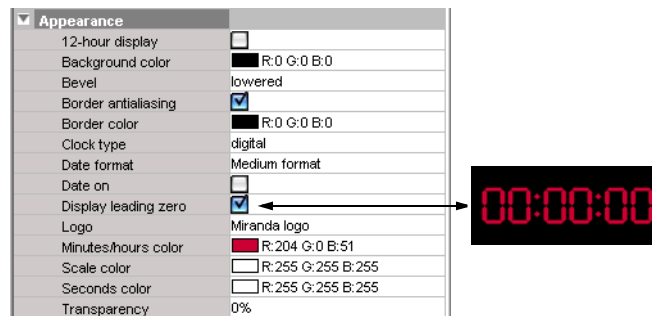
Notes

- When a clock switches between the LTC or DVITC signal, and the multiviewer's internal clock reference, you may notice a one-second offset on the monitor wall.
- Refreshing the current layout (or switching to another layout and then back) cancels the fallback mechanism. When this happens, the clock that had lost its time reference halts, showing the time it was at the moment the layout was refreshed (or loaded again), based on the multiviewer system clock.

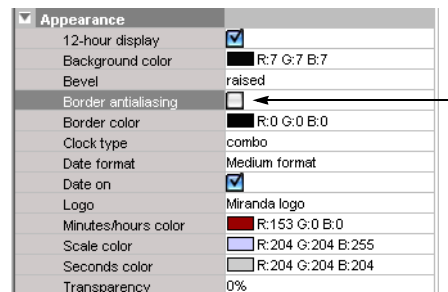
- 4 Modify the clock's **Appearance** properties as needed:
 - From the **Clock type** list, select between a digital, an analog or a combo-type clock.



- Resize the clock as needed, set color attributes, and select the appropriate date and time formats.
- In the case of a digital or combo-type clock, select the **Display leading zero** check box, if you want to see the time with a leading zero when it is before 10:00 a.m. or 10:00 p.m.



- In the case of an analog or combo-type clock, you can also add a clock logo (see [Inserting a Clock Logo](#) on page 247).
- In the case of an analog or combo clock, if the clock is to be displayed against a pink background such as RGB (255, 0, 255) or similar, then make sure to clear the **Border antialiasing** check box.



In such cases, if border antialiasing remains enabled, the clock will have a pink outline on the monitor wall.

- 5 Define actions associated to this layout element (see [Creating Monitor Wall Actions](#) on page 264).
- 6 On the **File** menu, click **Save**.

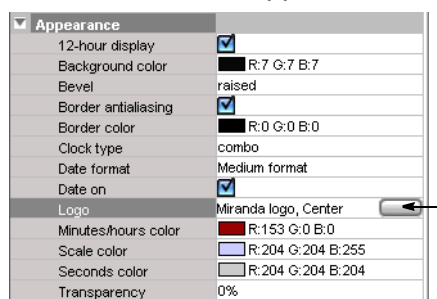
Inserting a Clock Logo

Notes


- The maximum **size** for each image is 256 KB, and the maximum overall size for all images is 10 MB. The image can be in PNG, GIF, or JPEG format. Images can be used on multiple layouts and only need to be imported to the database once.

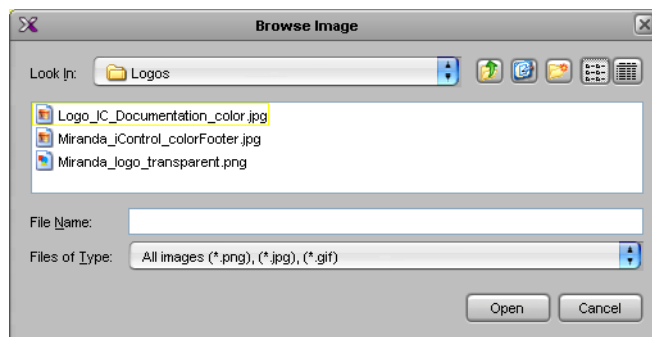
To insert a clock logo

- 1 In the **Properties** pane, click the **Logo** box, under **Appearance**.
- 2 Click the button that appeared at the end of the box.



The **Select Image** window appears.

- 3 If the logo you want to use is not already listed in **Select Image**, then click the **Open**  button to open the **Browse Image** window. Locate the image, select it, and then click **Open**.



The image is imported into the database.

- 4 In **Select image**, select the logo you want to use from the **Image selection** list, and then click **OK**.

Creating Layouts

Inserting a Clock Logo




The logo appears on the clock background.

Working with Composite Monitors

Creating a Composite Monitor

Composite monitors encapsulate a number of primary elements (such as a video monitor, one or two audio monitors, a UMD, and a time code) that can then be managed as a single object. The following example outlines the basic rules to follow, in order to create composite monitors that can be resized elegantly.

To create a composite monitor

- 1 Open an existing layout or create a new one.
- 2 Click the Composite button  on the toolbar, and then click the layout. Resize the empty composite box approximately, to a size that will be appropriate for the display where it is to appear.




Empty composite

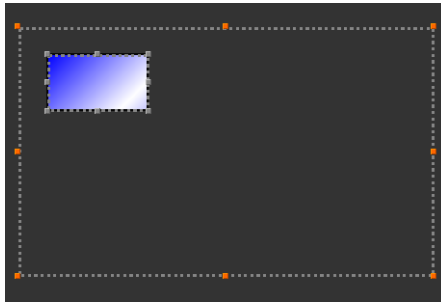
- 3 Right-click the empty box, and then click **Unlock** on the menu. Notice that the handles around the box boundary line become orange.



Unlocked empty composite


Note: If you double-click a composite monitor, the handles also become orange. However, in such a case, you cannot move or resize individual components within the composite (see [Unlocking a Composite Monitor](#) on page 254).

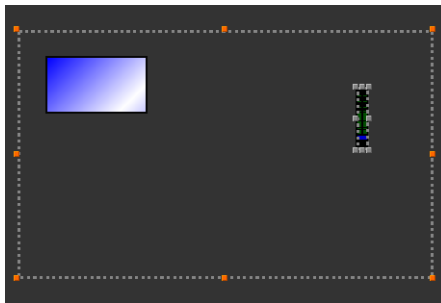
- 4 Add a monitor to the composite, either using a button on the toolbar or dragging an element from a monitor library. For example, click the Video monitor button  on the toolbar, and then click inside the composite to add a video monitor.




Video monitor within unlocked composite

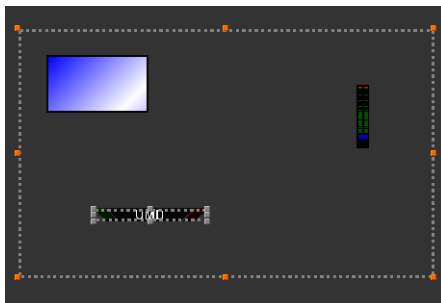
Note: Only primary monitors (not composite) can be part of a composite.

- 5 Click the Audio monitor button  on the toolbar, and then click inside the composite to add an audio level meter.



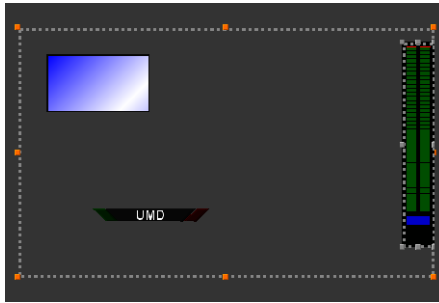
Audio level meter within unlocked composite

- 6 Click the UMD button  on the toolbar, and then click inside the composite to add a UMD.



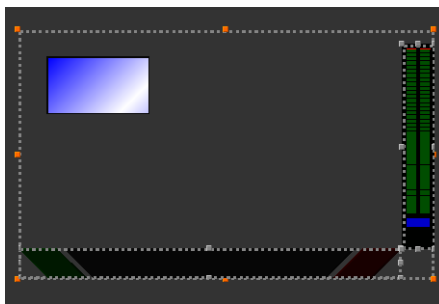
UMD within unlocked composite

- 7 Move the audio level meter *to the very edge* of the composite, using the mouse and then finishing with the arrow keys, and resize it as appropriate.



Audio level meter resized and moved to the side

- 8 Move the UMD to the very bottom of the composite, using the mouse and then finishing with the arrow keys, and resize it if needed.

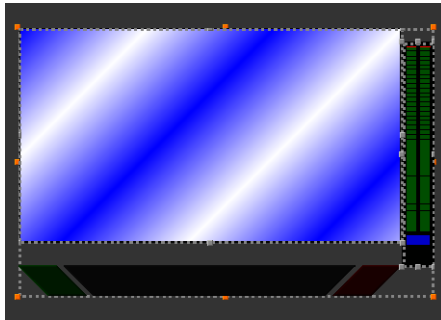


UMD resized and moved to the bottom, with its upper right handle matching the audio level meter's lower left handle

Notes

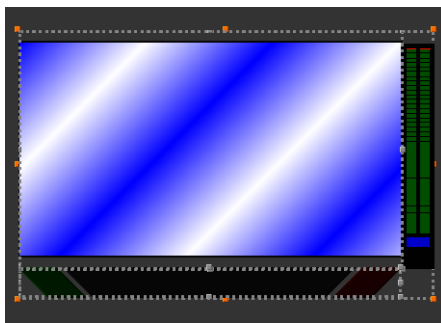
- Making sure that UMDs and audio monitors do not overlap one another in a composite monitor will ensure optimal performance of any layout where several copies of this composite might appear. As a rule, avoid overlapping graphical elements in a layout.
- To align a monitor more precisely against another, select one of them, and then click the second one while holding the Shift key. It is then possible to drag any of the sizing handles (the larger gray dots) to resize any of the selected monitors, while their relative position remains visible. Whenever appropriate, matching adjacent monitors' corner or center handles together will help achieve a composite that can be resized elegantly.

- 9 Move the video monitor to the top-left corner of the composite, then click its bottom-right corner handle, and drag it to stretch the video until one of its dimensions completely fills the empty area (vertically or horizontally).



Video monitor stretched to fill the remaining horizontal area

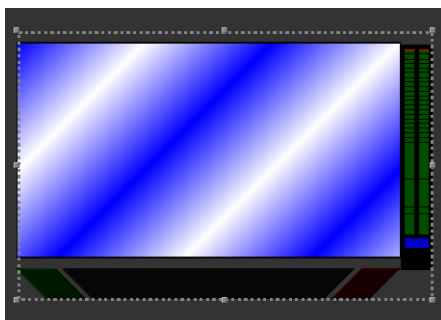
- 10 Drag the video monitor's bottom-center handle until it meets the UMD's bounds.



Video monitor stretched vertically with its bounds matching the UMD's

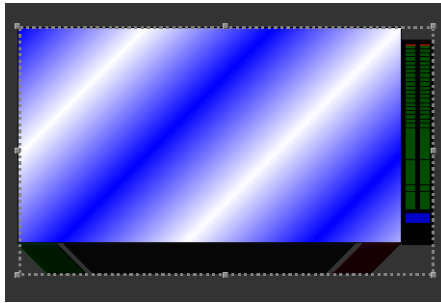
Note: Resizing the video monitor is easier with the UMD's bounds visible: first click the video monitor, and then click the UMD while holding the Shift key.

- 11 Adjust the size and position of the components some more if needed, making sure to keep the peripheral monitors at the very edges of the composite's boundary box, while minimizing empty space within the composite.
- 12 Click outside the composite to lock it.



Locked composite

- 13 Drag the composite's top or bottom center handle inwards, until there is no more empty space above and below the video monitor.



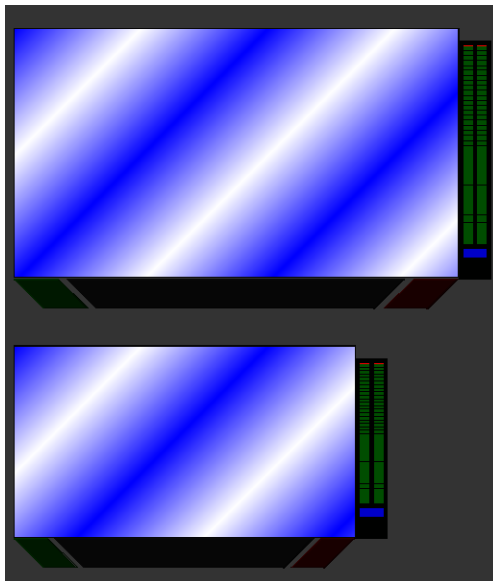
Composite resized to remove remaining empty space around video monitor

- 14 To be able to reuse the new composite in other layouts, drag it onto the appropriate monitor library while *holding the Ctrl key*. See [Creating Monitor Libraries](#) on page 259 for more information.
- 15 On the **File** menu, click **Save**.

Resizing a Composite Monitor

To resize a composite

- Click the composite monitor, and drag any of its *corner* handles outwards or inwards. The composite expands or shrinks while its individual elements maintain their relative position and aspect ratio. Certain multiviewer models have limitations as to the minimum allowed monitor size. See [Monitor Limitations in a Layout](#), on page 183.



Larger and smaller copies of the original composite

Composite monitors configured for maximum video area

In the case of composite monitors from the legacy *maximum video area* monitor libraries, or that were created with a version of XEdit earlier than 7.40, individual monitors within a composite are resized according to the following rules:

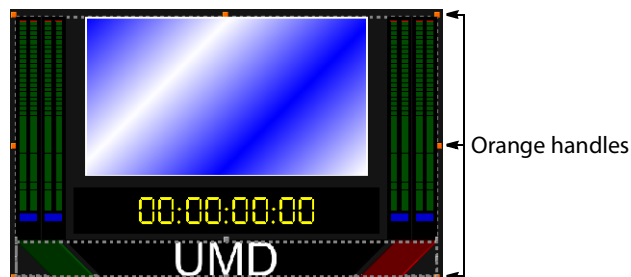
- Video monitors are scaled proportionally, in both width and height.
- Vertical audio monitors are scaled vertically, but their width does not change.
- Horizontal audio monitors, time codes, timers, and UMDs are scaled horizontally, but their height does not change.
- Clocks are not resized.

The following table summarizes these rules:

Monitor type	Height	Width
Video	Scalable	Scalable
Vertical audio monitor	Scalable	Fixed
Horizontal audio monitor, UMD, time code, timer	Fixed	Scalable
Clock	Fixed	Fixed

Unlocking a Composite Monitor

Since a composite monitor functions as a single entity, its individual components are locked together. If you want to configure individual components within a composite monitor, you need to first unlock the monitor. There are two ways in which a composite monitor can be unlocked, one of which prevents you from moving or resizing individual components. An unlocked composite monitor has orange handles around its boundary line.



If you want to configure properties for individual components within a composite monitor

- Double-click the composite monitor whose primary elements you want to configure. Notice that the handles around the boundary line become orange. When using this method, you cannot move or resize the monitor's individual components.

If you want to add, move, or resize individual components within a composite monitor

- Right-click the composite monitor you want to modify, and then click **Unlock** on the menu. Alternatively, click the monitor, and then press F2. Notice that the handles around the boundary line become orange.

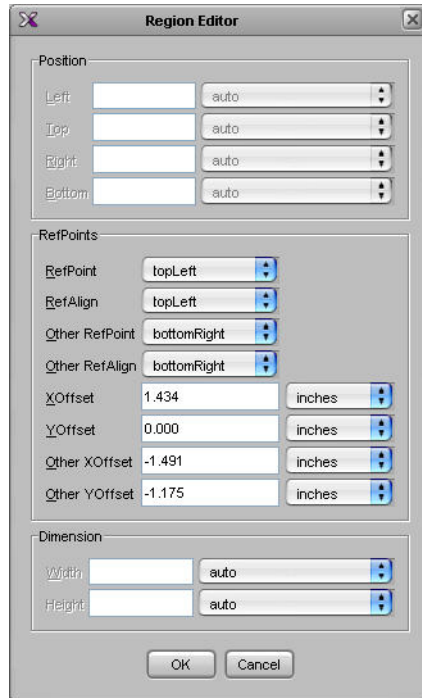
Using the Region Editor

Opening the Region Editor

Note: The region editor is part of the expert view. To show the expert view, click the **View filters** button on the **Properties** pane's toolbar, and then select the **Expert view** check box. Using the region editor is not recommended. To accomplish most configurations, the standard tools available in the layout editor are sufficient.

To open the region editor

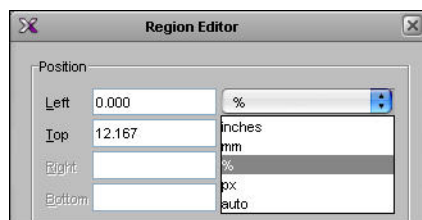
- 1 Click the monitor whose properties you want to see.
- 2 In the **Properties** pane, click the **Bounds** box, under **Size & Position**.
Click the button that appeared inside the box to open the **Region Editor** window.



Configuring a Monitor's Position Using the Region Editor

To set a monitor's position on the layout

- 1 For each position, first select the appropriate unit.

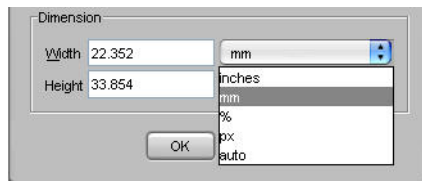


- 2 Type values in the **Left**, **Top**, **Right**, and **Bottom** boxes, relative to the upper-left corner of the display.
- 3 Click **OK** to close the editor.
- 4 On the **File** menu, click **Save**.

Configuring a Monitor's Dimensions Using the Region Editor

To configure a monitor's dimensions


- 1 For each dimension, first select the appropriate unit.





- 2 Type values in the **Width** and **Height** boxes.
- 3 Click **OK** to close the editor.
- 4 On the **File** menu, click **Save**.

Format Painting

Copying Properties from one Monitor to Another


Every monitor in a layout has properties related to its appearance that you can configure in the **Properties** pane. The *Copy properties* tool  copies most of these properties from one monitor *to another of the same type* (such as audio monitor to audio monitor, clock to clock, etc.). Assignments, and actions are not copied. Size is not copied by default (see [TIP](#), below). To copy actions, use the *Copy actions* tool (see [Copying Actions from one Monitor to Another](#) on page 258). To copy size only, use the *Copy size* tool (see [Copying Size from one Monitor to Another](#) on page 257).

To use the Copy properties tool


- 1 In the **Layouts** tab, click the monitor whose properties you want to copy to another monitor of the same type.
The monitor's boundary box appears.
The Copy properties button  becomes available on the toolbar.
- 2 Click the Copy Properties button to switch to format-painting mode.
- 3 Point to another monitor of the same type in the layout.
The pointer changes to a hand with the index finger pointing , indicating that the properties of the first monitor (whose boundary box is still shown) can be copied onto the monitor beneath the pointer.
- 4 Click the monitor beneath the pointer to copy the properties onto that monitor.
The monitor's appearance changes to reflect the new properties.

TIP


To have the width and height copied as well, press and hold the Ctrl key while clicking the monitor.



- 5 Repeat this for every monitor whose properties you want to change.
- 6 Click the Select button  on the toolbar to exit format-painting mode when you have finished.

Copying Size from one Monitor to Another


The size of every monitor in a layout can be adjusted by the user, by dragging handles on the boundary box that appears when the monitor is selected. The *Copy size* tool  copies the size from one monitor *to another monitor of the same type*. The Copy size tool does not copy any other properties from one monitor to another.

To use the Copy size tool




- 1 In the **Layouts** tab, click the monitor whose size you want to copy to another monitor of the same type.
The monitor's boundary box appears.
The Copy size button  becomes available on the toolbar.
- 2 Click the Copy size button to switch to size-painting mode.

- 3 Point to another monitor of the same type in the layout.
The pointer changes to a hand with the index finger pointing , indicating that the size of the first monitor (whose boundary box is still shown) can be copied onto the monitor beneath the pointer.
- 4 Click the monitor beneath the pointer to copy the size onto that monitor.
The monitor's size changes to match that of the first monitor.
- 5 Repeat this for every monitor whose size you want to change.
- 6 Click the Select button  on the toolbar to exit size-painting mode when you have finished.

Copying Actions from one Monitor to Another

The *Copy actions* tool  copies the single-click and double-click actions from one monitor *to another monitor of the same type*. The Copy actions tool does not copy any other properties from one monitor to another.

To use the Copy actions tool

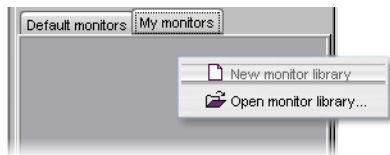
- 1 In the **Layouts** tab, click the monitor whose actions you want to copy to another monitor of the same type.
The monitor's boundary box appears.
The Copy actions button  becomes available on the toolbar.
- 2 Click the Copy actions button to switch to action-painting mode.
- 3 Point to another monitor of the same type in the layout.
The pointer changes to a hand with the index finger pointing , indicating that the actions of the first monitor (whose boundary box is still shown) can be copied onto the monitor beneath the pointer.
- 4 Click the monitor beneath the pointer to copy the actions onto that monitor.
The monitor's actions change to match that of the first monitor.
- 5 Repeat this for every monitor whose actions you want to change.
- 6 Click the Select button  on the toolbar to exit action-painting mode when you have finished.

Managing Monitor Libraries

Creating Monitor Libraries

To create a monitor library

- 1 Click the **Layouts** tab.
- 2 On the **Tools** pane, click **My monitors**.
- 3 Right-click inside the custom monitor libraries area, and then click **New monitor library** on the menu. Alternatively, click **New monitor library** on the **File** menu.



The new monitor library appears in the custom monitor libraries area on the **Tools** pane.

- 4 On the **File** menu, click **New**. Alternatively, click **Open** to open an existing layout.
- 5 Click the appropriate toolbar button, then click the layout to add a monitor of the selected type. Alternatively drag a monitor from one of the existing libraries onto the layout, or choose an existing monitor within the layout.
- 6 Customize the monitor if necessary, and then drag it onto the new monitor library while *holding the Ctrl key*.

Note: It is not possible to customize a monitor once it is inside a library.

- 7 Right-click anywhere inside the monitor library, and then click **Save monitor library** on the menu.

The **Save Monitor Library** window appears.

- 8 Type a name for the new custom monitor library, and then click **Save**.

Closing a Monitor Library

To close a monitor library

- Once the custom library is saved, you can right-click in the library area, and then click **Close monitor library** on the menu. Alternatively, on the **File** menu, click **Close monitor library**.

Opening a Monitor Library

To open a custom library

- Right-click inside the custom monitor libraries area, on the **Tools** pane, and then click **Open monitor library** on the menu.
- On the **File** menu, click **Open monitor library**.
- On the **File** menu, point to **Open recent**, and then select from the list of recently used monitor libraries.

Note: It is possible to have multiple custom libraries open at the same time.

10

Creating Actions

Introduction

This chapter describes how to configure and trigger monitor wall actions, and background actions.

Overview

An action is an operation automatically performed in response to a specific trigger. A *monitor wall action* is associated with a monitor belonging to a specific layout, or directly with a specific layout. It can only be activated when that layout is loaded on the monitor wall, whereas a *background action* can be triggered at any time by any alarm on the multiviewer. Unlike monitor wall actions, background actions are always available within a multiviewer system, regardless of what layouts are currently loaded.

Note: Version 5.30 of the Kaleido Software fixed a bug fix that required changes to the JavaScript code associated with all predefined actions elements in XEdit. For the fix to be applied to actions created with an earlier version of XEdit, open them with version 5.30 or later, and view the underlying JavaScript code by selecting every action element in turn, and then clicking the **View source** button in the **Properties** pane. XEdit will automatically update the JavaScript code. Verify that the first lines in the code start with `var param_<xxx> = <value>`, before saving the action.

Key Concepts

Term	Description
Layout	A group of monitors (or composite monitors) arranged for display on a monitor wall.
Composite monitor	A group of primary monitors.
Monitor	A graphical component used in the creation of a layout. Typical monitors include UMDs, time code monitors, audio monitors, video monitors, and clocks.
System list	Refers to the hierarchical list visible under XEdit's System tab, which gives a virtual representation of the system hardware (such as multiviewers and peripheral devices).

Term	Description
Action item	<p>Action elements are associated with a specific action. When defining an action for a monitor, you could specify, for instance, that a specific full screen layout be displayed on the monitor wall in response to the trigger. Multiple action items can be combined as a single action. The following action items are available:</p> <ul style="list-style-type: none"> • Toggle destination overlay • Unlatch / Acknowledge all • Reset a timer • Pause a timer • Start a timer • Load layout • Monitor audio • Switch router crosspoint • Set GPI output • Show full screen layout • Hide full screen layout • Assign source • Custom (<i>JavaScript</i>)
Trigger	<p>Refers to the event that causes an action to be invoked.</p> <p>For a monitor wall action, a trigger could be a single click or a double click on a monitor, the loading of a layout to the monitor wall, or the unloading of a layout.</p> <p>Background actions are triggered by alarms, or by Gateway commands:</p> <ul style="list-style-type: none"> • On Disabled: background action is triggered when an alarm is disabled • On Normal/OK: background action is triggered when an alarm reverts to normal • On Minor/Warning: <i>supported for Gateway alarms only</i> • On Major: <i>supported for Gateway alarms only</i> • On Critical/Error: background action is triggered by a critical alarm • On Change / Gateway: background action is triggered by any change in alarms status, or by the <code>setKFireAction</code> Gateway command
Triggering of background actions	<p>Any multiviewer alarm can be used as a trigger to invoke a background action.</p> <p>The end event of any countdown timer can be used as a trigger to invoke a background action.</p> <p>Any GPI input from the multiviewer can trigger a background action.</p> <p>Gateway commands sent by an external device can be used to trigger actions created in XEdit.</p> <p>The system verifies alarm states after a multiviewer has restarted, and every time you create or modify a background action. Consequently, if—for example—an alarm's <i>Normal</i> state was selected as the trigger for a background action, and this alarm's state is <i>Normal</i>, when the action is created, or when the multiviewer has restarted, the action will be executed.</p> <p>Note: A background action triggered by an alarm is always executed, regardless of the alarm's operational mode (see Alarm Suppression on page 118).</p>

Term	Description
Triggering of GPI outputs	Any multiviewer alarm can be used to trigger a GPI output change.
Gateway	Kaleido multiviewers can execute commands received through the <i>Kaleido Remote Control Protocol (Gateway)</i> interface, allowing third-party developers and individual users remote access to some Kaleido functions. Refer to the <i>Kaleido Remote Control Protocol (Gateway) User's Guide</i> , for more information. See Related Documentation , on page 11.

Creating Monitor Wall Actions

Monitor wall actions can be assigned to a specific monitor on a layout, or to the layout itself. Actions associated with a monitor on a layout can only be triggered when the layout is loaded on the monitor wall. Actions associated with a layout, are triggered either upon loading the layout to the monitor wall, or when the layout is being replaced with another one.

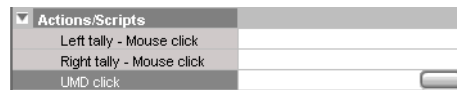
Assigning a monitor wall action to a monitor

To assign a monitor wall action to a monitor

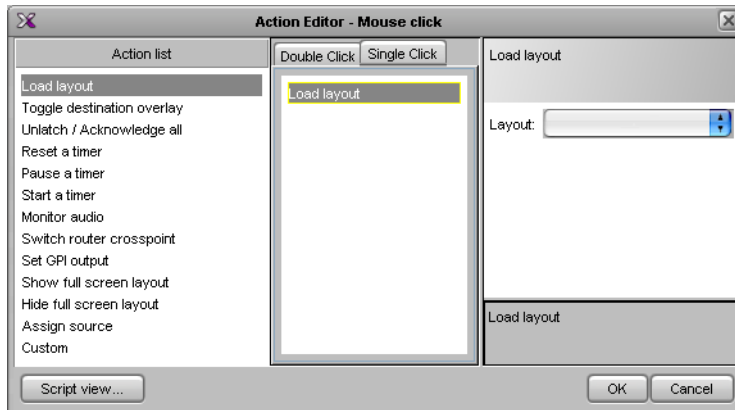
- 1 Open the layout that contains the monitor to which you want to assign an action, or create a new layout.
- 2 In the **Layouts** tab, unlock the appropriate composite monitor if applicable (see [Unlocking a Composite Monitor](#) on page 254), and then click the monitor you want to configure.
- 3 In the **Properties** pane, click the **Mouse click** box, under **Actions/Scripts**.



Note: For a UMD, three action types can be set, and there is a box for each under **Actions/Scripts**: **Left tally - Mouse click**, **Right tally - Mouse click**, and **UMD click**.

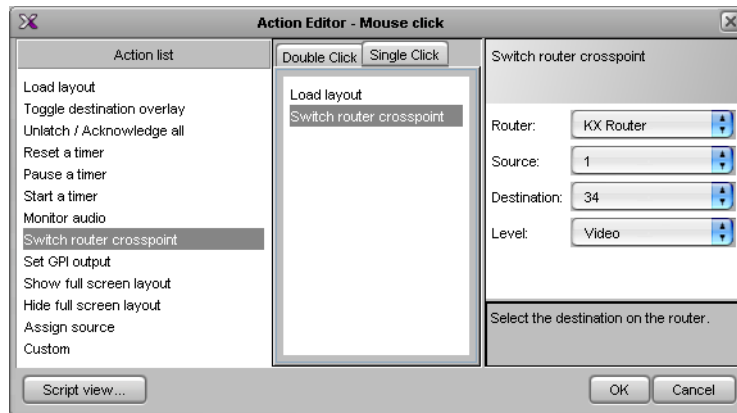


- 4 Click the button that appeared at the end of the box you clicked. The **Action Editor** window appears.
- 5 In **Action Editor**, drag the appropriate action item from the **Action List** pane to the middle pane under either the **Single Click** or **Double Click** tab.



- 6 Select the action in the middle pane.
- 7 In the right pane, specify the attributes of the action.

- 8 Repeat this procedure if you want to add action items. If multiple actions are specified, the trigger (such as, a single click on UMD) will cause all of these actions to be executed in order.



- 9 When finished, click **OK** to close the window, and then click the Save toolbar button. The next time the layout is loaded on the monitor wall, the actions will be available.

Note: When you click a monitor on the monitor wall, all the actions associated with the single-click event are triggered. When you double-click a monitor, all the actions associated with the single-click AND the double-click events are triggered.

Assigning a monitor wall action to a layout

To assign a monitor wall action to a layout

- 1 Open the layout to which you want to assign an action, or create a new layout.
- 2 In the **Layouts** tab, click the layout background.
- 3 In the **Properties** pane, click the box that matches the type of action you want to set:
 - **On layout exiting**—to define an action to be executed when the layout is unloaded (for example, when it is about to be replaced with another one, on the monitor wall), or
 - **On layout loading**—to define an action to be executed when the layout is loaded to the monitor wall.
- 4 Click the button that appeared at the end of the box you clicked.

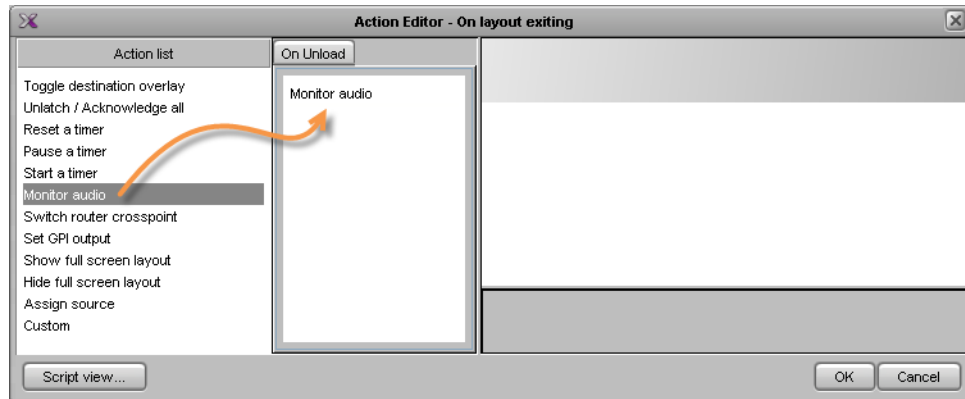


The **Action Editor** window appears.

- 5 In **Action Editor**, drag the appropriate action item from the **Action List** pane to the middle pane (named either **On Unload** or **On Load** depending on the type of action you have selected at [step 3](#)).

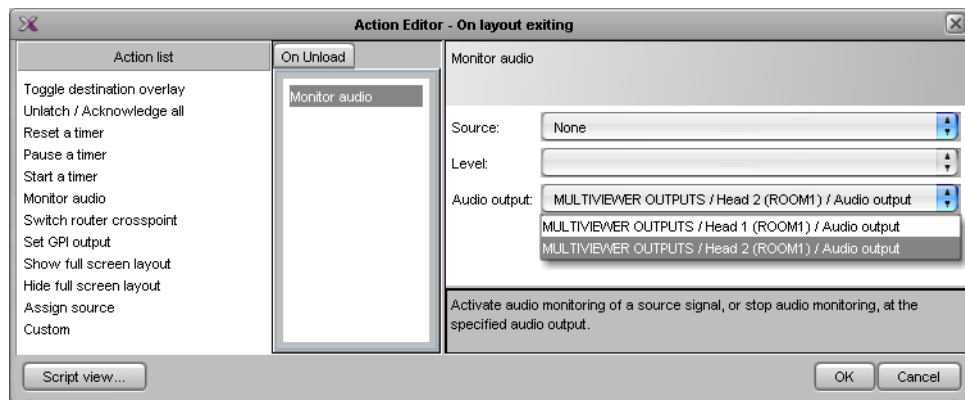
Creating Actions

Assigning a monitor wall action to a layout



6 Select the action in the middle pane.

7 In the right pane, specify the attributes of the action.



8 Repeat this procedure, if you want to add action items.

If multiple actions are specified, the trigger (for example, the loading or unloading of the layout) will cause all of these actions to be executed in order.

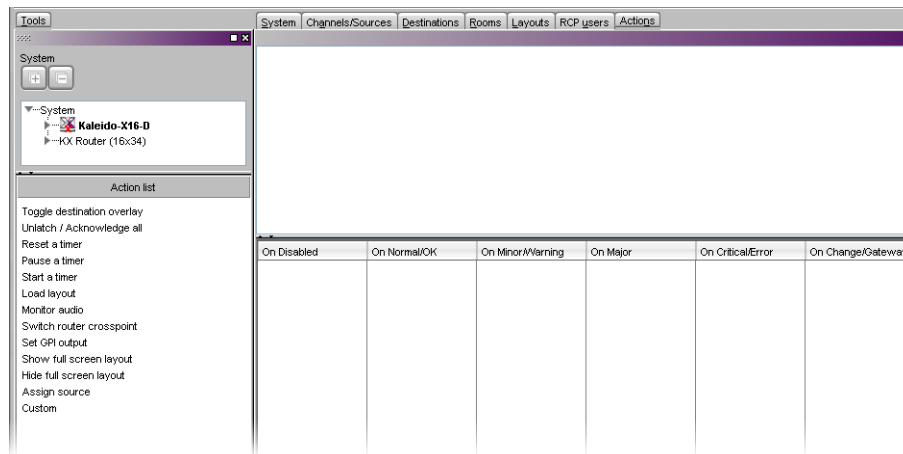
9 When finished, click **OK** to close the window, and then click the Save toolbar button.

Creating Background Actions

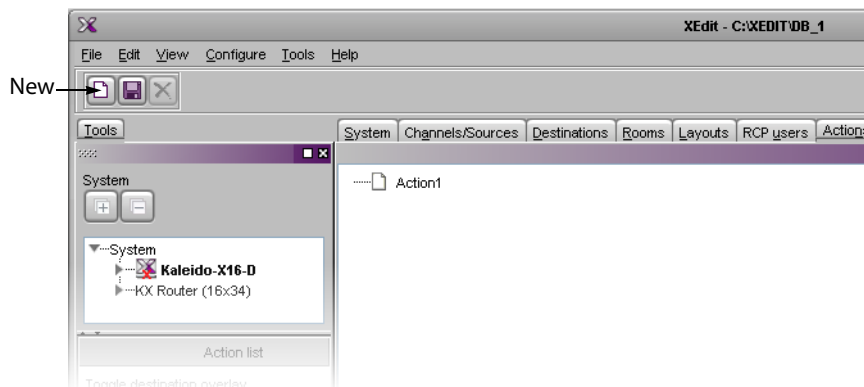
Creating a Background Action from the Actions Tab

To create a background action

- 1 Open XEdit and load the database associated with the multiviewer for which you want to create a background action. Alternatively, click **Connect** on the **Configure** menu, to work online (see [Using XEdit in Online Mode](#) on page 28).
- 2 Click the **Actions** tab.



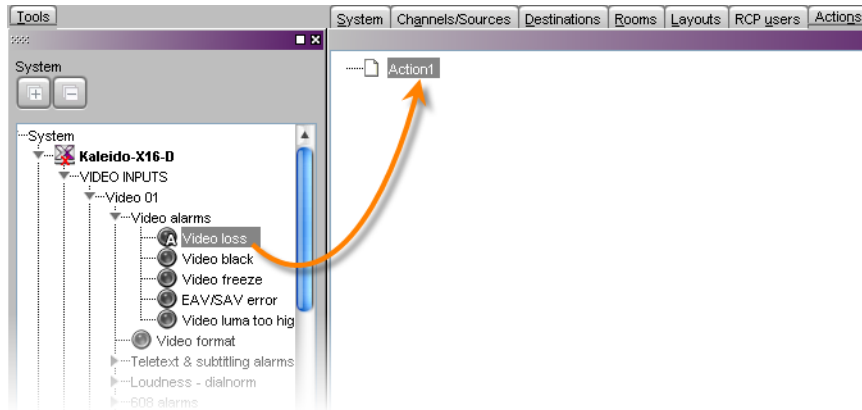
- 3 Click the **New** toolbar button.



- 4 On the **Tools** pane, click and drag an alarm from the filtered System list onto the new action. This defines the alarm as the trigger for the action.

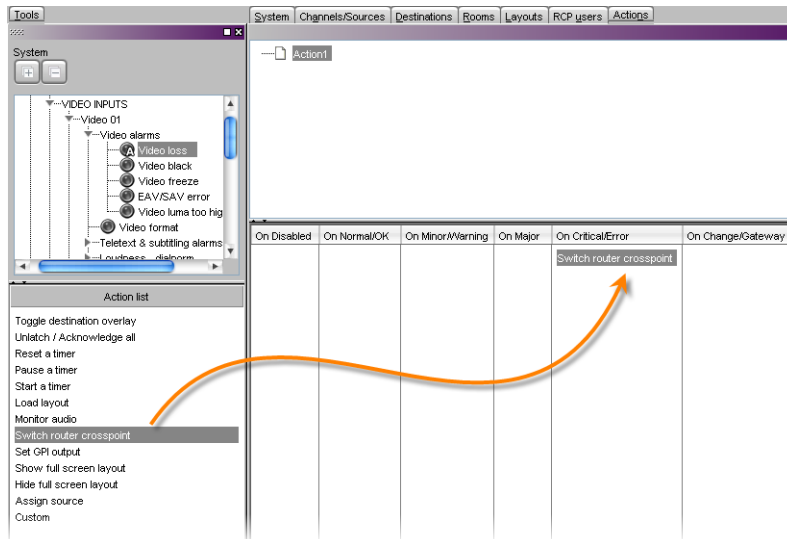
Creating Actions

Creating a Background Action from the Actions Tab

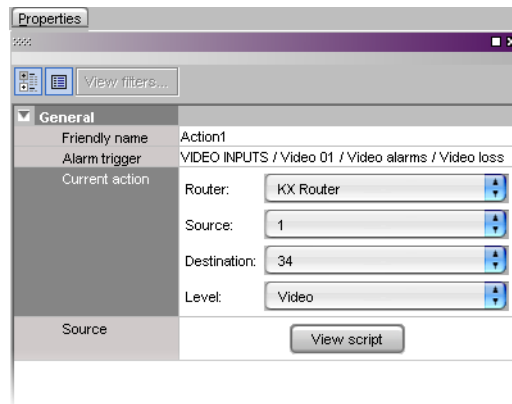


Note: You do not have to perform this step for actions triggered by Gateway commands, because the Gateway alarm itself acts as the trigger. See [Creating an Action that can be Triggered through a Gateway Command](#), on page 270.

- 5 From the **Action list** area of the **Tools** pane, drag one of the available action items onto one of the six columns at the bottom of the **Actions** tab.



- 6 Configure the action's properties in the **Properties** pane.



- 7 Repeat [step 5](#) and [step 6](#) as necessary.

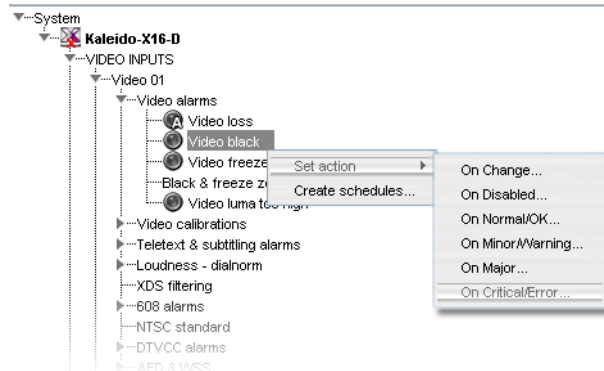
Note: If you assign multiple action items to a trigger, you can change the order of execution by dragging items to higher or lower positions in the list. When the background action is triggered, its associated action items are executed in order from top to bottom.

- 8 Click the Save toolbar button.

Creating a Background Action from the System List

To create a background action from the System list

- 1 In the **Description/Calibration** tab (or in any other tab that shows a filtered System list with alarms), right-click the alarm you want to associate with an action.



- 2 On the **Set action** menu, select the appropriate trigger condition:
 - On Change
 - On Disabled
 - On Normal/OK
 - On Critical/Error

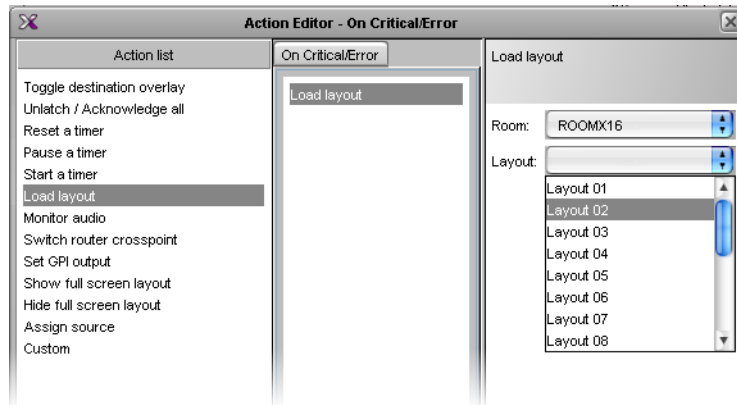
Note: The trigger conditions **on Minor/Warning** and **on Major** are supported for Gateway alarms only.

The **Action Editor** window appears.

Creating Actions

Creating an Action that can be Triggered through a Gateway Command

- 3 From the **Action list** pane, drag one of the available action items to the middle column, and then set the action item's properties in the **Properties** pane.

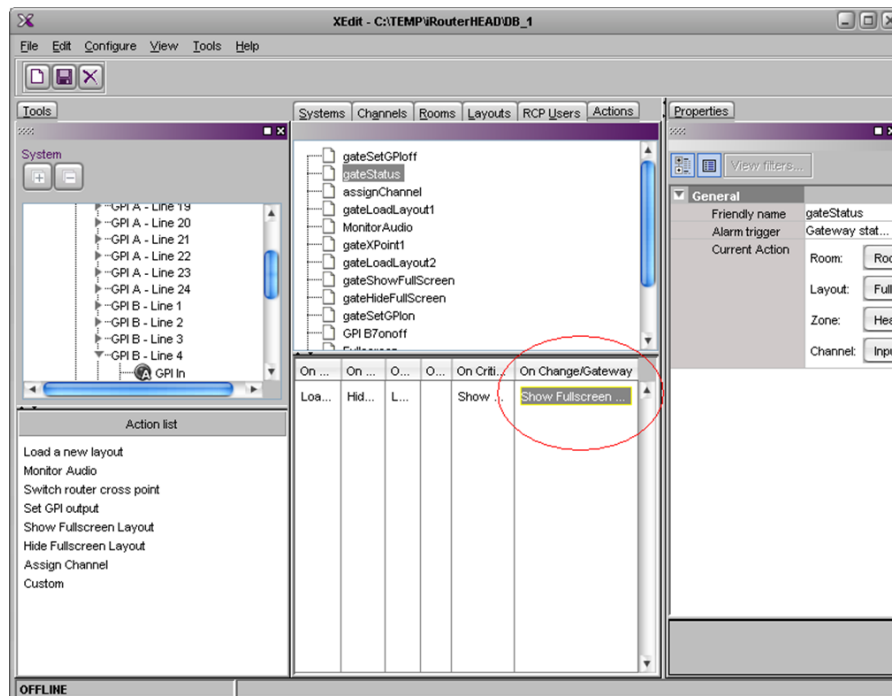


- 4 Repeat [step 3](#) as needed.
- 5 Click **OK** to close the window, and then click the Save toolbar button, to save the action.

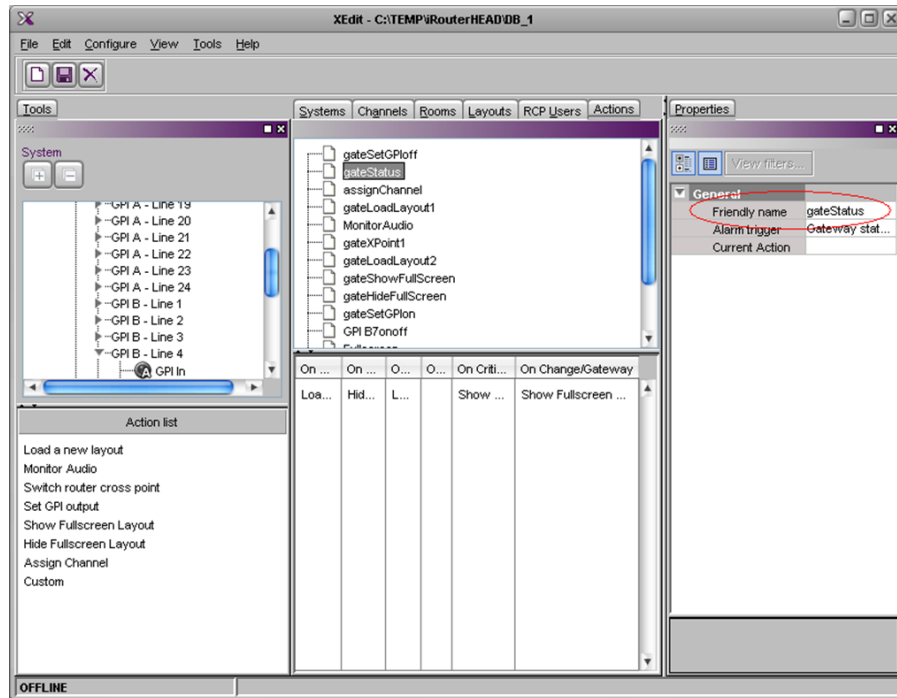
Creating an Action that can be Triggered through a Gateway Command

To create an action that can be triggered through the Gateway

- 1 Perform [step 1](#) to [step 3](#) from [Creating Background Actions](#), on page 267.
- 2 From the **Action list** area of the **Tools** pane, drag one of the available action items onto the **On Change / Gateway** column at the bottom of the **Actions** pane.



- 3 Under **Properties > General**, type a **Friendly name** for the Action.



Note: The **Friendly name** is used with the `setKFireAction` command to trigger the action. Refer to the *Kaleido Remote Control Protocol (Gateway) User's Guide*, for details. See [Related Documentation](#), on page 11.

Editing an Action

To edit an action

- 1 Select an action under the **Actions** tab, or in the middle pane of the **Action Editor** window.
- 2 Under the **Properties** pane, modify the action item's parameters
- 3 Click Save on the toolbar if you modified the action under the **Actions** tab, or click **OK** if you modified the action in the **Action Editor** window.

Removing Action Items from an Action

To remove an action item from an action

- 1 Select an action under the **Actions** tab, or in the middle pane of the **Action Editor** window.
- 2 Select one or more action items associated with the action.
- 3 Press the Delete key.
- 4 Click Save on the toolbar if you modified the action under the **Actions** tab, or click **OK** if you modified the action in the **Action Editor** window.

Deleting an Action

To delete an action

- 1 Select the action you want to delete under the **Actions** tab.
- 2 Click the Delete toolbar button.
- 3 Click Save on the toolbar if you modified the action under the **Actions** tab, or click **OK** if you modified the action in the **Action Editor** window.

11 Managing RCP Users

Introduction

A user uses either the Kaleido-RCP2 and RCP-200 panels to connect to the multiviewer using a username/password combination. This chapter explains the configuration of a Kaleido multiviewer for use with a Kaleido-RCP2, an RCP-200 Remote Control Panel, or from the Gateway.

XEdit Quick Start Task List

Follow these steps in XEdit, to set up your RCP users' profiles:

- 1 Create an RCP user. See [Managing RCP Users](#) on page 274.
- 2 Grant room access to the RCP user. See [Managing Room Access](#) on page 276.
- 3 Select the configuration of the external keyboard for this user. See [Setting the Keyboard Language](#) on page 283.

Key Concepts

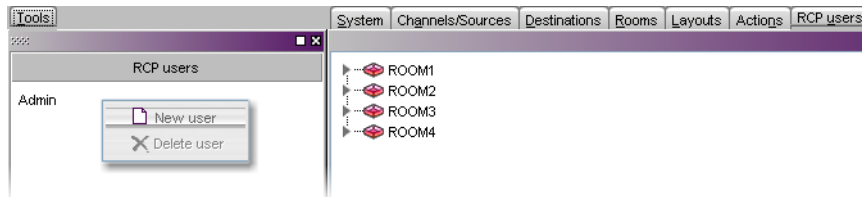
Term	Description
Kaleido-RCP2	The Kaleido-RCP2 is a multi-function remote control panel designed for use with Grass Valley's Kaleido multiviewers. Ethernet connectivity allows multiple RCP users to access multiple Kaleido systems, allowing convenient access to their real-time operating features. The XEdit application is used to manage certain aspects of the Kaleido-RCP2 such as layout presets and audio monitoring destination
RCP-200	The RCP-200 advanced remote control panel for Densité cards, Kaleido multiviewers, and NVISION/third party routers. It provides a highly intuitive graphical interface and it simplifies video/audio signal processing and control in both single and multi-user environments. The XEdit application is used to manage certain aspects of the RCP-200 such as layout presets and audio monitoring destination.
Gateway	Kaleido multiviewers can execute commands received through the <i>Kaleido Remote Control Protocol (Gateway)</i> interface, allowing third-party developers and individual users remote access to some Kaleido functions. Refer to the <i>Kaleido Remote Control Protocol (Gateway) User's Guide</i> , for more information. See Related Documentation , on page 11.

Managing RCP Users

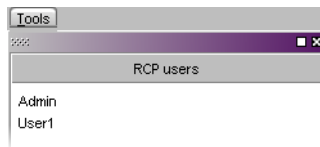
Adding RCP Users

To add an RCP user to the system

- 1 In the main window, click the **RCP users** tab.
- 2 On the **Tools** pane, right-click anywhere in the **RCP users** area, and then click **New user** on the menu.



A new user is added to the RCP users list.



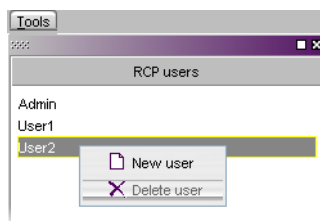
Notes

- New users are called *UserN*, where N = 1, 2, 3 etc.
 - RCP users can be renamed. See [Changing an RCP User's Name or Password](#) on page 285.
 - New users are saved automatically; it is not necessary to click the **Save** button after adding a user to the system.
-

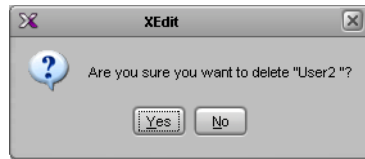
Removing RCP Users from the System

To remove an RCP user from the system

- 1 In the main window, click the **RCP users** tab.
- 2 On the **Tools** pane, select the user you want to remove from the system's RCP users list.
- 3 Right-click the selection, and then click **Delete user** on the menu.



A confirmation window appears.



- 4 Click **Yes**.
- 5 On the **File** menu, click **Save**.

Note: The user *Admin* cannot be removed.

Managing Room Access

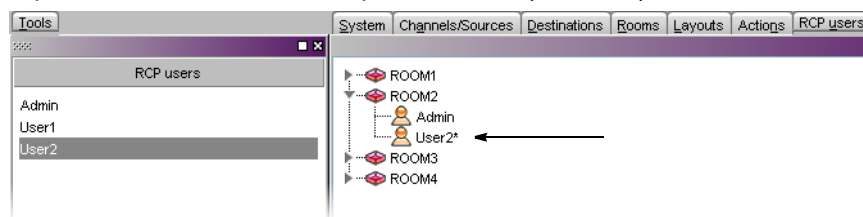
Granting Room Access to RCP Users

To grant RCP users access to a room

- 1 In the main window, click the **RCP users** tab.
- 2 On the **Tools** pane, select the appropriate users from the RCP users list.

Note: Use Shift+click or Ctrl+click to select multiple users.

- 3 Drag the selected users onto the appropriate room in the **RCP users** tab.
- 4 Expand the room (if it is not expanded already) to verify that the users were added.



RCP user "User2" has been granted access to Room2


- 5 On the **File** menu, click **Save**.

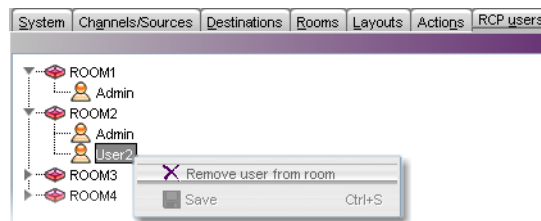
Removing RCP Users from Rooms

To remove RCP users from rooms

- 1 In the main window, click the **RCP users** tab, expand the appropriate rooms if needed, and then select the users you want to remove.

Note: Use Shift+click or Ctrl+click to select multiple users.

- 2 On the **File** menu, click **Remove user from room**. Alternatively, click the toolbar's Remove button , or right-click and then click **Remove user from room** on the menu.



The selected user is removed access to the room.

- 3 On the **File** menu, click **Save**.

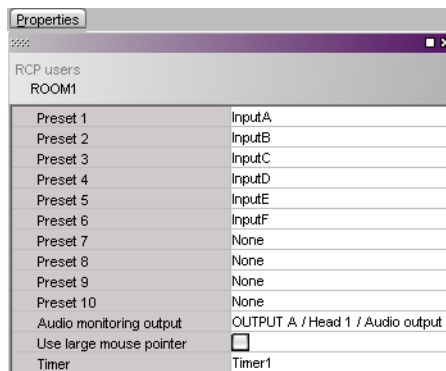
Note: The user *Admin* cannot be removed.

Setting Room Preferences

Room preferences will apply by default for any user who log on to the room from a Kaleido-RCP2, or RCP-200 control panel. See [Setting RCP User Preferences](#) on page 279, to learn how to configure preferences for a specific user.

To set default preferences for a room

- 1 In the main window, click the **RCP users** tab, and then select the appropriate room. The selected room's preferences (layout presets, audio monitoring output, mouse pointer size, and timer) are listed in the **Properties** pane.



- 2 Modify the room preferences as needed.

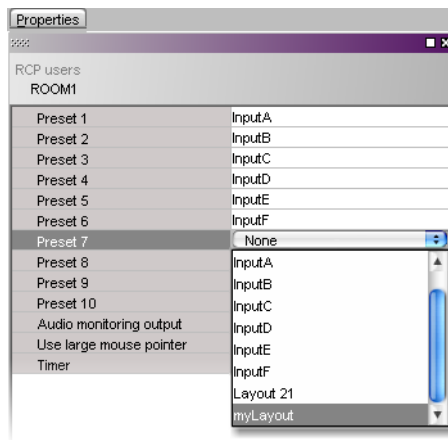
Note: An asterisk (*) will appear beside the room in the main pane, if any of its properties are modified. The asterisk will disappear when the changes are saved.

- 3 On the **File** menu, click **Save**.

Assigning Room Layouts to the Kaleido-RCP2 Preset buttons

To assign room layouts to the Kaleido-RCP2 preset buttons

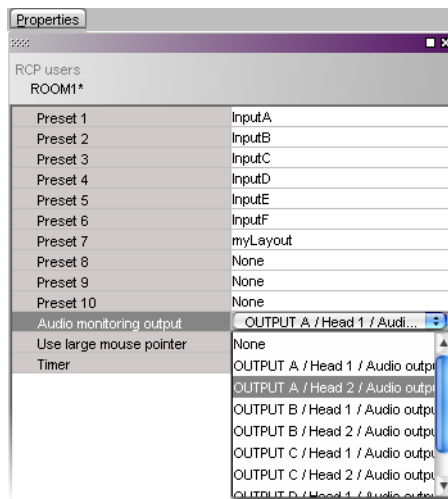
- 1 In the main window, click the **RCP users** tab, and then select the room for which you want to configure layout presets.
- 2 For each Kaleido-RCP2 preset button, click the corresponding box in the **Properties** pane, and then select the appropriate layout from the list.



Assigning an Audio Output to the Remote Control Panel's AUDIO MONITORING Button

To assign an audio output to the Remote Control Panel's AUDIO MONITORING button for a room

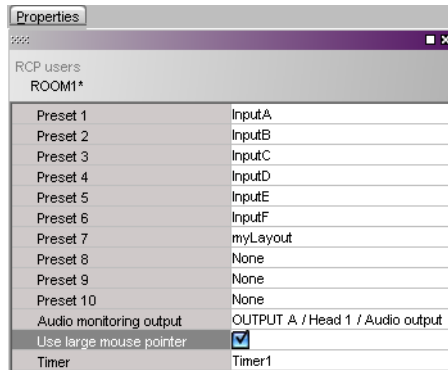
- 1 In the main window, click the **RCP users** tab, and then select the room for which you want to configure the remote control panel's AUDIO MONITORING button.
- 2 In the **Properties** pane, click the **Audio monitoring output** box, and then select the output used to monitor audio signals, from the list.



Enabling the Large Mouse Pointer for a Room

To display a larger pointer on the monitor wall for a room

- 1 In the main window, click the **RCP users** tab, and then select the room where you want to use a large pointer on the monitor wall.
- 2 In the **Properties** pane, select the **Use large mouse pointer** check box.

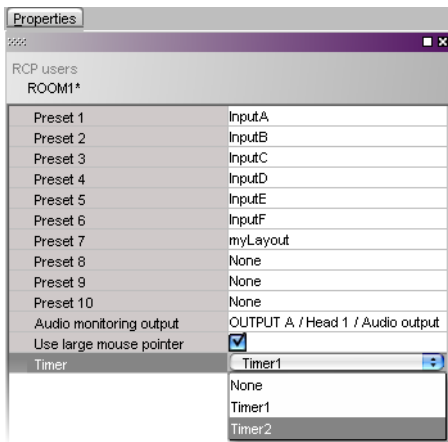


Note: When the large mouse pointer option is enabled for a room, the menus also appear in a larger font size on the monitor wall displays associated with this room.

Assigning a Timer to a Room

To assign a default timer for all RCP users in a room

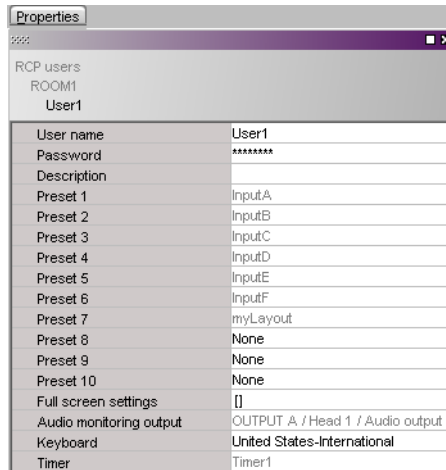
- 1 In the main window, click the **RCP users** tab, and then select the room to be assigned a timer.
- 2 In the **Properties** pane, click the **Timer** box, and then select the appropriate timer to be controlled by default from this room.



Setting RCP User Preferences

To modify the preferences for an RCP user

- 1 In the main window, click the **RCP users** tab, and then select the user whose preferences you want to set, from under the appropriate room.
The selected RCP user's preferences (layout presets, full screen assignment, audio monitoring output, external keyboard configuration, and timer) are listed in the **Properties** pane.



2 Modify the preferences as needed. See:

- [Assigning Room Layouts to a Kaleido-RCP2 User's Presets](#), on page 281,
- [Assigning a Full Screen Layout to an RCP User](#), on page 281,
- [Assigning Audio Output to an RCP User](#), on page 282, and
- [Setting the Keyboard Language](#), on page 283.

Note: User preferences are specific to an RCP user in a specific room. If no preferences have been specified for an RCP user, then the corresponding room preferences apply. They appear in gray in the **Properties** pane.

3 Modify the system-level attributes for this user (user name, description, password) as needed. See [Changing an RCP User's Name or Password](#) on page 285.

Note: These system-level attributes are specific to a user, independent of the room to which the user is assigned.

4 On the **File** menu, click **Save**.

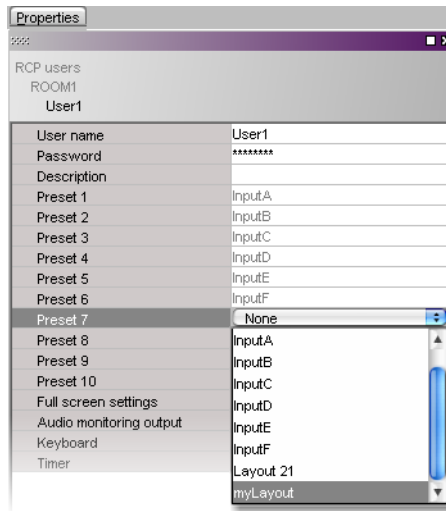
Notes

- The *Admin* user name cannot be modified.
 - An asterisk (*) will appear beside the RCP user in the main window if any of the user properties are modified. The asterisk will disappear when the changes are saved.
 - The message "Cannot find reference" indicates that a full screen layout, full screen zone, or layout associated with a Room or RCP user has been deleted.
-

Assigning Room Layouts to a Kaleido-RCP2 User's Presets

To assign a room layout to a Kaleido-RCP2 user's preset button

- 1 In the main window, click the **RCP users** tab, and then select the user for whom you want to configure the remote control panel's preset buttons, from under the appropriate room.
- 2 For each Kaleido-RCP2 preset button, click the corresponding box in the **Properties** pane, and then select the appropriate layout from the list.

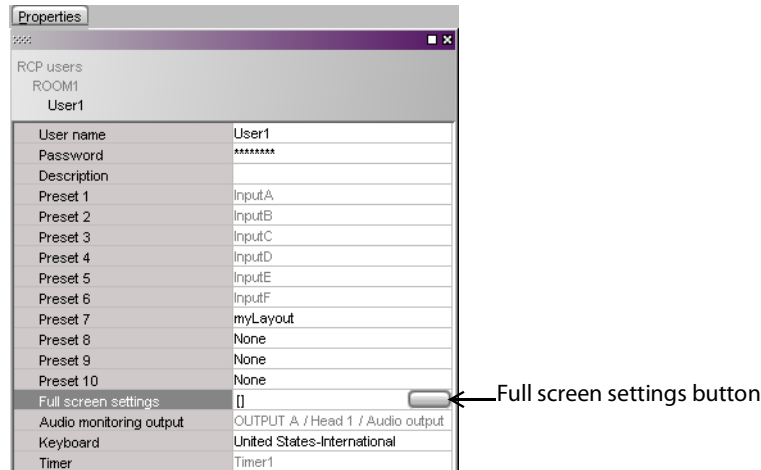


Note: If no layout is specified for this user preset, the layout that has been selected for this preset in the room's preferences will apply. It will appear in gray in the **Preset [n]** box. See [Setting Room Preferences](#) on page 277.

Assigning a Full Screen Layout to an RCP User

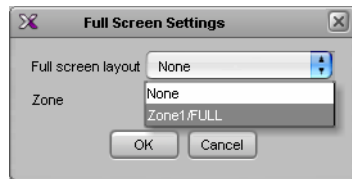
To assign a full screen layout to an RCP user

- 1 In the main window, click the **RCP users** tab, and then select the user for whom you want to configure the remote control panel's FULL SCREEN button, from under the appropriate room.
- 2 In the **Properties** pane, click the **Full screen settings** box, and then click the button that appeared at the end of the box.



The **Full Screen Settings** window appears.

- 3 In **Full Screen Settings**, select the appropriate full screen layout, and then click **OK**.

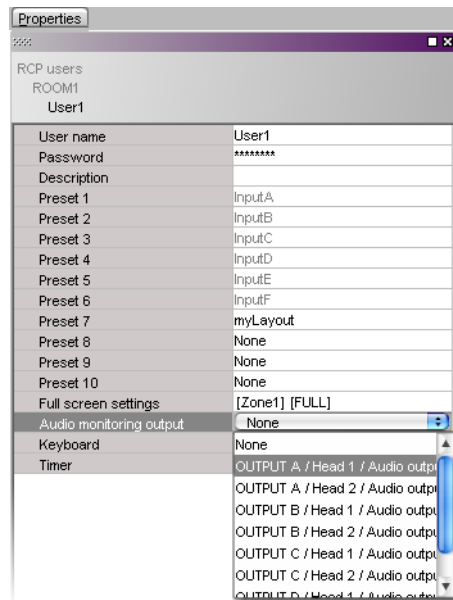


Note: Before XEdit 2.00, full screen layouts were not associated with a specific full screen zone. In the case of such legacy layouts, you must also select the appropriate full screen zone from the **Zone** list.

Assigning Audio Output to an RCP User

To assign an audio output to an RCP User

- 1 In the main window, click the **RCP users** tab, and then select the user for whom you want to configure the remote control panel's **AUDIO MONITORING** button, from under the appropriate room.
- 2 In the **Properties** pane, click the **Audio monitoring output** box, and then select the output used to monitor audio signals by this user in this room, from the list of available outputs.



Note: If no audio monitoring output is specified for this user, the output signal that has been selected in the room's preferences will apply. It will appear in gray in the **Audio monitoring output** box. See [Setting Room Preferences](#) on page 277.

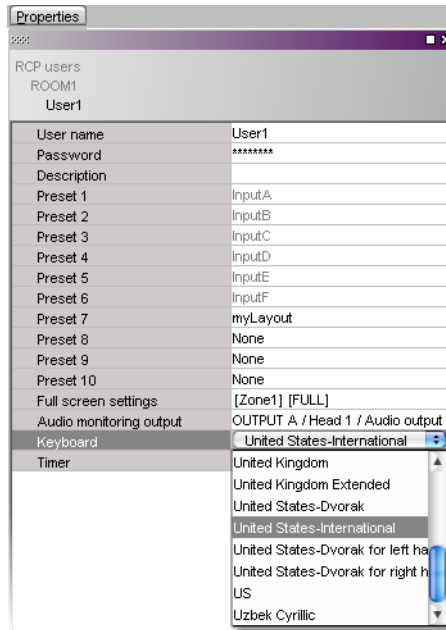
Setting the Keyboard Language

To set the input language for an external keyboard connected to the Kaleido-RCP2 or RCP-200

- 1 In the main window, click the **RCP users** tab, and then select the user for whom you want to set the keyboard, from under the appropriate room.
- 2 In the **Properties** pane, click the **Keyboard** box, and then select the keyboard to be used by this user in this room, from the list of available keyboard configurations.

Managing RCP Users

Assigning a Timer to an RCP User

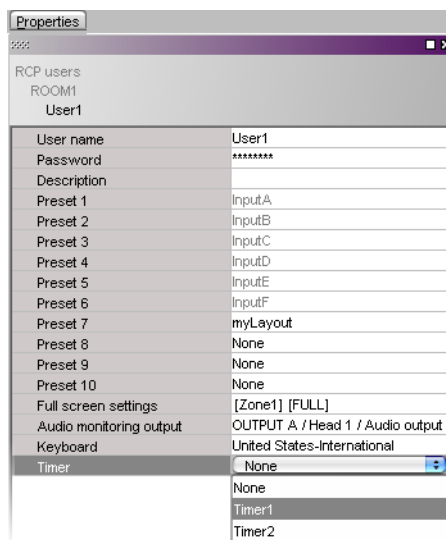


Note: This setting applies to the selected user, in the current room only. A keyboard configuration must be selected for each user, in every room, unless the system default is suitable.

Assigning a Timer to an RCP User

To assign a timer to an RCP User

- 1 In the main window, click the **RCP users** tab, and then select the user to whom you want to assign a timer, from under the appropriate room.
- 2 In the **Properties** pane, click the **Timer** box, and then select the appropriate timer to be controlled by this user in this room, from the list of available timers.



Note: If no timer is specified for this user, the timer that has been selected in the room's preferences will apply. It will appear in gray in the **Time** box. See [Setting Room Preferences](#) on page 277.

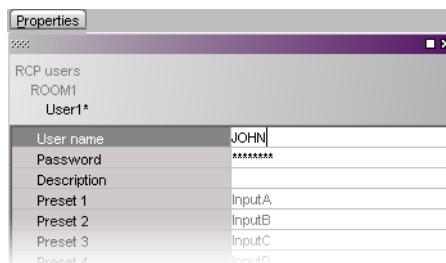
Changing an RCP User's Name or Password

To change an RCP user's name and password

- 1 In the main window, click the **RCP users** tab, and then select the user whose user name or password you want to change, from under any of the rooms.

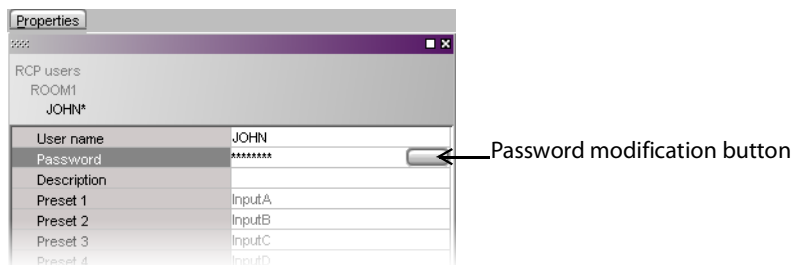
Note: A user's name or password cannot be changed from within the **Tools** pane. They can only be changed from within the rooms list, in the main pane. The user can be removed from the room after the name or password change. The change will be retained. See [Granting Room Access to RCP Users](#) on page 276.

- 2 In the **Properties** pane, click the **User name** box, and then type the new name.

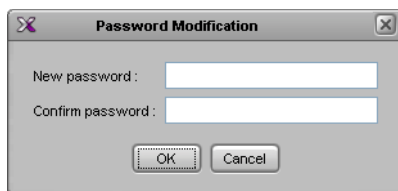


Note: The name must be no more than 8 characters in length, and consist of only letters and numbers (no spaces or special characters).

- 3 In the **Properties** pane, click the **Password** box, and then click the button that appeared at the end of the box.



The **Password Modification** window appears.



- 4 In **Password Modification**, type the new password (only numbers, up to 8 digits) and then type it again to confirm.
- 5 Click **OK**.

12

Tally Interface Devices & Timer Systems

Introduction

This chapter describes how multiviewers can be configured to receive dynamic labels and status from tally interface devices, timer, time code and status information from a timer system, or status from a GPI module.

Overview

Kaleido multiviewer systems support most production switchers and other tally interface devices such as UMD controllers and automation systems, through a network connection. Some timer systems and GPI I/O modules are also supported through a network connection. The multiviewer can dynamically update monitor wall elements to reflect text and status updates from the devices.

Key Concepts

Drivers for Controlling Tally Interface Devices from the Multiviewer

Drivers are available to extend your Kaleido-X system with the ability to control tally interface devices such as the ones listed in the tables below. Contact your sales representative for more information.

Production Switchers

Company	Device/System
Grass Valley (Thomson)	Kayenne K-Frame, Karrera K-Frame, XtenDD HD/SD series

UMD controllers

Company	Protocol	Device/System
TSL	TSL UMD protocol V5.0	UMD Controller (TCP/IP or UDP/IP) <i>IP Limitation:</i> only one screen index can be received per unicast port.
Image Video		TSI-1000 Tally System Interface (requires option from Image Video)

Automation systems

Company	Device/System
Sundance Digital	Fastbreak NXT Automation (requires option from Sundance Digital)

Drivers for Timers

Timer systems

Company	Device/System
Plura (Alpermann+Velte)	Studio Production Timer (SPT)

Plura (Alpermann+Velte) Studio Production Timer

Note: The Kaleido Software supports Plura (Alpermann+Velte) Studio Production Timer (SPT) systems that comprise a Rubidium series IE module with firmware version 2.14.24 or later, and option R (Timer Request Protocol) enabled. Only the *Basic* timer format mode is available.

For your multiviewer to receive time code information from a Plura (Alpermann+Velte) Studio Production Timer (SPT) system, and to display the system's contribution on the monitor wall, you need to configure your multiviewer's Plura SPT service, by performing the following tasks in XEdit:

- 1 Add the Plura (Alpermann+Velte) SPT timer system to your multiviewer system configuration, and set up the communication parameters (see [Adding a Timer System to your Multiviewer Configuration](#) on page 289).
- 2 Add logical sources and configure them by assigning alarms (or text elements) from the SPT system to the logical sources' alarm (or text) levels (see [Assigning Timer System Information to Logical Sources](#) on page 290).
- 3 Assign the appropriate alarm and text levels from logical sources, to layout elements such as time code monitors, UMDs or alarm monitors (see [Configuring Layout Elements](#) on page 292).

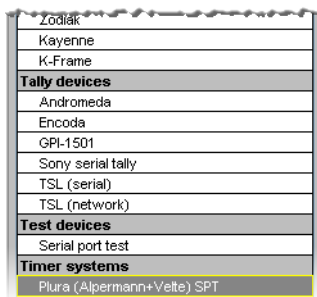
Adding a Timer System to your Multiviewer Configuration

To add a Plura (Alpermann+Velte) SPT system to your multiviewer configuration

- 1 Open XEdit.
- 2 Connect to the multiviewer, if you want to apply your changes in real time (see [Connecting to a Multiviewer](#) on page 28).

Note: If this step is omitted, then you will need to export the database to apply the changes.

- 3 In the main window, click the **System** tab, and then click **Description/Calibrations** on the second-level tab bar. The main pane displays the System hierarchical list, and the **Tools** pane displays the equipment library when the root of the System list is selected.
- 4 Drag the **Plura (Alpermann+Velte) SPT** device from the equipment library onto the root of the System hierarchical list.



Alternatively, right-click the list root, and then click **Insert Plura (Alpermann+Velte) SPT** on the menu.

A window appears, prompting you for a device identifier.

- 5 In **Device Identifier**, type a name for the timer system, and then click **OK**.

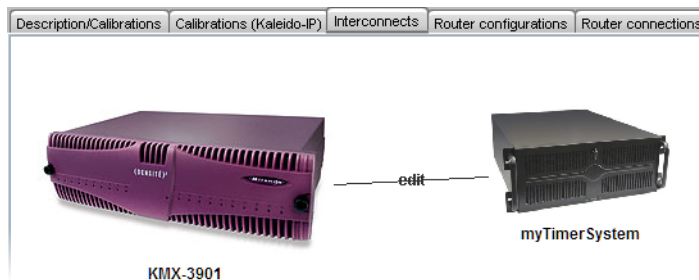


The timer system is added to the system list.

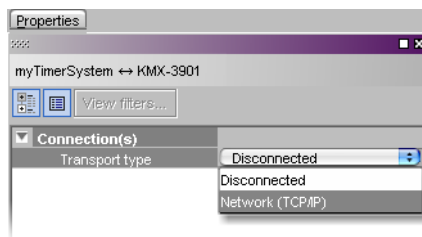


- 6 Click the **Interconnects** tab.
- 7 Position the pointer over the multiviewer icon, then click and drag towards the timer system icon.

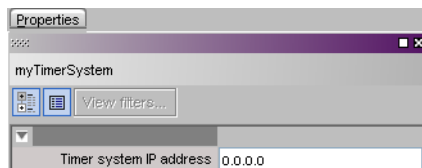
A line representing the connection between the multiviewer and the device appears.



- 8 Click the connection line between multiviewer and device.
- 9 In the **Properties** pane, select **Network (TCP/IP)** from the **Transport type** list.



- 10 In the **Interconnects** tab, click the timer system icon.
- 11 In the **Properties** pane, type the IP address of your timer system.



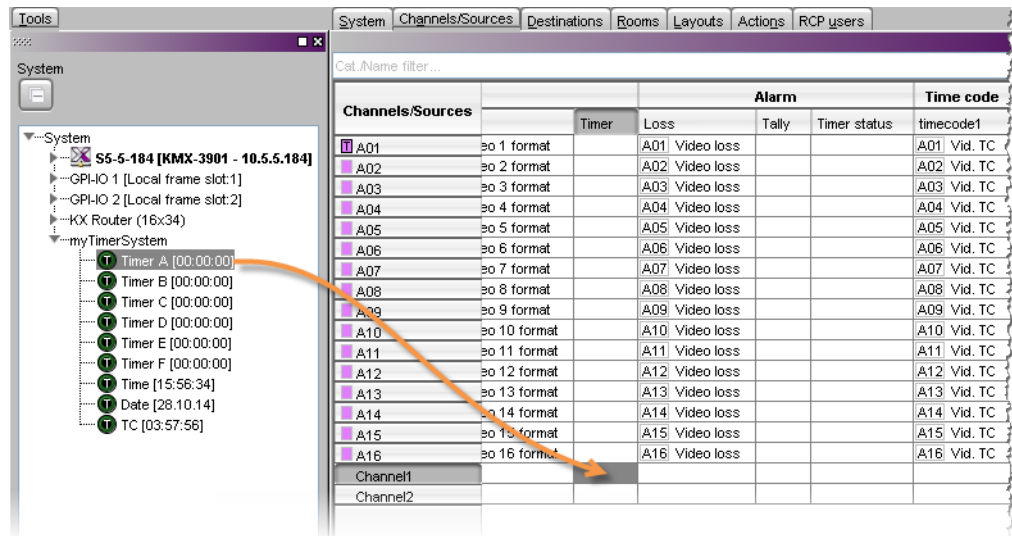
You are now ready to add information from the timer system to logical sources.

Assigning Timer System Information to Logical Sources

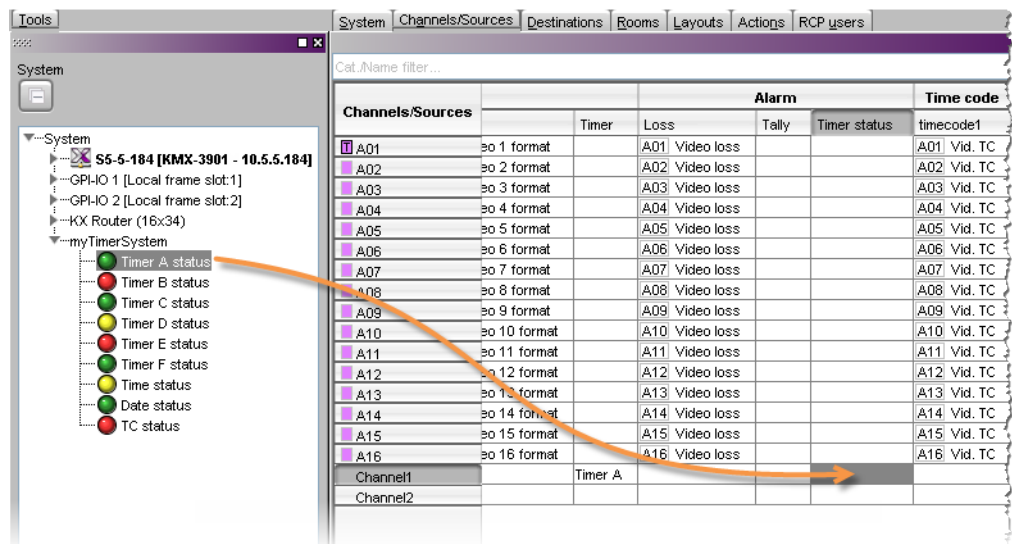
To configure your logical sources

- 1 In the **Channels/Sources** tab, add the required number of logical sources for your purposes (see [Manually adding a Logical Source](#) on page 75).

- 2 Add the required number of text and alarm levels for your purposes (see [Adding a level](#) on page 77).
For example, you might add one text level named *Timer*, and one alarm level named *Timer status*.
- 3 Click a cell that corresponds to the appropriate *text* level of a logical source you want to configure.
- 4 In the filtered System list, navigate to the text element you want to monitor, and drag it onto the selected cell.



- 5 If your logical sources include more text levels to be associated with the timer system, then repeat [step 3](#) and [step 4](#) for the current logical source's remaining text levels.
- 6 Click a cell that corresponds to the appropriate *alarm* level of a logical source you want to configure.
- 7 In the filtered System list, navigate to the alarm element you want to monitor, and drag it onto the selected cell.

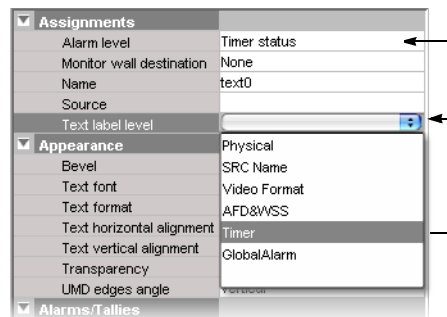


- 8 If your logical sources include more alarm levels to be associated with the timer system, then repeat [step 6](#) and [step 7](#) for the current logical source's remaining alarm levels.
- 9 Repeat [step 3–step 8](#) for any remaining logical sources you want to configure with information from the timer system.
- 10 On the **File** menu, click **Save**.
Changes to the sources table are saved.

Configuring Layout Elements


You can now assign the logical sources you previously configured (see [Assigning Timer System Information to Logical Sources](#) on page 290) to UMDs or other monitors that can display text or alarms (such as time code monitors, alarm monitors) in a layout. Depending on your purposes, you will assign the appropriate text or alarm levels to specific components within the monitors.

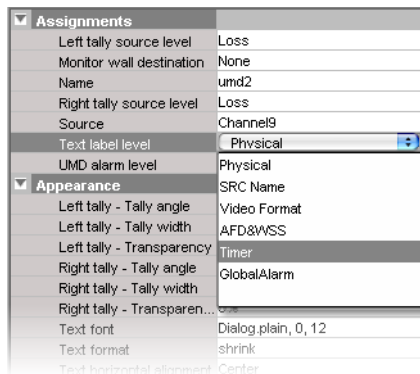
For example, you might configure the assignments for an alarm monitor, by replacing the default alarm level and text label level assignments (both set to *GlobalAlarm*, by default) with an alarm level associated with the timer system, and the corresponding text level, respectively.



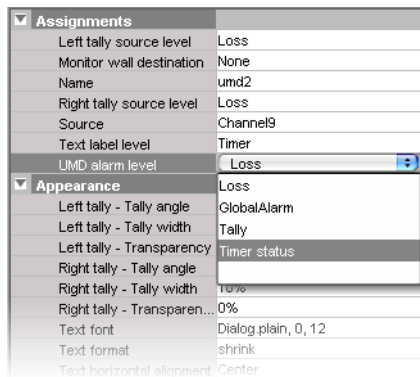
The procedure below explains how to configure a UMD to report timer text and status.

To configure a UMD for dynamic reporting of text and status from a timer system

- 1 Click the **Layouts** tab, and then open a layout.
- 2 Add a UMD from the set of predefined UMDs available on the **Tools** pane (such as *umd2*), or use the UMD toolbar button  (see [Configuring UMDs](#), on page 224, and [Working with Composite Monitors](#), on page 249, if needed).
- 3 On the **Tools** pane, select one of the logical sources you previously configured (see [Assigning Timer System Information to Logical Sources](#) on page 290) from the filtered **Channels/Sources** list, and then drag it onto the UMD.
- 4 In the **Properties** pane, click the **Text label level** box, and then select the text level you want to monitor (such as the *Timer* level you previously configured).



- 5 Click the **UMD alarm level** box, and then select the alarm level you want to monitor (such as the *Timer status* level you previously configured).



- 6 Select a monospace font for the text:
 - a Click the **Text font** box, and then click the button that appears inside the box to open the font picker window.
 - b In **Select a Font**, click a monospace font (such as Lucida Sans Typewriter), and then click **OK** to close the window.

Alternatively, set the text to be left-aligned by clicking the **Text horizontal alignment** box, and then selecting **Left** from the list.

- 7 Click outside the composite to lock it, if applicable.
- 8 On the **File** menu, click **Save**.
- 9 If you have been working in offline mode, then export the database to your multiviewer (see [Exporting a Database](#) on page 32).

On the monitor wall, you can now load the layout containing the monitors that were assigned information from the Plura (Alpermann+Velte) SPT system. Text and status information from the device will be visible on the monitor wall. Any changes made by the device's operator will be immediately reflected on the monitor wall.

GPI-1501 General Purpose Interface I/O Module

The GPI-1501 is a 2RU Densité card that provides 20 dedicated GPI (General Purpose Interface) inputs plus eight terminals that can be individually configured as either a GPI input or GPI output. You may add one or more GPI-1501 modules to your multiviewer configuration to supplement the multiviewer's existing GPI interface or, in the case of a Kaleido-Modular-X system, to provide such an interface.

For example, you may resort to the GPI interface to receive tally information from a switcher whose specific protocol the multiviewer does not support, assuming the switcher is capable of communicating through GPI.

For your multiviewer to receive status information from a GPI-1501 module, and to display the module's contribution on the monitor wall as visual tally information, you need to configure your multiviewer's GPI-1501 service, by performing the following tasks in XEdit:

- 1 Add the GPI-1501 module to your multiviewer system configuration, and set up the communication parameters (see [Adding a GPI-1501 Module to your Multiviewer Configuration](#) on page 294).
- 2 Configure logical sources by assigning GPI alarms from the GPI-1501 module to the logical sources' alarm levels (see [Assigning GPI Status Information to Logical Sources](#) on page 297).
- 3 Assign alarm levels from logical sources, to layout elements such as UMDs or alarm monitors (see [Configuring Layout Elements](#) on page 298).

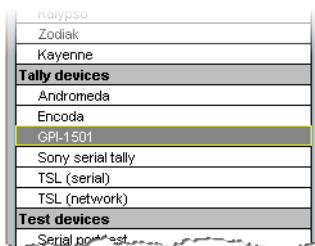
Adding a GPI-1501 Module to your Multiviewer Configuration

To add a GPI-1501 module to your multiviewer system configuration

- 1 Open XEdit.
- 2 Connect to the multiviewer, if you want to apply your changes in real time (see [Connecting to a Multiviewer](#) on page 28).

Note: If this step is omitted, then you will need to export the database to apply the changes.

- 3 In the main window, click the **System** tab, and then click **Description/Calibrations** on the second-level tab bar. The main pane displays the System hierarchical list, and the **Tools** pane displays the equipment library when the root of the System list is selected.
- 4 Drag the **GPI-1501** device from the equipment library onto the root of the System hierarchical list. Alternatively, right-click the list root, and then click **Insert GPI-1501** on the menu.



A window appears, prompting you for a device identifier.

- 5 In **Device Identifier**, type a name for the GPI-1501, and then click **OK**.

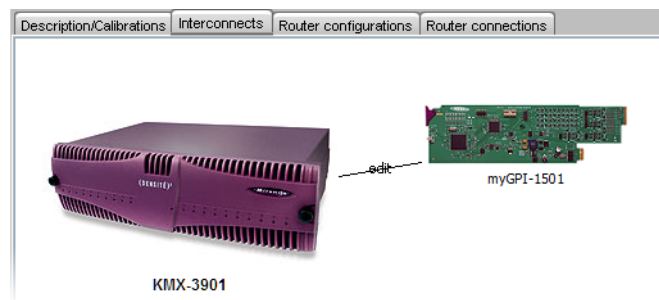


The GPI-1501 is added to the system list.

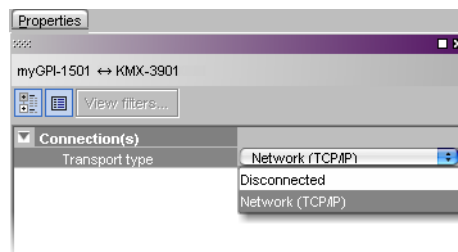


- 6 Click the **Interconnects** tab.
- 7 Position the pointer over the multiviewer icon, then click and drag towards the GPI-1501 icon.

A line representing the connection between the multiviewer and the device appears.

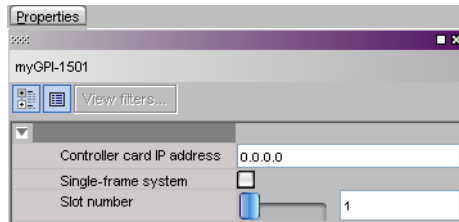


- 8 Click the connection line between multiviewer and device.
- 9 In the **Properties** pane, select **Network (TCP/IP)** from the **Transport type** list.



Note: In the case of a system with several GPI-1501 modules, some of which you do not necessarily use all the time, you may choose to momentarily disconnect those that are not in use, when you need to reduce network traffic, by selecting **Disconnected** from the **Transport type** list.

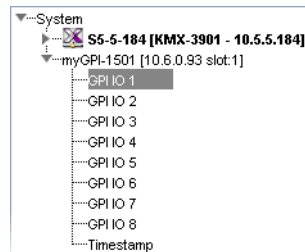
- 10 In the **Interconnects** tab, click the GPI-1501 icon.
- 11 In the **Properties** pane, type the number of the slot where your GPI-1501 card is located in its housing frame, directly in the **Slot number** box, or use the slider to set it.



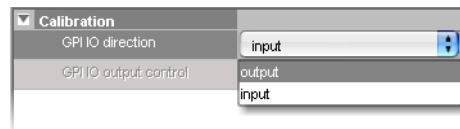
- Enter the IP address of the Densité frame housing the GPI-1501 (use the IP address associated with the CPU-ETH2 controller card's ETH1 port).
- 12 If you want to configure the GPI-1501 itself, click the **Description/Calibrations** tab, and then expand the appropriate GPI-1501 module in the System list.

Note: GPI-1501 configuration is only available when XEdit is connected to the multiviewer. If you were working in offline mode up to this point, you must now export the database to the multiviewer (see [Exporting a Database](#) on page 32), and then switch to online mode (see [Connecting to a Multiviewer](#) on page 28).

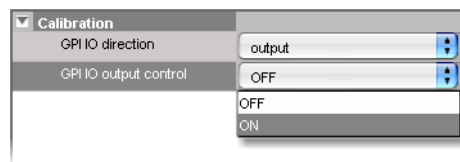
- a Click one of the eight configurable I/O terminals.



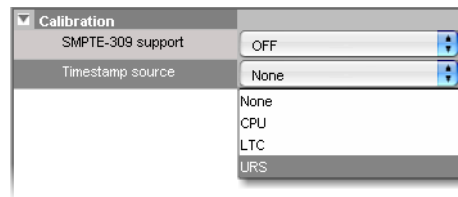
- b In the **Properties** pane, select the appropriate value from the **GPI IO direction** list, to configure the GPI line's direction (input or output).



- c In the case of a GPI *output* line, if you want to set its ON/OFF state manually for test purposes, then select either ON or OFF from the **GPI output control** list.



- d To configure the source of timestamp information, click the **Timestamp** element in the System list, and then, in the **Properties** pane, select the appropriate value from the **Timestamp source** list.



- **None:** No timestamping.
- **CPU:** Timestamping will be based on the Densité CPU-ETH2 controller card's real time clock.
- **LTC:** Timestamping will be based on the LTC signal at GPI input 20 if available. Selecting LTC as the timestamp source renders GPI input 20 unavailable for GPI purposes.
- **URS:** Timestamping will be based on the time information carried in the URS signal internal to the Densité housing frame. The URS is generated by a reference module (REF-1801) which must be installed in the frame for the URS to be available.

e If you selected **LTC**, then you may enable SMPTE ST 309 support.



You are now ready to add information from the GPI-1501 to logical sources.

Assigning GPI Status Information to Logical Sources

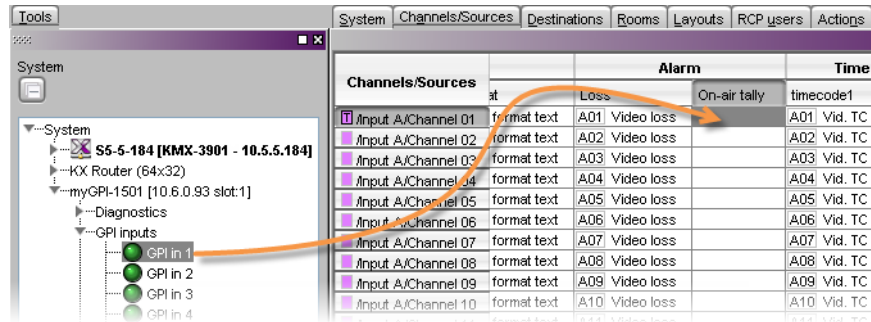
To configure your logical sources

- 1 In the **Channels/Sources** tab, add the required number of alarm levels for your purposes (see [Creating and Configuring Logical Sources](#) on page 72). For example, you might add one alarm level named *On-air tally*.

New alarm level

Video	Audio	Text		Alarm	
video1	audio1	text1	video format	Loss	On-air tally
A01	A01 Emb 1	InputA-video1	A01 Video format text	A01 Video loss	
A02	A02 Emb 1	InputA-video2	A02 Video format text	A02 Video loss	
A03	A03 Emb 1	InputA-video3	A03 Video format text	A03 Video loss	
A04	A04 Emb 1	InputA-video4	A04 Video format text	A04 Video loss	

- 2 Click a cell that corresponds to the appropriate alarm level of a logical source you want to configure.
- 3 In the filtered System list, navigate to the GPI element you want to monitor, and drag it onto the selected cell.



- 4 If your logical sources include more alarm levels to be associated with the GPI-1501, then repeat [step 2](#) and [step 3](#) for the current logical source's remaining alarm levels.
- 5 Make corresponding assignments to other logical sources by incremental copy, if necessary (see [Making Further Assignments by Incremental Copy](#) on page 83).

Alarm level based on status
 information from the GPI-1501

Channels/Sources		Source info		Video	Audio	Text		Alarm		Time code	
#	Cat.	Name	video1	audio1	text1	video format	Loss	On-air tally	timecode1	LT	
1	Input A	Channel 01	A01	A01	Emb 1	InputA-video1	A01 Video format text	A01 Video loss	GPI In 1 [10.6.0.93:1]	A01 Vid. TC	LTG
2	Input A	Channel 02	A02	A02	Emb 1	InputA-video2	A02 Video format text	A02 Video loss	GPI In 2 [10.6.0.93:1]	A02 Vid. TC	LTG
3	Input A	Channel 03	A03	A03	Emb 1	InputA-video3	A03 Video format text	A03 Video loss	GPI In 3 [10.6.0.93:1]	A03 Vid. TC	LTG
4	Input A	Channel 04	A04	A04	Emb 1	InputA-video4	A04 Video format text	A04 Video loss	GPI In 4 [10.6.0.93:1]	A04 Vid. TC	LTG
5	Input A	Channel 05	A05	A05	Emb 1	InputA-video5	A05 Video format text	A05 Video loss	GPI In 5 [10.6.0.93:1]	A05 Vid. TC	LTG

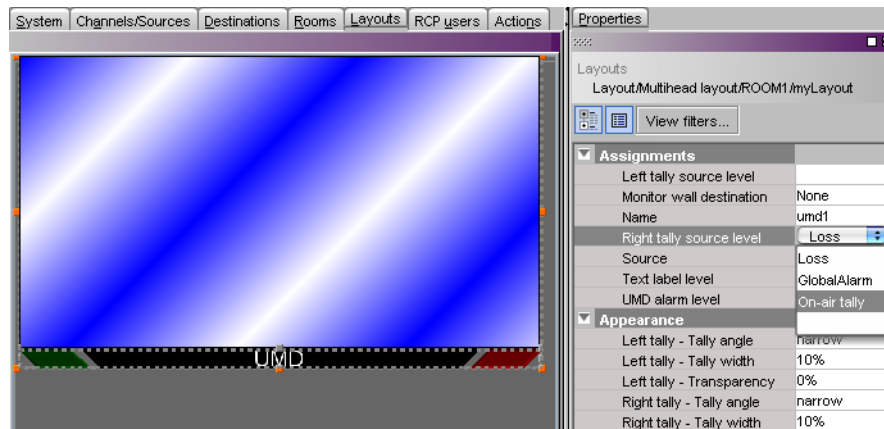
- 6 On the **File** menu, click **Save**.
 Changes to the sources table are saved.

Configuring Layout Elements

You can now assign the logical sources you previously configured (see [Assigning GPI Status Information to Logical Sources](#) on page 297) to monitors that can display text or alarms (for example, UMD, video, text alarm status) in a layout. Depending on your purposes, you will assign the appropriate text or alarm levels to specific components within the monitors. For example, you might select an alarm level as the source for an alarm monitor, and the *GlobalAlarm* level (see [Global Alarms](#) on page 118) as the text label level. The procedure below explains how to configure a UMD to report the On-air tally status.

To configure layout elements for dynamic text and tally reporting

- 1 Click the **Layouts** tab, and then open the layout you want to configure.
- 2 On the **Tools** pane, select one of the logical sources you previously configured (see [Assigning GPI Status Information to Logical Sources](#) on page 297) from the filtered **Channels/Sources** list, and then drag it onto the appropriate monitor.
- 3 Repeat [step 2](#) until you have assigned all the sources you want to monitor to the appropriate monitors in your layout.
- 4 Click a UMD whose tally reporting behavior you want to set, after unlocking the composite monitor that contains it if applicable (see [Unlocking a Composite Monitor](#) on page 254).
- 5 In the **Properties** pane, click the **Right tally source level** box, and then select the alarm level you want to monitor (such as the *On-air tally* level you previously configured).



Alarm level selection for the right tally in a UMD

- 6 Click outside the composite to lock it, if applicable.
- 7 Repeat [step 4](#) and [step 5](#) until you have configured all UMDs that are to display tally status when this layout is loaded on the monitor wall.
- 8 On the **File** menu, click **Save**.
- 9 If you have been working in offline mode, then export the database to your multiviewer (see [Exporting a Database](#) on page 32).

On the monitor wall, you can now load the layout containing the monitors that were assigned tally information provided by the GPI-1501. Tally status from the device (such as a switcher) feeding the GPI-1501 module will be visible on the monitor wall. Any changes made by the device's operator will be immediately reflected on the monitor wall.

TSL IP UMD Controller

The TSL IP Tally system can be added to a multiviewer system to receive and interpret UMD information from peripheral devices.

TSL IP Limitation: only one screen index can be received per unicast port.

Workaround: configure multiple unicast ports, each associated to a different screen index. Then in the multiviewer configure multiple TSL drivers (each configured with a different unicast port number) to receive each separate UMD stream index.

K-Frame Switchers

A multiviewer can receive dynamic source names and tally information from Grass Valley K-Frame production switchers, such as Kayenne K-Frame or Karrera K-Frame Video Production Center systems. The procedures below describe how to set up a multiviewer to interface with this family of production switchers.

Configuring the K-Frame Switcher

To establish tally contribution from the switcher to your multiviewer, you need to identify the multiviewer as a tally client, by using the switcher's touch screen menu panel or the K-Frame Menu application.

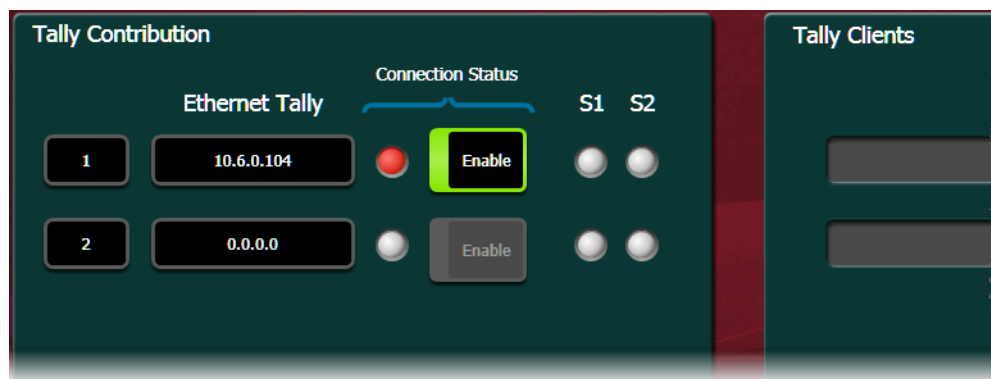
To set up the K-Frame switcher

- 1 On the K-Frame touch screen menu panel, touch the **Eng Setup** menu button, the **Ports & Devices** category button, and then the **Tally Ports** tab.

The Tally Ports menu appears.

- 2 Enter your multiviewer's IP address in one of the two tally ports, and then touch the **Enable** button for the selected port.

The connection status indicator turns red, since the connection has yet to be established on the multiviewer side.



Assuming the required sources and outputs have been defined, this completes the configuration required on the switcher. The multiviewer system will be able to send commands to the switcher, and the switcher will respond accordingly. Refer to your switcher's *Installation & Service Manual* for more information.³

Configuring the Multiviewer

For your multiviewer to receive tally status, and source names from a K-Frame switcher, and to display the switcher's contribution on the monitor wall as visual tally and dynamic text information, you need to configure your multiviewer's K-Frame tally service, by performing the following tasks in XEdit:

- set up the communication parameters;

3. Manuals and Release Notes for all Grass Valley production switchers are available here:
http://www.grassvalley.com/apps/doc_prodlst?super=broadcast&set=switchers

- configure logical sources by assigning source names and tally status from the switcher, to the logical sources' text or alarm levels;
- assign alarm and text levels from logical sources to layout elements such as UMDs or alarm monitors.

Establishing communication between the K-Frame switcher and the multiviewer

To set up the multiviewer's communication parameters

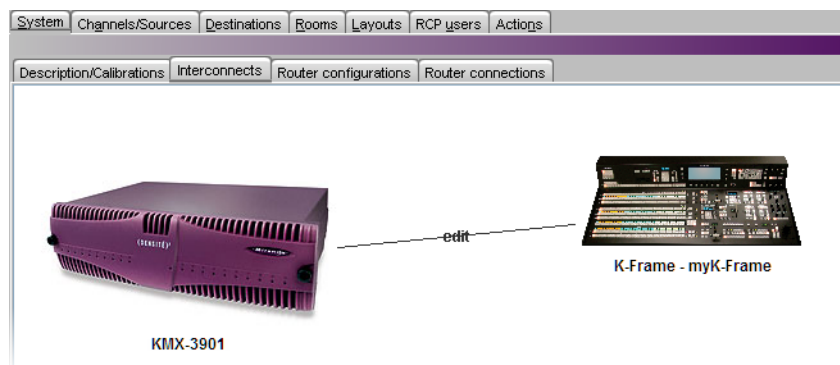
- 1 Open XEdit.
- 2 In the main window, click the **System** tab, and then click **Description/Calibrations** on the second-level tab bar. The main pane displays the System hierarchical list, and the **Tools** pane displays the equipment library when the root of the System list is selected.
- 3 Drag the **K-Frame** switcher device from the equipment library onto the root of the System hierarchical list. Alternatively, right-click the list root, and then click **Insert K-Frame** on the menu.

A window appears, prompting you for a device identifier.

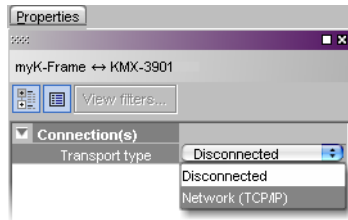


- 4 Type a name for the K-Frame production switcher, and then click **OK**. The device is added to your system configuration.
- 5 Click the **Interconnects** tab.
- 6 Position the pointer over the multiviewer icon, then click and drag towards the K-Frame production switcher icon.

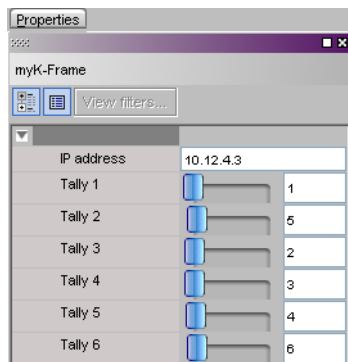
A line representing the connection between the multiviewer and the device appears.



- 7 Click the connection line between multiviewer and device.
- 8 In the **Properties** pane, select **Network (TCP/IP)** from the **Transport type** list.



- 9 In the **Interconnects** tab, click the **K-Frame** production switcher icon.
- 10 In the **Properties** pane, enter the K-Frame switcher's IP address, and set the appropriate output numbers to use for tally calculation, based on your switcher's configuration.



By default, in XEdit, **Tally 1** corresponds to the K-Frame switcher's output 1 (which typically carries the *Program* signal), and **Tally 2** corresponds to the K-Frame switcher's output 5 (typically the *Preview* signal).

- 11 On the **File** menu, click **Save**.

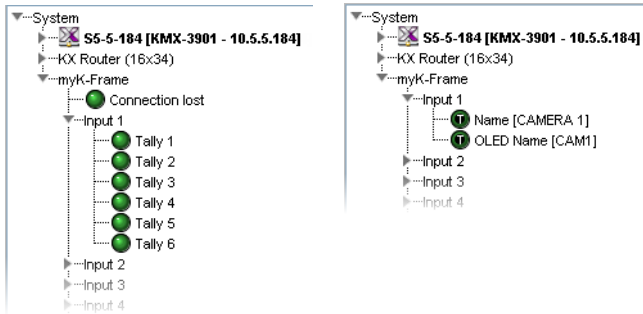
This establishes communication between the multiviewer and the switcher. On the touch screen menu panel (or in K-Frame Menu) you may notice that the status indicators turned green in the Tally Ports menu, and your multiviewer is now listed in the **Tally Clients** list.



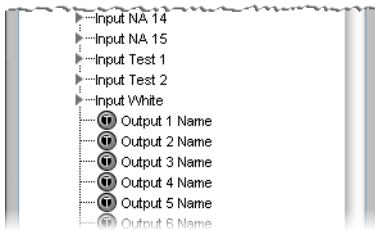
Assigning K-Frame tallies and input names to logical sources

The K-Frame contribution tally protocol provides information on up to 192 inputs, up to 96 outputs, the full set of fixed sources internal to the K-Frame system, and up to 2 complete operator suites. In XEdit's **Channels/Sources** tab, configure logical sources using input names and system tallies from the K-Frame. You will find these elements by expanding the filtered system list that appears on the **Tools** pane.

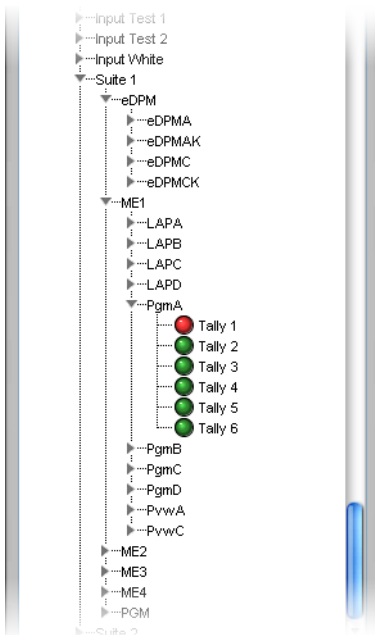
- For every input, 6 tallies, and 2 text labels (the *engineering name* and the *OLED name*) are available. When the OLED name is not defined for an input, both text labels contain the engineering name. A tally status indicates whether the input contributes to the output associated with the tally (see [step 10](#), under [Establishing communication between the K-Frame switcher and the multiviewer](#), on page 302). For example, if **Tally 1** has been configured to match *Output 1*, then the Tally 1 status of an input indicates whether this input contributes to Output 1.



- For every physical output of the K-Frame, the (static) name of the output is available.



- Within the operator suites, 6 tally statuses are available for every video processing engine (VPE) output. The tally status indicates whether the VPE output contributes to the switcher output associated with the tally.



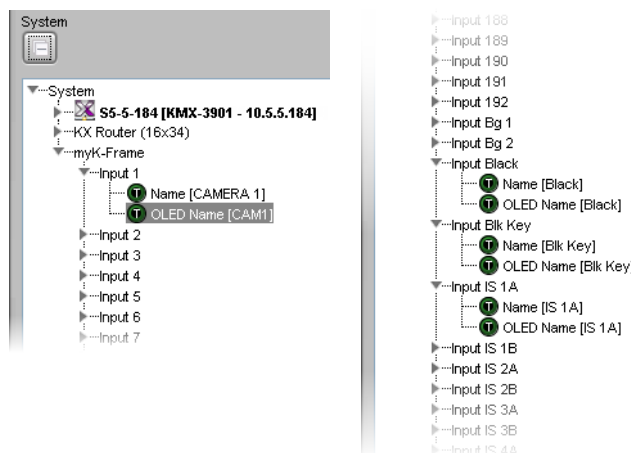
To configure your logical sources

- 1 In the **Channels/Sources** tab, add the required number of text and alarm levels for your purposes (see [Creating and Configuring Logical Sources](#) on page 72).

You may, for example, add two text levels to monitor source labels from the K-Frame switcher, and two alarm levels to monitor Program and Preview tallies.

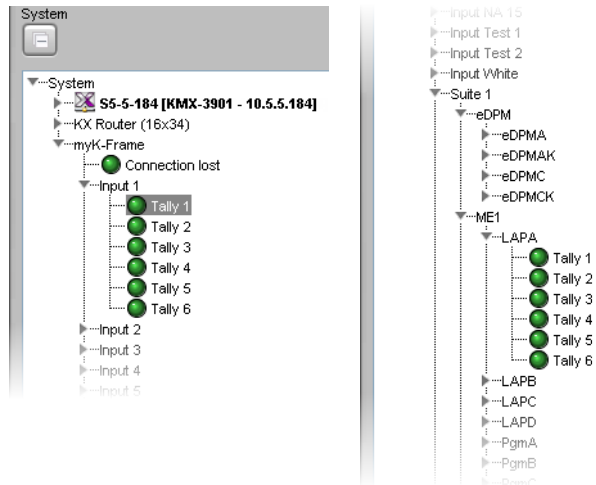
System Channels/Sources Destinations Rooms Layouts RCP_users Actions												
Channels/Sources	Source info			Video		Audio		Text			Alarm	
	#	Cat.	Name	VIDEO	EMB 1	SRC Name	OLED name	Eng name	Loss	PGM	PVVW	
A01	1		A01	A01	A01 Emb 1	A01			A01 Video loss			
A02	2		A02	A02	A02 Emb 1	A02			A02 Video loss			
A03	3		A03	A03	A03 Emb 1	A03			A03 Video loss			
A04	4		A04	A04	A04 Emb 1	A04			A04 Video loss			
A05	5		A05	A05	A05 Emb 1	A05			A05 Video loss			
A06	6		A06	A06	A06 Emb 1	A06			A06 Video loss			
A07	7		A07	A07	A07 Emb 1	A07			A07 Video loss			
A08	8		A08	A08	A08 Emb 1	A08			A08 Video loss			
A09	9		A09	A09	A09 Emb 1	A09			A09 Video loss			
A10	10		A10	A10	A10 Emb 1	A10			A10 Video loss			

- 2 Click a cell that corresponds to the appropriate *text* level of a logical source.
- 3 In the filtered System list, navigate to the text element you want to monitor, and drag it onto the selected cell.



K-Frame elements available from the filtered System list, for assignment to text levels in the sources table

- 4 If your logical sources include more text levels to be associated with the switcher, then repeat [step 2](#) – [step 3](#) for the current logical source's remaining text levels.
- 5 Click a cell that corresponds to the appropriate *alarm* level of the current logical source.
- 6 In the filtered System list, navigate to the tally element you want to monitor, and drag it onto the selected cell.



K-Frame elements available from the filtered System list, for assignment to alarm levels in the sources table

- 7 If your logical sources include more alarm levels to be associated with the K-Frame switcher, then repeat [step 5](#) – [step 6](#) for the current logical source's remaining alarm levels.
- 8 Make corresponding assignments to other logical sources by incremental copy, if necessary (see [Making Further Assignments by Incremental Copy](#) on page 83).

Text levels based on dynamic K-Frame source labels Alarm levels based on tallies from the K-Frame switcher

Channels/Sources	Source info			Video	Audio	Text			Alarm		
	#	Cat.	Name	VIDEO	EMB 1	SRC Name	OLED name	Eng name	Loss	PGM	P/VW
A01	1		A01	A01	A01 Emb 1	A01	Input 1 OLED name	Input 1 name	A01 Video loss	Input 1 tally 1	Input 1 tally 2
A02	2		A02	A02	A02 Emb 1	A02	Input 2 OLED name	Input 2 name	A02 Video loss	Input 2 tally 1	Input 2 tally 2
A03	3		A03	A03	A03 Emb 1	A03	Input 3 OLED name	Input 3 name	A03 Video loss	Input 3 tally 1	Input 3 tally 2
A04	4		A04	A04	A04 Emb 1	A04	Input 4 OLED name	Input 4 name	A04 Video loss	Input 4 tally 1	Input 4 tally 2
A05	5		A05	A05	A05 Emb 1	A05	Input 5 OLED name	Input 5 name	A05 Video loss	Input 5 tally 1	Input 5 tally 2
A06	6		A06	A06	A06 Emb 1	A06	Input 6 OLED name	Input 6 name	A06 Video loss	Input 6 tally 1	Input 6 tally 2
A07	7		A07	A07	A07 Emb 1	A07			A07 Video loss		
A08	8		A08	A08	A08 Emb 1	A08			A08 Video loss		
A09	9		A09	A09	A09 Emb 1	A09			A09 Video loss		
A10	10		A10	A10	A10 Emb 1	A10			A10 Video loss		

- 9 On the **File** menu, click **Save**.
 Changes to the sources table are saved.

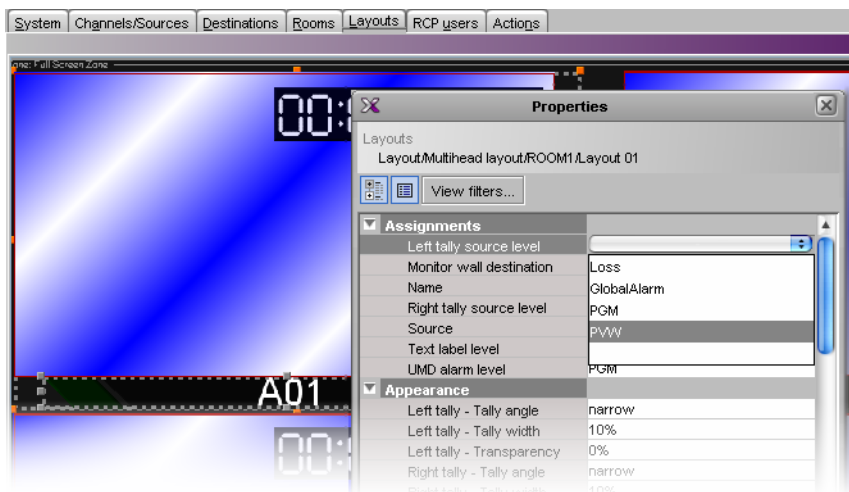
Configuring layout elements

You can now assign the logical sources you previously configured (see [Assigning K-Frame tallies and input names to logical sources](#) on page 303) to monitors that can display text (such as UMD) or alarms (such as UMD, video, text alarm status) in a layout. Depending on your purposes, you will assign the appropriate text or alarm levels to specific components within the monitors (for example, assign an alarm level to tally components in a UMD, or a text level to the UMD text component).

To configure layout elements for dynamic text and tally reporting

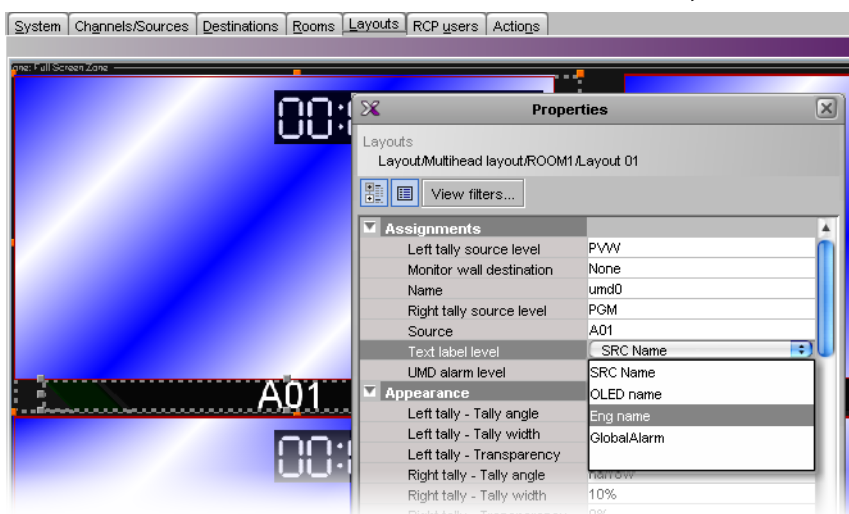
- 1 Click the **Layouts** tab, and then open the layout you want to configure.

- 2 On the **Tools** pane, select one of the logical sources you previously configured (see [Assigning K-Frame tallies and input names to logical sources](#) on page 303) from the filtered **Channels/Sources** list, and then drag it onto the appropriate monitor.
- 3 Repeat [step 2](#) until you have assigned all the sources you want to monitor to the appropriate monitors in your layout.
- 4 Click the first UMD whose dynamic text and tally reporting behavior you want to set, after unlocking the composite monitor that contains it if applicable (see [Unlocking a Composite Monitor](#) on page 254).
- 5 In the **Properties** pane, click the **Left tally source level** box, and then select the alarm level you want to monitor.



Alarm level selection for the left tally in a UMD

- 6 Click the **Right tally source level** box, and then select the appropriate alarm level, if applicable.
- 7 Click the **Text label level** box, and then select the text level you want to monitor.



Text level selection for the text label in a UMD

- 8 Click outside the composite to lock it, if applicable.

- 9 Repeat [step 4](#) – [step 8](#) until you have configured all UMDs that are to display dynamic text and tally status when this layout is loaded on the monitor wall.
- 10 On the **File** menu, click **Save**.
- 11 If you have been working in offline mode, then export the database to your multiviewer (see [Exporting a Database](#) on page 32).

On the monitor wall, you can now load the layout containing the monitors that were assigned dynamic text and tallies provided by the K-Frame switcher. Input names, and tally status from the switcher will be visible on the monitor wall. Any changes made by the switcher's operator will be immediately reflected on the monitor wall.

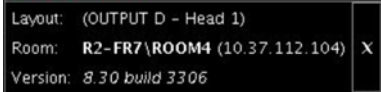
13

Operation of the Monitor Wall

Introduction

This section introduces the multiviewer monitor wall features and describes the actions you can perform on the multiviewer's monitor wall.

Key Concepts

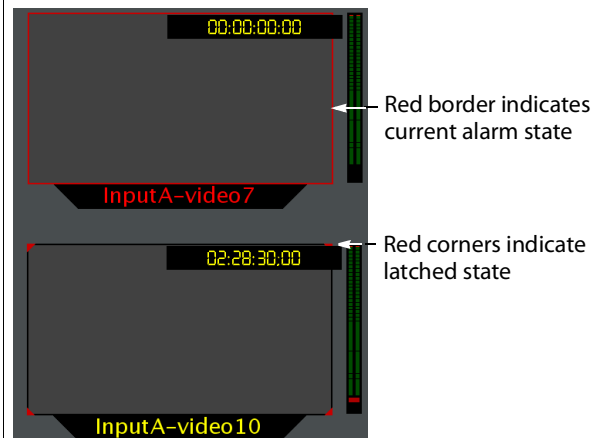
Monitor wall	The <i>monitor wall</i> refers to the group of display screens that are connected to the output modules of a specific Kaleido system.
Room	A <i>room</i> is a visual grouping of display screens. A room represents the physical displays, positioned and sized as viewed by the user in an actual room. Rooms can include <i>full screen zones</i> , and are defined and configured by using the XEdit application. See Logging on to the Monitor Wall Using a Remote Control Panel on page 314.
Automatic resolution detection	<i>Automatic resolution detection</i> eases the initial setup of a new display monitor by automatically determining the best resolution supported by the display. This ensures that the multiviewer will be configured for the best video quality. When a new display is connected, the multiviewer will detect the EDID of the display on boot-up, and will set the correct resolution accordingly. This means that displays can be hot-swapped. If an existing display is replaced by a new one, the multiviewer will automatically change the resolution without the need for a system restart. Note: The Kaleido-IP does not support automatic output resolution detection.
Layout	A <i>layout</i> refers to a visual grouping of monitors on the monitor wall. Layouts are specific to a room, and created by using the XEdit application. Full screen layouts, also defined in XEdit, are specific to a full screen zone within a particular room. See Loading Layouts , on page 320, and Displaying a Source in Full Screen Mode , on page 323.
Dashboard	The <i>dashboard</i> is a window that contains the system name, IP address and software build version. It also displays error messages. The dashboard is displayed at the bottom right of each display, on the monitor wall:  See Displaying the Dashboard , on page 318, and Hiding the Dashboard , on page 319.

Monitor	A <i>monitor</i> is an element that is part of a layout. XEdit supports several types of primary elements (clocks, timers, video monitors, audio monitors, UMDs, time code monitors, alarm monitors, etc.), that can be grouped into composite monitors.
Logical source	A <i>logical source</i> (called a <i>channel</i> , in earlier versions of the documentation) refers to a group of physical audio, video, or metadata sources, and text attributes. A logical source can be used as a whole, and assigned to a virtual monitor. See Assigning Sources to Monitors on page 332.
Video monitor	A <i>video monitor</i> is a layout element used to define an area for displaying a video signal. Within a video monitor, the <i>video window</i> is the active area where the video signal is displayed, possibly including closed captions or teletext. See Displaying Subtitles and Closed Caption Text on page 326.
Composite monitor	A <i>composite monitor</i> (also referred to as a <i>composite</i> , a <i>monitor</i> or a <i>tile</i>) is a group of primary elements that can be seen as a single object within a layout. Composite monitors typically include a video window, one or more audio level meters, and a UMD with two tallies.
Safe area	The <i>safe area</i> is a configurable region inside a video window. The safe area markers delimit this region (for example, a 4:3 region inside a 16:9 window). See Toggling Safe Area Markers on page 325.
Audio monitor	An <i>audio monitor</i> (also called <i>audio level meter</i> or <i>ALM</i>) is a layout element that provides a visual representation of sound. See Audio Monitoring on page 313.
UMD	An <i>under monitor display (UMD)</i> has a <i>text label</i> that can be static or dynamically updated by a peripheral device. It can also have <i>left and right tally indicators</i> . The UMD typically indicates the name of the video source seen in a video monitor. You can edit static labels directly on the monitor wall: see Editing UMD Text , on page 330, and Selecting an Input Method , on page 331.
Time code monitor	A <i>time code monitor</i> displays the Ancillary Time Code (ATC) from an HD video signal, or the time code found in an embedded SDI video signal, part of the vertical interval of an analog signal (VITC), or other external Linear Time Code (LTC). This monitor also supports time code information from external providers. Time code monitors can be used for monitoring the duration of programs.
RCP User	The advanced Remote Control Panel (RCP) simplifies video/audio signal processing and control in both single and multiuser environments. RCP User use the RCP to control connected equipment.
Timer	A <i>timer monitor</i> is based on a <i>timer</i> defined within the multiviewer system. Three timer modes are available: (1) UP: timer counts up starting from zero up to a preset time, (2) DOWN: timer counts down from a preset time to zero, and (3) REMAINING: timer counts down from the current time until it reaches a preset time. Timers are defined and configured in XEdit. They can be slaved to production timers, assigned to logical sources, assigned to rooms or specific RCP users, and controlled from the Kaleido-RCP2. See Using Timers on page 336.
Clock	A <i>clock</i> is the visual representation of time in a video or display. It can be based on a reference LTC signal or on the multiviewer's system time.

Subtitling monitor	<p>A <i>subtitling monitor</i> defines an area for displaying subtitles extracted from a video signal. By using a subtitling monitor you can monitor subtitling from a specific DVB or SCTE 27 stream, independently from the associated video stream. This requires the <i>CC/XDS</i> option to be enabled (see the multiviewer's <i>Installation & Service Manual</i> for more information). See Setting the DVB Subtitling Language from the Monitor Wall, on page 328, and Setting the SCTE 27 Subtitling Language from the Monitor Wall, on page 329.</p> <p>Note: With the current version of the Kaleido Software, the subtitling monitor supports DVB subtitles and SCTE 27 subtitles, from Kaleido-IP sources only.</p>
V-chip monitor	<p>The <i>V-chip monitor</i> provides a visual indication of the V-chip rating from the CC (608) metadata in an SD video signal, or from the CC (608) legacy caption data, when such data is present within an HD video signal. Requires the <i>CC/XDS</i> option to be enabled (see the multiviewer's <i>Installation & Service Manual</i> for more information).</p>
Metadata monitor	<p>A <i>metadata monitor</i> defines an area for displaying XDS, or digital content advisory descriptor (CAD) information compliant with CEA-766-D, extracted from a video signal. This requires the <i>CC/XDS</i> option to be enabled (see the multiviewer's <i>Installation & Service Manual</i> for more information).</p>
Action	<p>An <i>action</i> is an operation automatically performed in response to a specific trigger. <i>Monitor wall actions</i> are directly associated with layout elements. <i>Background (floating) actions</i> are actions that are global to the multiviewer system. Unlike monitor wall actions, background actions are always available. See Triggering Actions on page 339.</p>
Trigger	<p>A <i>trigger</i> is an event that triggers an action. An example of a trigger could be a double click on a monitor. Background actions are triggered by alarms or by Gateway commands. In XEdit, when defining an action for a layout element, you could specify, for instance, that a specific full screen layout be displayed on the monitor wall in response to the trigger.</p>
Alarm monitor	<p><i>Alarm monitors</i> help you see the status of global and virtual alarms, but their use is not limited to this type of alarms. When any alarm level is assigned to an alarm monitor, the status of this alarm will be shown. When using the global alarm at the text label level, it will display the text value of the alarm, which is a readable name.</p>
Alarm latch	<p>To prevent operators from missing temporary alarms on the monitor wall, layout elements that are capable of displaying an alarm status (for example, video monitors, subtitling monitors, UMDs, alarm monitors) can be configured with a latching mechanism. An <i>alarm latch</i> will keep the error state visible until someone acknowledges the associated alarm. See Acknowledging Alarms on page 340.</p> <p>When you acknowledge an alarm, latched or current, the latched status is reset to normal (that is, unlatched). If the alarm is acknowledged while its status indicates an error condition, the latched status is reset to normal, and will only go back to error if the alarm status returns to normal and then to error again.</p>

Note: If you have an iControl application server, you may use its GSM alarm browser to configure an *acknowledgement snooze duration*, which defines the period during which alarm status changes detected by your multiviewer are ignored, immediately after an alarm is acknowledged. Such a snooze period is typically not desirable in the context of multiviewer alarms. Therefore, a multiviewer's GSM has its acknowledgement snooze duration set to 0 ms, by default.

Video monitors can provide alarm status information through their borders' color and blinking behavior, and show the latched state as small indicators in each corner of the video window. UMDs (text and tallies) and alarm monitors can change their text or background color and blinking behavior, to reflect the alarm status and show the latched state through their borders.



See [Configuring a Video Monitor's Alarm Reporting Behavior](#), on page 199, [Configuring a UMD's Alarm Reporting Behavior](#), on page 225, and [Configuring Alarm Monitors](#), on page 231, for details on configuring the alarm reporting and latching attributes for these layout elements.

The multiviewer tracks the latched state of all alarm levels in a logical source at all times, even when alarms are not being monitored on the monitor wall, or through SNMP traps or background actions. It could thus happen that some layout elements will show a latched status indicator after a layout is loaded, even if the current state of the corresponding alarm is normal and the alarm was not monitored in the previous layout (the alarm occurred on the feed while the feed was not monitored).

- Latching only occurs when an alarm severity is above normal (for example, minor, major, or critical). All other alarm states (unavailable, unassigned, pending, unknown, etc.) are not latched.
- Unlatching a global alarm unlatches all its contributing alarms. Unlatching the last alarm contributing to a global alarm unlatches the global alarm itself.
- The color of the latch indicator reflects the highest level of alarm received since the corresponding alarm was last unlatched.

Gateway

Kaleido multiviewers can execute commands received through the *Kaleido Remote Control Protocol (Gateway)* interface, allowing third-party developers and individual users remote access to some Kaleido functions. Refer to the *Kaleido Remote Control Protocol (Gateway) User's Guide*, for more information. See [Related Documentation](#), on page 11.

Audio Monitoring

The Kaleido-RCP2's **volume control**, **Mute**, and **-20dB** buttons, their equivalent on the RCP-200, and the corresponding Gateway commands apply to *analog* audio monitoring outputs are not supported by the Kaleido-IP.

Logging on to the Monitor Wall Using a Remote Control Panel

As network devices, the RCP-200 advanced remote control panel, and the Kaleido-RCP2 control panel provides access to any room, from any Kaleido multiviewer system on the network. As a security measure, access is controlled by a login procedure. Multiple RCP-200 and Kaleido-RCP2 can be used by different users to access the same room concurrently. When multiple RCP users are active in the same room, they each control a separate pointer on the monitor wall, and can use the monitor wall menu independently, as long as they limit their actions to separate displays.

In a default system configuration, a multiviewer's video outputs are assigned to specific rooms:

- On a Kaleido-IP, the multiviewer outputs are assigned to ROOM.

Logging on to the Monitor Wall Using the Kaleido-RCP2

To log on to a Kaleido multiviewer's room from the Kaleido-RCP2

- 1 On a Kaleido-RCP2 with an active connection to the network, press and hold the ENTER button until the ESC button lights up. The **Configuration** menu appears, with the ROOM SELECTION option displayed.
- 2 Press ENTER again to obtain the list of rooms from the Kaleido multiviewer systems that are currently available on the network.
The rooms are listed in the form [multiviewer name]/[room name].
- 3 In the room list, select the room you want to access by pressing the **2** key (to move up in the list) or the **8** key (to move down the list).
- 4 When the appropriate room name is highlighted, press ENTER to accept the new selection, and then press ESC to exit the **Configuration** menu.
- 5 Press the LOGIN key.
The following message will appear on the LCD display:
LOGIN Position
Admin
- 6 Select your user name by pressing the **2** key (to move up in the list) or the **8** key (to move down the list).
- 7 When your user name is highlighted, press ENTER.
- 8 When prompted, type the password for this user name, then press ENTER.

Note: By default, the user "Admin" has no password.

The message "Access granted" will appear on the LCD display if the login is successful. If a mouse is connected to the Kaleido-RCP2, then you should be able to see and move the mouse pointer on the monitor wall. Alternatively, use the Kaleido-RCP2's mouse-function keys.

Notes

- If at any time the message "Target system is offline" or "No login list available" appears on the LCD display, press the ESC, ENTER and DEL keys simultaneously and go back to [step 1](#).

Notes (continued)

- The pointer may flicker when two RCP users access displays fed by the same multiviewer output.
 - Two users accessing the same display will be limited to sharing a single pointer.
-

For more information on the Kaleido-RCP2, refer to the *Kaleido-RCP2 Guide to Installation and Operation*. See [Related Documentation](#), on page 11.

Logging on to the Monitor Wall Using the RCP-200

To log on to a Kaleido multiviewer room from the RCP-200

- 1 On an RCP-200 with an active connection to the network, press the LIST button. All devices, and Kaleido multiviewer rooms, detected by the RCP-200 appear on the left screen. Kaleido multiviewer rooms are listed in the form [multiviewer name]\[room name].
- 2 Touch the room you want to access (press the DOWN or UP soft keys to scroll the list as needed).
- 3 If the list of users assigned to this room appears on the right-hand screen, touch the user name under which you want to log on, enter your password, and then touch LOG IN.

Note: By default, the user "Admin" has no password.

The room's monitor wall control panel appears on the right-hand screen, with the ASSIGN CHANNEL category selected. If a mouse is connected to the RCP-200, then after touching WALL MOUSE you should be able to see and move the mouse pointer on the monitor wall.

Notes

- If the ROUTER SELECT category becomes selected instead of ASSIGN CHANNEL, showing the following message on the right-hand screen: "Please select a router from the left-hand screen," then you still need to complete the correlation between some monitor wall destinations and the representation of the corresponding KX Router logical router. See *Correlating Monitor Wall Destinations and KX Router Logical Routers for the RCP-200* in the multiviewer's *Installation & Service Manual* for more information.
 - The RCP-200 will remember your user credentials until you log out explicitly (by touching LOG OUT at the upper-right corner of the control panel).
 - The pointer may flicker when two RCP users access displays fed by the same multiviewer output.
 - Two users accessing the same display will be limited to sharing a single pointer.
-

For more information on the RCP-200, refer to the *RCP-200 Guide to Installation and Operation*. See [Related Documentation](#), on page 11.

Using On-Screen Wall Control

Locating the Mouse Pointer on the Monitor Wall

If you have a large system, the monitor wall may comprise a large number of display screens, where the mouse pointer location is not always obvious.

To locate the mouse pointer on the monitor wall

- Click the middle mouse button.

A more recognizable square shape appears around the pointer.

Note: Configuring a larger pointer may also help. See [Enabling the Large Mouse Pointer for a Room](#) on page 278, for details.

Using On-Screen Wall Control from the RCP-200

Once you have logged on to a room from the RCP-200 control panel, a mouse connected to one of the panel's USB port automatically switches to the monitor wall, while the RCP-200's touch screen features remain available. You can alternate using the mouse between the RCP-200's right-hand screen, and the monitor wall.

To use the mouse on the RCP-200's right-hand screen

- Touch the WALL MOUSE category.

The category's background turns a darker shade (purple), and the mouse pointer appears on the RCP-200's right-hand screen.

To use the mouse on the monitor wall

- Touch the WALL MOUSE category.

The category's background turns a lighter shade (mauve), and the mouse pointer appears on the monitor wall.

Synchronizing the RCP-200's Head View with the Monitor Wall

The RCP-200 control panel does not automatically reflect changes to the current layout that were not performed from the RCP-200—for example, someone may have loaded a different layout, or changed assignments, from another control panel, from XEdit, or by using the monitor wall mouse.

To synchronize the RCP-200's head view with the monitor wall

- Press the REFRESH knob.

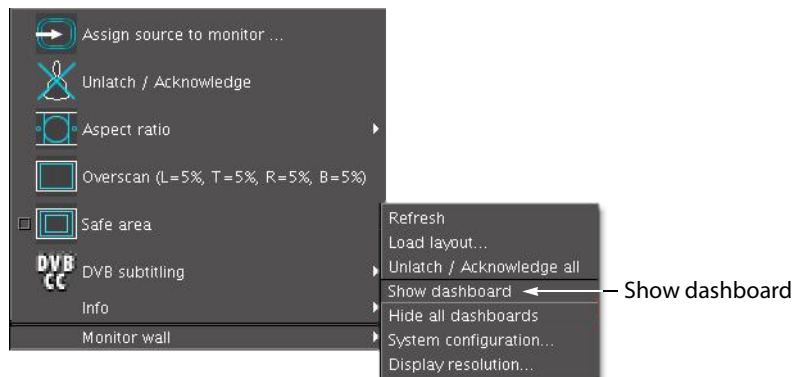
Displaying the Dashboard

Whenever the Kaleido Software detects an error, it will automatically display the dashboard on every monitor of the monitor wall. When all errors are resolved, then the system automatically closes the dashboard on every monitor. You can also display the dashboard as needed, to view your multiviewer's system name, IP address, software version and current error messages. In such cases you must manually close the dashboard.

Note: It is possible to disable the automatic display of the dashboard on specific displays. See [Disabling the Dashboard](#) on page 157 for details on how to configure this option.

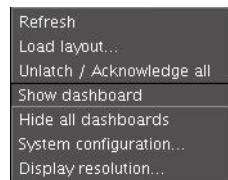
To display the dashboard

- 1 Right-click a monitor. On the menu, point to **Monitor wall**, and then click **Show dashboard** to display the dashboard associated with the current head.



Monitor wall menu (from composite monitor menu)

Note: If you right-click the monitor wall background directly, then the monitor wall menu appears immediately, and you can click **Show dashboard** directly:



After a brief delay, the dashboard appears at the bottom-right corner of the display monitor, and the command **Hide dashboard** replaces **Show dashboard** on the menu.



Dashboard on the monitor wall

Hiding the Dashboard

To hide the dashboard

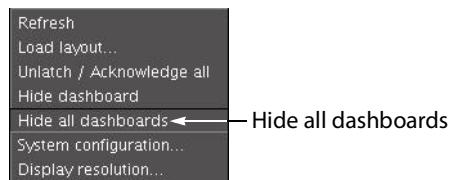
- Click the x button at the bottom-right corner of the dashboard. Alternatively, right-click anywhere on the monitor wall, point to **Monitor wall** on the menu (if you clicked a layout element), and then click **Hide dashboard** to hide the dashboard on the current display.



Note: Clicking the x button closes the dashboards on every display monitor in the room if they were displayed automatically.

To hide all the dashboards

- Right-click anywhere on the monitor wall, point to **Monitor wall** on the menu (if you clicked a layout element), and then click **Hide all dashboards** to hide the dashboard on every display in the room.



Note: When a dashboard is closed while the system is in an error condition, it will automatically reappear after 60 minutes, or when a new error occurs.

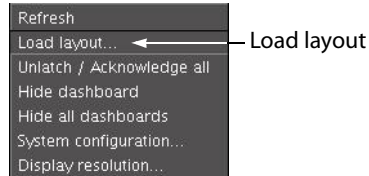
Loading Layouts

Note: Due to a limitation in XEdit's support for drag-and-drop operations, when you first load a new layout on the monitor wall, you may notice that a monitor's source or destination assignment is incorrect. Open the layout in XEdit, click the corresponding monitor, verify the **Source** and **Monitor wall destination** attributes indicated in the **Properties** pane, and correct them as needed. See [Assigning Logical Sources or Monitor Wall Destinations to Monitors](#) on page 185.

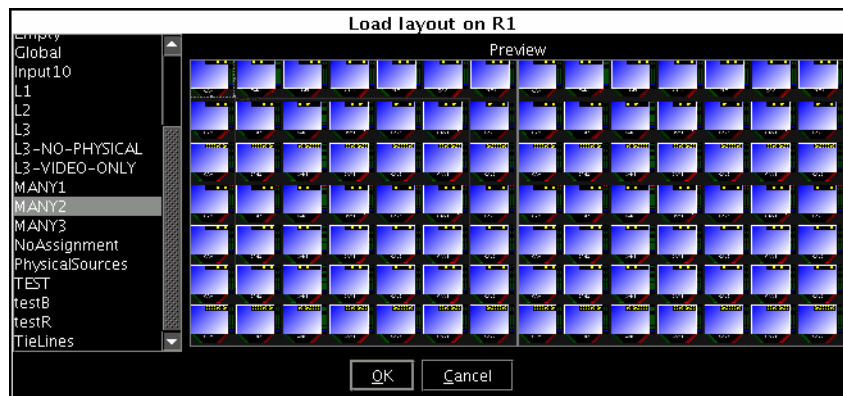
Loading a Layout by Using the Mouse

To load a layout on the monitor wall, by using the mouse

- 1 Right-click anywhere on the monitor wall, point to **Monitor wall** (if you clicked a layout element), and then click **Load layout** on the menu.



The layout chooser appears.



- 2 Select the layout you want to load, from the set of layouts defined for this room, and then click **OK**.

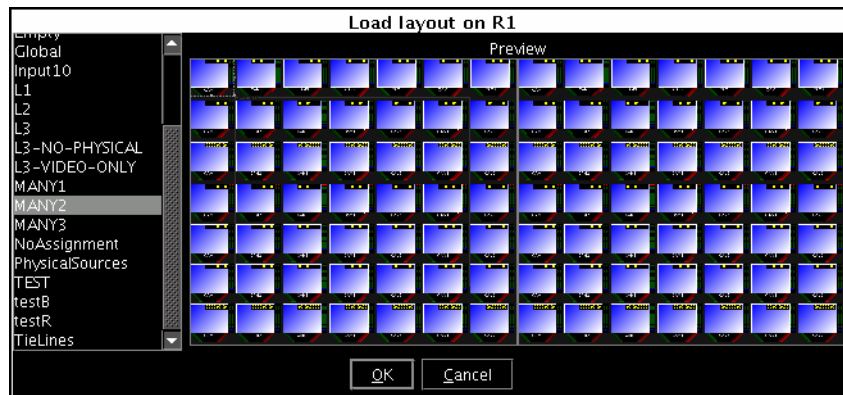
The new layout appears on the monitor wall.

Loading a Layout by Using the Kaleido-RCP2

To load a layout on the monitor wall, by using the Kaleido-RCP2

- 1 Press **LOAD** on the Kaleido-RCP2.

The layout chooser appears.



- 2 Select the layout you want to load, from the set of layouts defined for this room, and then click **OK**.

The new layout appears on the monitor wall.

Using Layouts Presets

To load a layout using the Kaleido-RCP2's preset buttons

- Press the appropriate preset button (1-10) on the Kaleido-RCP2.

The button you just pressed starts flashing (while the button associated with the currently loaded layout, if any, remains lit). Once the layout associated with the preset button for the current user appears on the monitor wall, the button stops flashing, and becomes lit (while the previously lit button is not lit anymore). See [Assigning Room Layouts to the Kaleido-RCP2 Preset buttons](#) on page 277, for more information.

Note: Once the preset button has stopped flashing on the Kaleido-RCP2, if the new layout has source assignments from an upstream router, it may still take a moment before these sources appear on the monitor wall.

Loading a Layout by Using the RCP-200

To load a layout on the monitor wall, by using the RCP-200

- 1 Touch LAYOUT SELECT on the RCP-200's right-hand screen.
The layout chooser view appears.
- 2 Rotate the TAKE knob to locate the layout you want to load, scrolling the list as needed.
- 3 Once you have selected the layout you want to load, press TAKE.
After a moment, the new layout appears on the monitor wall, and the RCP-200's right-hand screen returns to the ASSIGN CHANNEL panel.

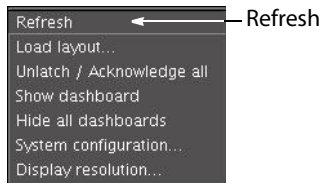
Refreshing a Layout

To refresh a layout

- Right-click anywhere on the monitor wall, point to **Monitor wall** (if you clicked a layout element), and then click **Refresh** on the menu.

Operation of the Monitor Wall

Refreshing a Layout



Displaying a Source in Full Screen Mode

To display a source in full screen mode from the Kaleido-RCP2

- 1 Move the pointer over the video source you want to display in full screen mode.
- 2 Press FULL SCREEN on the Kaleido-RCP2.

The full screen layout assigned to the current user is loaded into the full screen zone.

To display a source in full screen mode from the RCP-200

- 1 Touch the WALL MOUSE category if it is not already selected, and then move the pointer over the video source you want to display in full screen mode on the monitor wall.
- 2 If you have yet to assign the FULL SCREEN wall function to one of the programmable knobs, rotate the knob you want to program until FULL SCREEN is selected, and then press the knob.

FULL SCREEN appears above the programmed knob.

- 3 Press the FULL SCREEN knob.

The full screen layout assigned to the current user is loaded into the full screen zone.

To close the full screen view

- Move the pointer over the full screen zone, and then press FULL SCREEN again, on the Kaleido-RCP2 or RCP-200.

Note: A full screen layout can also be loaded by configuring actions in XEdit. See [Managing Layouts](#) on page 172, for information on creating a full screen layout, and see [Creating Actions](#), on page 261, for detailed instructions.

Changing a Source's Aspect Ratio

To change the aspect ratio using the Kaleido-RCP2

- Move the pointer over the video source whose aspect ratio you want to change, and then press ASPECT RATIO on the Kaleido-RCP2. Continue pressing ASPECT RATIO to alternate between the available aspect ratio options (4:3, 16:9, and possibly a third custom aspect ratio if one was defined in XEdit for the monitor).

To change the aspect ratio using the RCP-200

- 1 Touch the WALL MOUSE category if it is not already selected, and then move the pointer over the video source whose aspect ratio you want to change on the monitor wall.
- 2 If you have yet to assign the ASPECT RATIO wall function to one of the programmable knobs, rotate the knob you want to program until ASPECT RATIO is selected, and then press the knob.

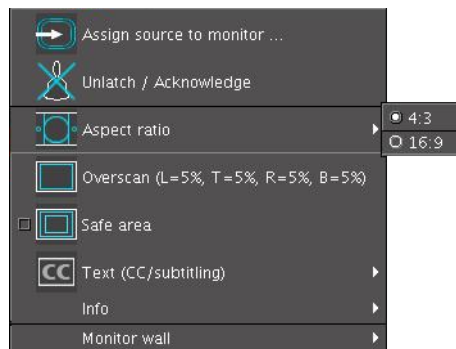
ASPECT RATIO appears above the programmed knob.

- 3 Press the ASPECT RATIO knob.

The video source's aspect ratio changes. Continue pressing ASPECT RATIO to alternate between the available aspect ratio options (4:3, 16:9, and possibly a third custom aspect ratio if one was defined in XEdit for the monitor).

To change the aspect ratio using the mouse

- 1 Right-click the video source.
- 2 On the menu, point to **Aspect Ratio**, and then click **4:3** or **16:9**.



Note: There may be one more choice on the menu if you set a custom aspect ratio in XEdit, for this monitor. See [Setting a Video Monitor's Aspect Ratio](#) on page 192.

The video is resized accordingly within the layout.

Toggling Safe Area Markers

To toggle the safe area markers on a video using the Kaleido-RCP2

- Move the pointer over the video source, and then press SAFE AREA on the Kaleido-RCP2. Continue pressing SAFE AREA to toggle the markers.

To toggle the safe area markers on a video using the RCP-200

- 1 Touch the WALL MOUSE category if it is not already selected, and then move the pointer over the video source whose cropping mode you want to change on the monitor wall.
- 2 If you have yet to assign the SAFE AREA wall function to one of the programmable knobs, rotate the knob you want to program until SAFE AREA is selected, and then press the knob.

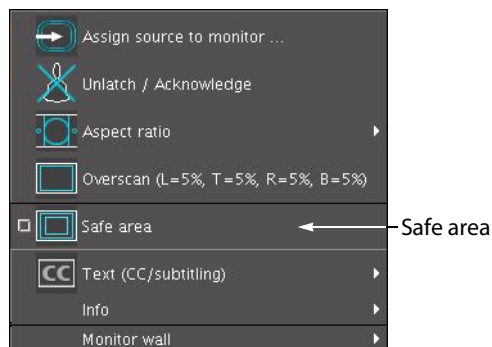
SAFE AREA appears above the programmed knob.

- 3 Press the SAFE AREA knob.

The safe area markers appear inside the video window. Continue pressing SAFE AREA to toggle the markers.

To toggle the safe area markers on a video using the mouse

- 1 Right-click the video source, and then click **Safe Area** on the menu.



The safe area markers appear inside the video window.



- 2 Click **Safe Area** again on the menu, to hide the markers.

Displaying Subtitles and Closed Caption Text

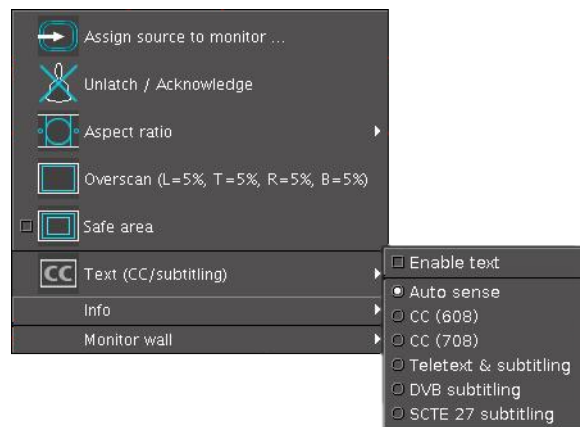
Notes

- The Kaleido-IP supports extraction of EIA-608, EIA-708, OP-47 Teletext, SCTE 27 subtitles, DVB subtitles, and DVB teletext.

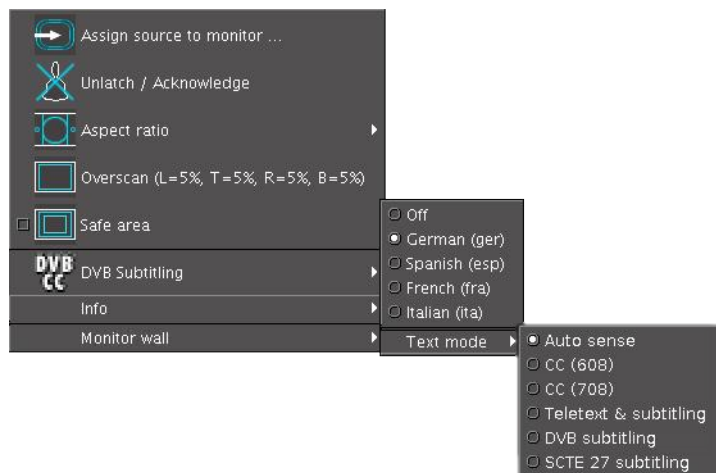
Setting the Text Mode

To change the text mode for a video, or subtitling monitor







- 1 Right-click the appropriate video, or subtitling monitor, on the monitor wall.
- 2 If the current text mode indicator is **Text (CC/subtitling)**, then:
 - a Click **Enable text** on the menu, to first enable the display of subtitles and closed captions.



- b Right-click the monitor again.
- 3 On the menu, point to the text mode indicator —either **Text (CC/subtitling)**, **CC (608)**, **CC (708)**, **Teletext & subtitling**, **DVB subtitling**, or **SCTE 27 subtitling**, then point to **Text mode**, and click the text mode you want to apply.



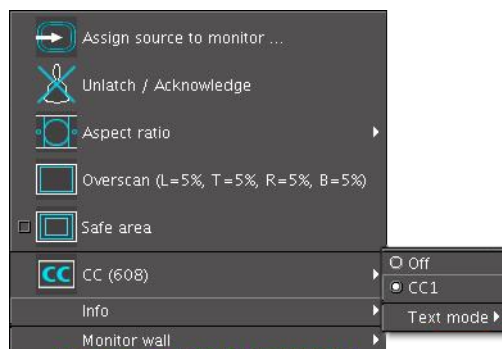
To prevent the menu from being too crowded by CC (608), CC (708), DVB subtitles, SCTE 27 subtitles, and Teletext/subtitling options, its content (label, icon and available choice) changes, depending on the current video format:

Signal type	Text Mode	Indicator	Label	Available choices
SD-SDI/CVBS 525, MPEG-2, H.264	Auto		CC (608)	Off, CC1, Text mode sub-menu
Any	CC (608)			
SD-SDI/CVBS 625, MPEG-2, H.264	Auto		Teletext & subtitling	For a Kaleido-IP: Off, Page A to Page H, Text mode sub-menu
Any	Teletext & subtitling			Other multiviewer models: Off, Page A, Edit pages, Text mode sub-menu
HD-SDI, MPEG-2, H.264	Auto		CC (708)	Off, Service 1 to Service 63, Text mode sub-menu
Any	CC (708)			
MPEG-2, H.264	Auto		DVB subtitling	Off, available language services, Text mode sub-menu
Any	DVB subtitling			
MPEG-2, H.264	Auto		SCTE 27 subtitling	Off, available language services, Text mode sub-menu
Any	SCTE 27 subtitling			
Other / Unknown	Auto		Text (CC/subtitling)	Enable text, Auto sense, CC (608), CC (708), Teletext & subtitling, DVB subtitling, SCTE 27 subtitling.

Switching Closed Captioning On/Off

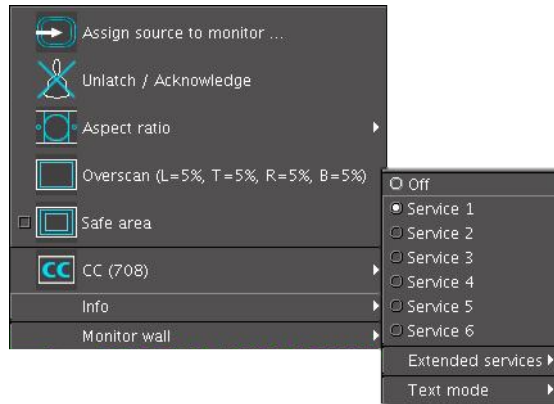
To switch CC (608) closed captioning on/off

- Right-click the appropriate composite or video monitor on the monitor wall, point to **CC (608)**, and then click either **CC1** or **Off**.



To switch CC (708) closed captioning on/off

- Right-click the appropriate composite or video monitor on the monitor wall, point to **CC (708)**, and then click either the appropriate service number or **Off**.

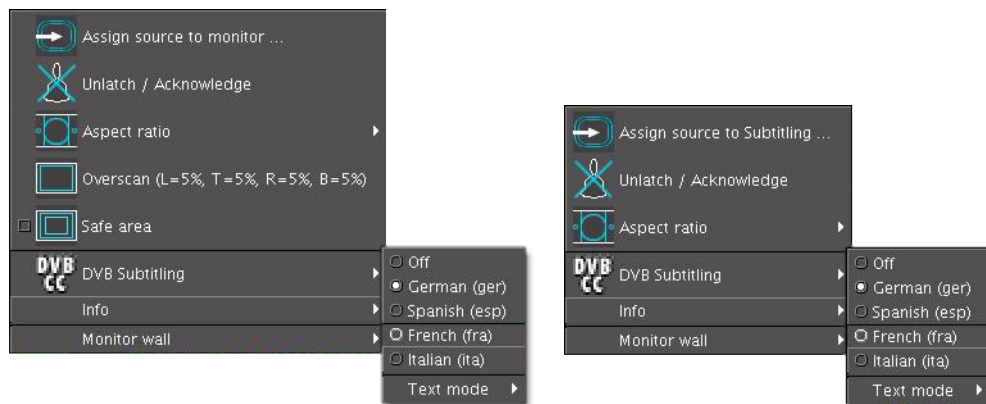


Note: The menu displays **Service 1** to **Service 6**. Use the **Extended services** sub-menu to select from the **Service 7** to **Service 63** range. When an extended service is enabled it is added to the menu below **Service 6**.

Setting the DVB Subtitling Language from the Monitor Wall

To set the decoded DVB subtitling language for a monitor on the wall

- Right-click the appropriate composite, video, or subtitling monitor, point to **DVB subtitling**, and then click the language you want to monitor.



Note: When monitoring a program that includes DVB subtitling based on a non-supported version of ETSI EN 300 743, the Kaleido-IP raises the *DVB subtitle invalid* alarm and no subtitling appears on the monitor wall.

To switch DVB subtitling off

- Right-click the monitor, point to **DVB subtitling**, and then click **Off**.

Setting the SCTE 27 Subtitling Language from the Monitor Wall

To set the decoded SCTE 27 subtitling language for a monitor on the monitor wall

- Right-click the appropriate composite, video, or subtitling monitor, point to **SCTE 27 subtitling**, and then click the language you want to monitor.

To switch SCTE 27 subtitling off

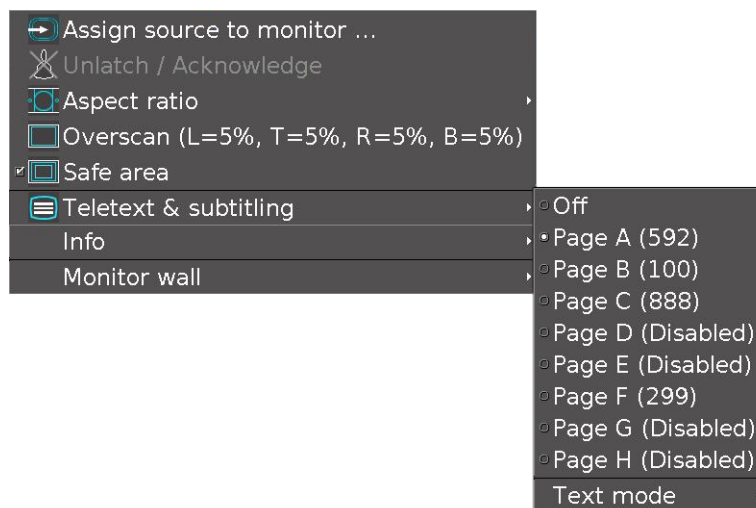
- Right-click the monitor, point to **SCTE 27 subtitling**, and then click **Off**.

Selecting a Teletext/Subtitling Page from the Monitor Wall

To change the decoded teletext/subtitling page for a Kaleido-IP

- Right-click the appropriate composite or video monitor, point to **Teletext & Subtitling**, and then click the page you want to decode on the menu.

The menu displays **Page A (###)** to **Page H (###)** where “###” is the number of the actual page being monitored (from 100 to 899), or the word *Disabled* (if the page number associated with this page is not to be monitored).



The assignments of Page A to Page H are configured in XEdit.

To switch teletext/subtitling off

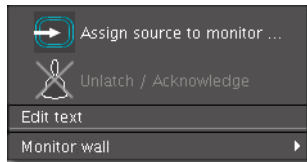
- Right-click the monitor, point to **Teletext & Subtitling**, and then click **Off**.

Editing UMD Text

Note: Only UMDs configured to show static text are editable on the monitor wall.

To edit the text on a UMD

- 1 Right-click the UMD whose text label you want to modify, and then click **Edit text** on the menu.



The UMD text area becomes editable.



- 2 Type the new text, and then press ENTER on the Kaleido-RCP2, RCP-200, or external keyboard.

The UMD displays the new text.



Selecting an Input Method

To select an input method

- 1 Click the appropriate composite or video monitor on the monitor wall.
- 2 Press left Alt+Shift+1 on the external keyboard.
The **Select Input Method** menu appears.
- 3 On the **Select Input Method** menu, click the appropriate input method.



You can now type text in your language of choice, using an external keyboard connected to the Kaleido-RCP2.

Assigning Sources to Monitors

Any monitor in a layout can be assigned a logical source in XEdit. It is possible to change the logical source assignment directly on the monitor wall.

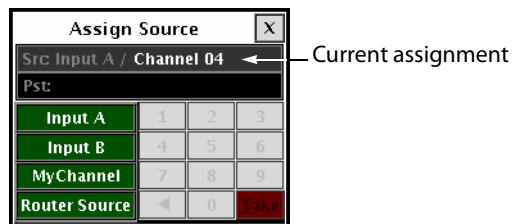
Note: Logical source assignments can also be changed by configuring actions in XEdit. See [Creating Actions](#) on page 261 for more information.

Assigning a Logical Source to a Monitor by Using the Kaleido-RCP2

To assign a logical source to a monitor, by using the Kaleido-RCP2's CHANNEL button

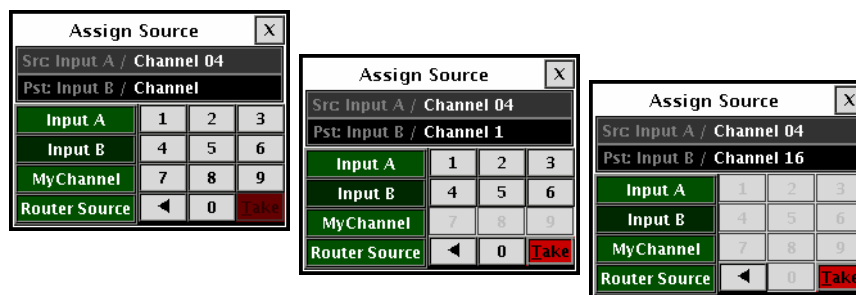
- 1 Move the pointer over the monitor that is to be assigned a logical source, and then press CHANNEL on the Kaleido-RCP2.

The **Assign Source** window appears.



The label of each category/index button in **Assign Source** is based on recurring strings found in the logical source names available for your system. The **Src** box shows the current assignment.

- 2 Click through the categories until the **Pst** box shows the logical source you want to assign to the selected monitor. For example, if you want to assign the logical source named "/Input B/Channel 16" to the monitor, click **Input B**, **1**, and then **6**.



- 3 Click **Take**.
The selected logical source is now assigned to the monitor.
- 4 Click the x button to close the **Assign Source** window.

Assigning a Logical Source to a Monitor by Using the RCP-200

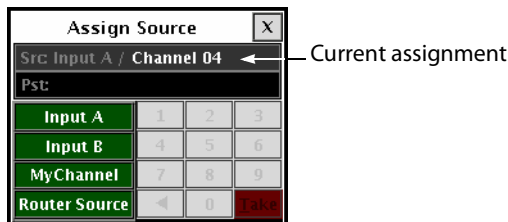
Although logical source assignments can be accomplished through the CHANNEL monitor wall function (see [page 333](#)), you may find the RCP-200's category/index router view more convenient. To use the RCP-200's category/index panel, your multiviewer system must have been configured to be controlled as a router. In a layout, the RCP-200 can only control monitors that have been assigned a monitor wall destination.

To assign a logical source to a monitor, by using the RCP-200's Category/Index panel

- 1 Select the appropriate head from the room view, by rotating the HEAD knob (or by touching the DISPLAY SELECT category, and then touching a room display), if needed.
- 2 Touch the monitor whose source assignment you want to change.
The monitor's border turns yellow, indicating that this monitor is a monitor wall destination, and the RCP-200's category/index panel appears on the left-hand screen.
The label of each category/index button is based on recurring strings found in the logical source names available for your system. The **Src** and **Dst** areas show the current source assignment and the monitor wall destination number for the selected monitor.
- 3 Touch through the categories until the **Pst** area shows the logical source you want to assign to the selected monitor. For example, if you want to assign the logical source named "/Input B/Channel 16" to the monitor, touch **Input B**, **1**, and then **6**.
- 4 Press **Take**.
The selected logical source is now assigned to the monitor.

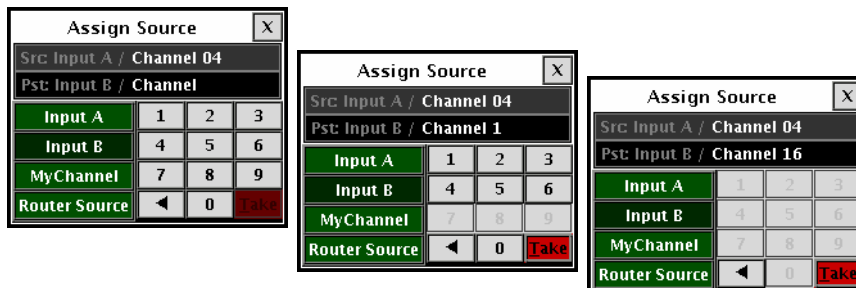
To assign a logical source to a monitor, by using the RCP-200's CHANNEL knob

- 1 Touch the WALL MOUSE category if it is not already selected, and then move the pointer over the composite or video monitor whose source assignment you want to change.
- 2 If you have yet to assign the CHANNEL wall function to one of the programmable knobs, rotate the knob you want to program until CHANNEL is selected, and then press the knob.
CHANNEL appears above the programmed knob.
- 3 Press the CHANNEL knob.
The **Assign Source** window appears on the monitor wall.



The label of each category/index button in **Assign Source** is based on recurring strings found in the logical source names available for your system. The **Src** box shows the current assignment.

- 4 Click through the categories until the **Pst** box shows the logical source you want to assign to the selected monitor. For example, if you want to assign the logical source named "/Input B/Channel 16" to the monitor, click **Input B**, **1**, and then **6**.



5 Click **Take**.

The selected logical source is now assigned to the monitor.

6 Click the x button to close the **Assign Source** window.

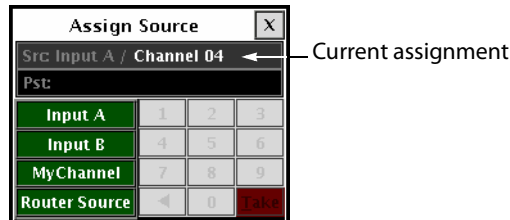
Assigning a Logical Source to a Monitor by Using the Mouse

To assign a logical source to a monitor, by using the mouse

- 1 Right-click the monitor that is to be assigned a logical source.
- 2 On the menu, point to **Assign source to [component]** (where [component] will be **monitor, video, UMD, tally, audio meter, status alarm, time code, metadata display, subtitling, or clock**, depending on the monitor you clicked).

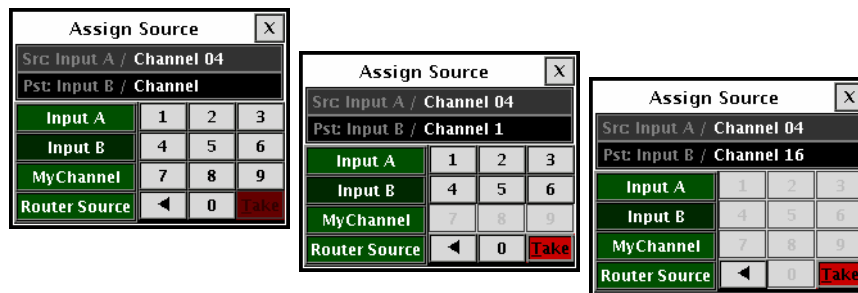


The **Assign Source** window appears.



The label of each category/index button in **Assign Source** is based on recurring strings found in the logical source names available for your system. The **Src** box shows the current assignment.

- 3 Click through the categories until the **Pst** box shows the logical source you want to assign to the selected monitor. For example, if you want to assign the logical source named “/Input B/Channel 16” to the monitor, click **Input B, 1**, and then **6**.



4 Click **Take**.

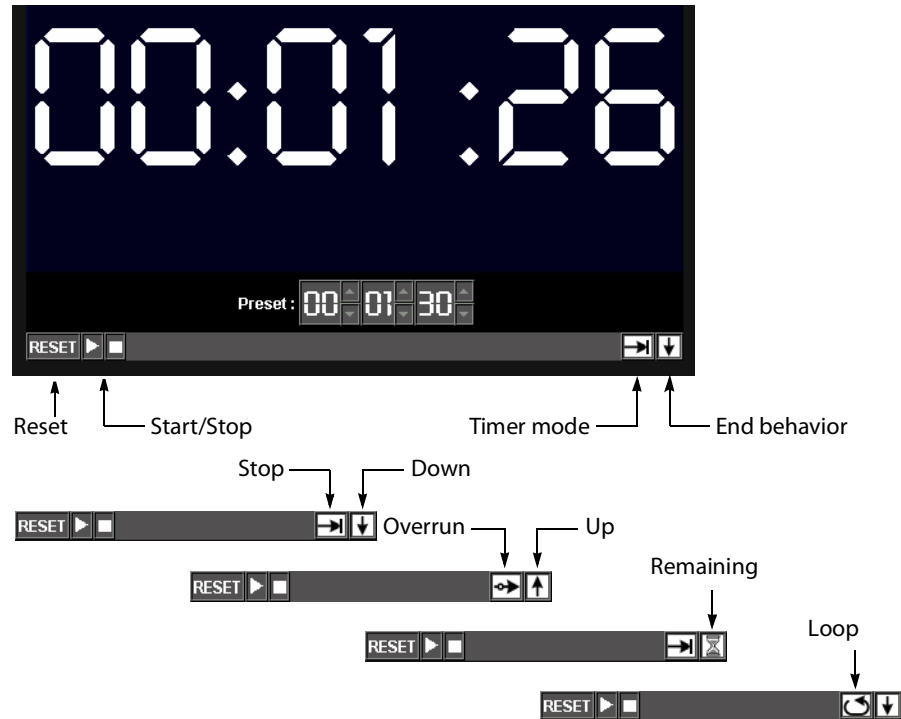
The selected logical source is now assigned to the monitor.

5 Click the x button to close the **Assign Source** window.

Using Timers

Timers can be assigned to timer monitors in a layout. Any user can control such timers by using the timer monitor's buttons and menu. An RCP user can be assigned a specific timer. This allows using the numeric keypad on an external keyboard connected to the Kaleido-RCP2 to control the timer.

Controlling a Timer by Using the Timer Monitor's Buttons and the Menu

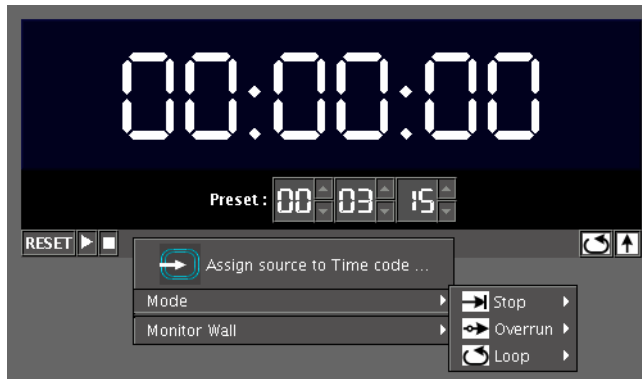


Notes

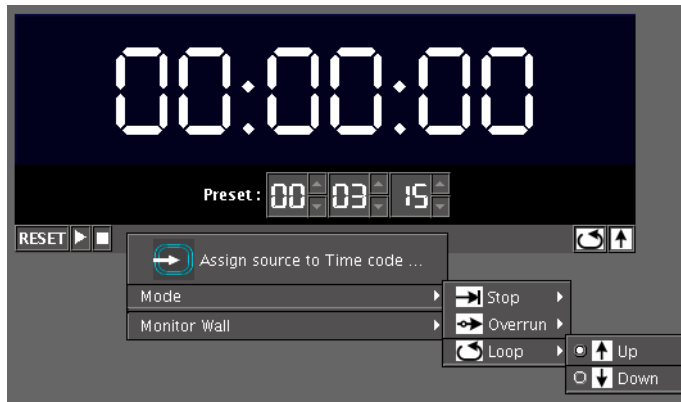
- Timer monitors display time in HH:MM:SS format. Even if the monitor is synchronized with an LTC source, frame count is not displayed.
 - Using a timer monitor's **Reset**, **Timer mode** or **End behavior** buttons will stop the timer, if it was running.
-

To configure an interactive timer monitor on the monitor wall

- 1 Right-click the timer you want to configure.



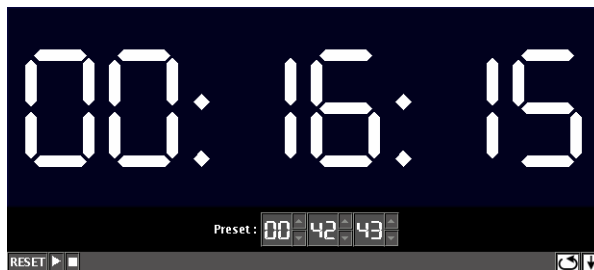
- 2 On the menu, point to **Mode**, navigate to the appropriate timer mode, and then click an end behavior.



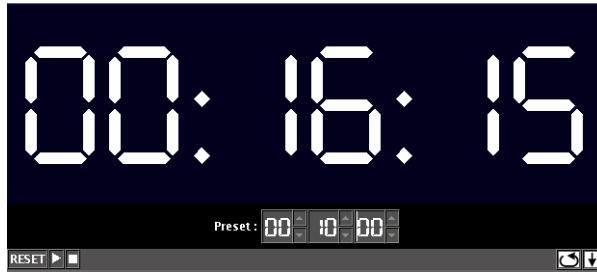
Alternatively, you can set the mode and behavior directly, by clicking the timer monitor's **Timer mode**, and **End behavior** buttons:

- Click the **Timer mode** button to select one of three modes: **Overrun**, **Stop** or **Loop**.
- Click the **End behavior** button to select one of three modes: **Down**, **Up** or **Remaining**.

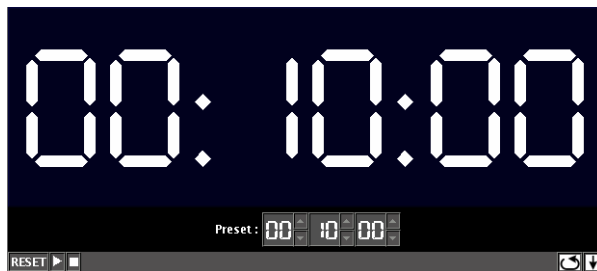
The timer monitor is updated accordingly.



- 3 Use the **Preset** controls to set a new preset time.



- 4 Click the **Reset** button to reset the timer to its initial value (based on timer mode and preset time).



- 5 Click the **Start** button to start the timer.



Controlling a Timer by Using an External Numeric Keypad

If a timer is assigned to the current RCP user, or else if a timer is assigned by default for the room, then the external keyboard's numeric keypad controls this specific timer.

Note: The reserved keys are always enabled, whether Num Lock is set or not.

To configure your assigned timer, by using a numeric keypad

- Press the slash key ("/") to set the timer mode and end behavior. Keep pressing the key to cycle through all the available options, until the buttons show the appropriate settings.
- Press the plus key ("+") to reset the timer. (This will also stop the timer if it was running.)
- Press the Enter key to start/pause the timer.
- Use the number keys to set or modify the preset time.

Triggering Actions

Notes

- An Action's trigger is determined when the Action is created in XEdit. See [Creating Actions](#) on page 261 for more information.
 - To create background actions that can be triggered from the RCP-200's programmable knobs, see [Creating an Action that can be Triggered through a Gateway Command](#), on page 270.
-

Triggering an Action from the RCP-200

To trigger a background action from the RCP-200's programmable knobs

- 1 If you have yet to assign the action you want to trigger to one of the programmable knobs, rotate the knob you want to program until the action is selected, and then press the knob.
The action's name appears above the programmed knob.
- 2 Press the knob to trigger the action.

Triggering an Action from the Monitor Wall

To trigger a monitor wall action

- 1 Move the pointer over a monitor associated with the action you want to trigger.
The pointer changes to a hand icon.
- 2 If the action is not triggered automatically, click or double-click the monitor.

Acknowledging Alarms

Acknowledging Alarms on the Monitor Wall

To acknowledge an alarm, by using the Kaleido-RCP2

- Move the pointer over the monitor whose alarm state you want to acknowledge, and then press the UNLATCH STATUS button on the Kaleido-RCP2.

To acknowledge an alarm, by using the RCP-200

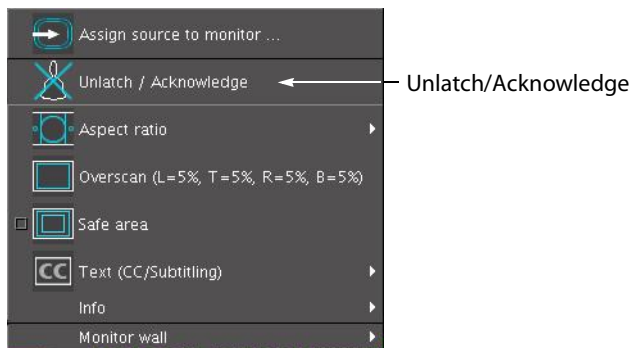
- 1 Touch the WALL MOUSE category if it is not already selected, and then move the pointer over the monitor whose alarm state you want to acknowledge on the monitor wall.
- 2 If you have yet to assign the UNLATCH STAT wall function to one of the programmable knobs, rotate the knob you want to program until UNLATCH STAT is selected, and then press the knob.

UNLATCH STAT appears above the programmed knob.

- 3 Press the UNLATCH STAT knob.

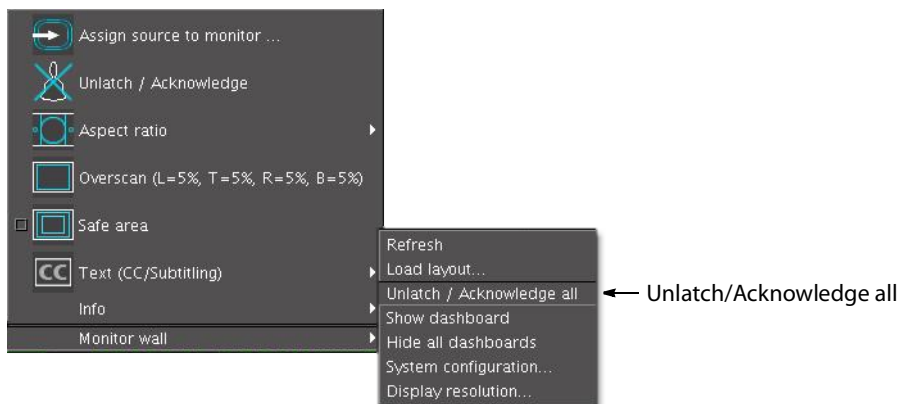
To acknowledge an alarm, by using the mouse

- Right-click the monitor whose alarm state you want to acknowledge, and then click **Unlatch/Acknowledge** on the menu.



To acknowledge all current alarms in a room

- Right-click the monitor wall, point to **Monitor wall** (if you clicked a monitor), and then click **Unlatch/Acknowledge all** on the menu.



This will acknowledge every alarm monitored *in the current room*.

Acknowledging Alarms by Using an Action

To acknowledge alarms, by using an action

- Create a *Unlatch/Acknowledge all* action. This action can be assigned to a monitor on the monitor wall, it can be triggered by loading or unloading a layout, or it can be a background action. See [Creating Actions](#) on page 261 for details.

Monitoring Audio

Notes

- Before connecting a display to a **Kaleido-IP** multiviewer, make sure the multiviewer is powered off. In the event that you have connected such a device while the multiviewer is running, you must restart the multiviewer for audio monitoring to be functional. See **Restarting and Shutting Down a Kaleido-IP Multiviewer** in the multiviewer's *Installation & Service Manual* for how to do this.
-

Triggering Audio Monitoring by Using the mouse, the RCP-200, or the Kaleido-RCP2

Notes

- All audio and video monitors are configured by default, with a *Monitor audio* action triggered by a single click.
 - If you have yet to assign the AUDIO MONITOR wall function to one of the RCP-200's programmable knobs, rotate the knob you want to program until AUDIO MONITOR is selected, and then press the knob. AUDIO MONITOR appears above the programmed knob.
-

To trigger audio monitoring, by using the mouse, the RCP-200, or the Kaleido-RCP2

- Move the pointer over an audio monitor, and then
 - click the monitor
 - press AUDIO MONITORING on the Kaleido-RCP2
 - press the AUDIO MONITOR programmable knob on the RCP-200

This will route *the monitor's audio source* to the monitoring output assigned to the current RCP user.

- Move the pointer over a video monitor, and then
 - click the monitor
 - press AUDIO MONITORING on the Kaleido-RCP2
 - press the AUDIO MONITOR programmable knob on the RCP-200

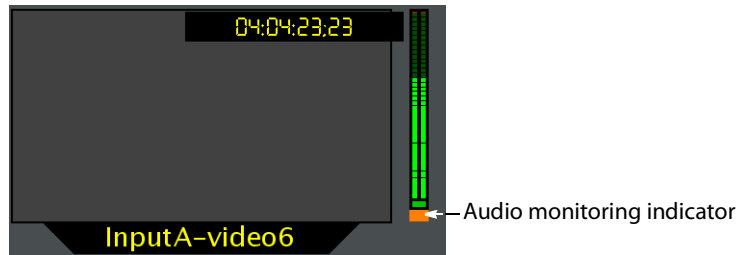
This will route *the specific audio level associated with the video monitor*, based on the assigned logical source.

- Move the pointer over any other monitor, and then
 - click the monitor
 - press AUDIO MONITORING on the Kaleido-RCP2
 - press the AUDIO MONITOR programmable knob on the RCP-200

This will route *the first audio level of the associated logical source* to the monitoring output.

Audio monitors that have an audio monitoring indicator (see [Configuring Audio Monitors](#) on page 207) and that are currently assigned the same audio level, will turn

the color associated with the current display (see [Calibrating the Audio Monitoring Color](#) on page 113), showing that is being sent to an audio monitoring output.



If multiple users are listening to the same audio source at the same time, then the indicator will show one color only: (1) the color associated with a display in the same room (2) the color associated with the display at the monitoring output that was enabled last in the room.

Controlling the Volume at the Audio Monitoring Output

Note: The Kaleido-RCP2's **volume control**, **Mute**, and **-20dB** buttons, their equivalent on the RCP-200, and the corresponding Gateway commands apply to *analog* audio monitoring outputs are not supported by the Kaleido-IP.

Controlling the volume from the Kaleido-RCP2

To control the volume at the audio monitoring output, from the Kaleido-RCP2

- Adjust the audio volume for your assigned monitoring output by using the up and down volume buttons on the Kaleido-RCP2.
- Mute the audio by pressing the Mute button on the Kaleido-RCP2.
- Attenuate the volume by 20 dB by pressing the -20 dB button on the Kaleido-RCP2.

Controlling the volume from the RCP-200

On the RCP-200, pressing the VOL knob repeatedly alternates between the normal, mute, and -20 dB audio output mode.

To control the volume at the audio monitoring output, from the RCP-200

- Adjust the audio volume for your assigned monitoring output by rotating the VOL knob.
- Mute the audio by pressing the VOL knob until MUTE appears above the knob.
- Attenuate the volume by 20 dB by pressing the VOL knob until -20 dB appears above the knob.

14

Maintenance & Troubleshooting

Introduction

This chapter shows you the various maintenance operations and corrective actions that maybe required to be performed when configuring the multiviewer system and over the multiviewer's lifetime.

Troubleshooting Common Issues

Troubleshooting consists of identifying common configuration errors and to provide solutions to these issues. Use the following troubleshooting table to diagnose common issues and take corrective actions to restore operation.

Symptom	Probable cause	Test	Corrective action
Mosaic layout is scrambled and has ghost images.	Head is assigned to two rooms.	Using XEdit, verify that each head is assigned only once.	In XEdit's room configuration pane, remove the extra displays. See Adding Displays , on page 148.

Acronyms Used in this Document



The acronyms used in this document are defined in the following table.

Acronym	Definition
ABT	Audio Bridge Terminal
ACOS	Mnemonic, tally and control of crosspoints
AES	Audio Engineering Society, specifically the AES3 standard
AFD	Active Format Description
AFD VI	AFD Video Index
ALM	Audio Level Meter
APS	Analogue Protection System
ARIB	Association of Radio Industry and Businesses
ASB	Analog Source Bit
ASCII	American Standard Code for Information Interchange
ASM	Any-Source Multicast
ATC	Ancillary Time Code
ATSC	Advanced Television Systems Committee
AUX	Axillary
AV	Audio-Video
BNC	Bayonet Neill–Concelman
CAD	Content Advisory Descriptor
CBR	Constant Bit Rate
CC	Closed Caption
CEA	Consumer Electronics Association
CGMS-A	Copy Generation Management System - Analog
CPU	Central Processing Unit
CSV	Comma Separated Values
CVBS	Composite Video and Blanking Signal
dBFS	Decibels Full Scale
dBu	A logarithmic voltage ratio with a reference voltage of 0.7746 volt = 0 dBu
DCII	Digicipher 2
DHCP	Dynamic Host Configuration Protocol
DIN	Deutsches Institut für Normung / German Institute for Standardization

Acronym	Definition
DNS	Domain Name System
DPI	Digital Program Insertion
DTMF	Dual-Tone Multi-Frequency signaling
DTVCC	Digital Television Closed Captioning
DVB	Digital Video Broadcasting
DVI	Digital Visual Interface
EBU	European Broadcasting Union
EDID	Extended Display Identification Data
eDPM	expansion Digital Picture Manipulator
ETH	Ethernet
ETS	European Telecommunication Standard
ETSI	European Telecommunications Standards Institute
GB	GigaBytes
GENLOCK	Generator Locking
GPI	General Purpose Interface
GPIO	General-Purpose Input/Output
GPU	Graphics Processing Unit
GSM	General Status Manager
GUI	Graphical user interface
HD	High Definition
HD-SDI	High Definition-Serial Digital Interface
HDMI	High-Definition Multimedia Interface
HDR	High Dynamic Range
HLG	Hybrid Log-Gamma (BT.2100)
HLS	HTTP Live Streaming
HTTP	Hypertext Transfer Protocol
HTTPS	HTTP Secure
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
IP	Internet Protocol
IRE	Institute of Radio Engineers
ISO	International Standards Organization
ITU	International Telecommunication Union
KMV	Kaleido Multiviewer
LAN	Local Area Network

Acronym	Definition
LAP	Look Ahead Preview
LCD	Liquid Crystal Display
LED	Light Emitting Diode
LEQ	A-weighted LEQ
LKFS	Loudness, K-weighted, relative to Full Scale
LTC	Linear Time Code
LUFS	Loudness Units relative to Full Scale
LUT	Look Up Table (also known as <i>Look Profiles</i>)
MIB	Management Information Base
MIDI	Musical Instrument Digital Interface
MPEG	Moving Picture Experts Group
MPEG ID	MPEG stream Identifier
msec	millisecond
mV	milliVolt
NIC	Network Interface Card
NMOS	Networked Media Open Specifications
NMS	Network Management System
NTP	Network Time Protocol
NTSC	National Television System Committee
NTSC-J	National Television System Committee-Japan
OLED	Organic LED
PAL	Phase Alternating Line
PAT	Program Association Table
PCM	Pulse-code modulation
PCR	Primary Clock Reference
PGM	Program
PID	Packet Identifier
PMT	Program Map Table
PQ	Perceptual Quantizer (SMPTE ST 2084)
PST	Preset
PSU	Power Supply Unit
PTS	Presentation Time Stamp
PVW	Preview
RAM	Random Access Memory
RCP	Remote Control Panel

Acronym	Definition
RDD	Registered Disclosure Document
Rec.2020 BT.2020	The standard for Ultra-high-definition television (ITU-R BT.2020)
Rec.709 BT.709 709 Standard	The standard for high-definition television (ITU-R BT.709)
REST	Representational State Transfer
RGB	Red Blue Green, or a VGA connection
RMI	Remote Method Invocation
RTMP	Real-Time Messaging Protocol
RTP	Real-time Transport Protocol
RTSP	Real Time Streaming Protocol
RU	Rack Unit
SCTE	Society of Cable Telecommunications Engineers
SD	Standard Definition
SDI	Serial Digital Interface
SDR	Standard Dynamic Range, Rec.709 (BT.709), as opposed to HDR
SECAM	Séquentiel couleur à mémoire / Sequential Color with Memory
SFM	Source-Filtered Multicast
SFP	Small Form-factor Pluggable
S-Gamut3	One of Sony's gamma curves for WCG
S-Log3	One of Sony's transfer function curves for HDR
SMPTE	Society of Motion Picture & Television Engineers
SMTP	Simple Mail Transfer Protocol
SNMP	Simple Network Management Protocol
SPT	Studio Production Timer
SSH	Secure Shell
SSM	Source-Specific Multicast
TCP	Transmission Control Protocol
TS	Transport Stream
TSID	MPEG Transport Stream identifier
TTF	True Type Font
UDP	User Datagram Protocol
UHD	Ultra-High Definition
UMD	Under Monitor Display
URL	Uniform Resource Locator

Acronym	Definition
URS	Universal Reference Signal
USB	Universal Serial Bus
UTF	Unicode Transformation Format
VANC	Vertical Ancillary Data
VESA	Video Electronics Standards Association
VGA	Video Graphics Array connector, a 640×480 screen resolution, or the DE-15 connector.
VITC	Vertical Interval of an analog signal
VLAN	Virtual Local Area Network
VPE	Video Processing Engine
VU	Volume Units
WCG	Wide Color Gamut
WSS	Wide screen signaling
WST	World System Teletext
XDS	Extended Data Services
XLS XLSX	Microsoft Office spreadsheet file format
ZIP	Lossless file compression format

index

Index

0–9

0 VU	104
3D monitoring	77
4K	145

A

AC-3 metadata	123
Access control	
XEdit	29–30
Actions	
assigned to monitors	264
background actions	267
configuration	261
trigger	262, 339
trigger audio monitoring	341–342
AFD	
about	167
configuration	197
Alarm monitors	
about	166
configuration	231
Alarms	
about	115
browser	116
debouncing, about	90
debouncing, configuration	101
global	118
GSM	115
latch, about	311
levels, in logical source	80
logging	116
lookup	118
monitor	166
providers	81, 115, 118
reporting behavior	231
scheduling	118
SNMP	120, 141
status	116
status indicator	120
sub-alarms	120

threshold	96
virtual	115, 119
ALM. <i>See</i> Audio monitors.	
Alpermann+Velte	289
Any-source multicast transport stream	46
ASM transport streams	46
Aspect ratio	
about	90, 167
AFD	197
automatic	168, 197
calibration	105
changing	324
of a room display	158
subtitling monitor	239
WSS	197
Assigning	
alarms to logical sources	80
audio outputs to RCP users	282
colors to logical sources	82
full screen layouts to RCP users	281
logical sources to monitors	332
room layouts to RCP users	281
timers to RCP users	284
timers to rooms	279
Audio	
level meter	166
monitor	166
output, assigning to RCP users	282
reference level	104
Audio level meters, scale	213
Audio monitoring	342
triggered by actions	341
Audio monitors	
about	166
scale	213
Audio profiles	
about	89
calibrations	93
Audio scales	
backup	33
configuration	212–213
Auto-layout	186
Automatic aspect ratio	197

B

Background actions	267
Background images	
clock logo	247
custom safe area	193
on layouts	187
Backup	
audio scales	33
creating	33
resolutions	33
retrieving	34

C

CAD. *See* Metadata monitors.

Calibrating	
0 VU	104
automatic aspect ratio	105
closed captioning	107
loudness (audio programs)	103
metadata holding time	107
subtitling	107
Calibration	
about	22
profiles	89
CC	122
Channels. <i>See</i> Sources.	
Clear duration	90
Clocks	
about	167
configuration	244
logo	247
Closed captions	
calibration	107
configuration	201
holding time	107
standards	122
switching on/off	327
text mode	326
Cluster	
rooms	150
Color levels, in logical source	82
Composite monitors	
about	166
configuration	249
creating	249
resizing	253

unlocking	254
Configuring	
alarm thresholds	96
aspect ratio	197
audio scales	212–213
static UMD text	224
system	38
TSL IP UMD Controller	300
UMD text	224
Content advisory descriptor. <i>See</i> Metadata monitors.	
Countdown timers	218, 221
Cropping	
about	168
configuration	196
custom	169

D

Dashboard	
disabling	157
showing on wall	318
Database	
about	22
backup	33
location	35
recommended workflow	41
retrieving backup	34
Debouncing	
about	90
configuration	101
Diagonal size	158
Dialnorm	123
Digital content advisory descriptor	240, 311
Display layouts	165
Display libraries	
about	145
closing	163
managing	161
opening	163
Displays	
adding to room	148
aspect ratio	158
dashboard	157
diagonal size	158
full screen zone	151
height	159
position	160
properties	153

removing from room	151
resolution	153, 155, 157, 309
rotation	159
width	159
Dolby E metadata	123
DTVCC	107
DVB subtitling	167, 235, 311, 328
DVTCC	122

E

EDID	309
Extended Data Services. <i>See</i> Metadata monitors.	

F

Factory defaults	39
Floating actions	267
Full screen layouts	
assigning to RCP user	281
creating	175
Full screen zones	
about	145
configuration	151
operation	323

G

Gateway	263
General status managers. <i>See</i> GSM.	
Global alarms	118
GPI-1501	294
Graphical layout elements	165
GSM	
about	115
alarm browser	116
alarm logging	116
sources, from external provider	81

H

HD closed captions	122
Height	159
HLS streams	51

I

iControl application server	
alarm consumer	116
alarm provider	118
Incremental copy	
about	71
using	83
Input Device	64
Input method	331
Inputs	64

K

Kaleido Remote Control Protocol (Gateway) ..	263
Kaleido-IP	
about	21
network source streams, removing	57
network sources streams, modifying	55
NMOS devices	64
streams, ASM	46
streams, HLS	51
streams, importing from spreadsheet	58
streams, preparing spreadsheet	58
streams, RTMP	54
streams, RTSP	53
streams, SSM/SFM	48
streams, unicast	50
virtual input streams, modifying	67
virtual input streams, removing	70
Kaleido-RCP2	
about	273
adding users	274
audio monitoring	342
layout presets	321
login	314
removing users	274, 276
user preferences	279
Kaleido-X	
configuration	38
Keyboard input method	331
K-Frame	301

L

Languages, input method	331
Layout	
display layout	165

-
- Layouts
- about 165
 - assigning to RCP users 281
 - automatically populated grid 186
 - background image 187
 - clocks 244
 - closing 174
 - countdown timers 221
 - deleting 176
 - digital content advisory descriptor 240
 - duplicating 179
 - exporting 182
 - full screen 175
 - importing 182
 - loading 320
 - management 172
 - Metadata monitor 167
 - monitors, adding 183
 - opening 172
 - pan view, in XEdit 189
 - presets 321
 - rearranging 180
 - refreshing 321
 - room layout 174
 - source assignment 185
 - subtitling monitor 235
 - timers 221
 - V-chip monitor 242
 - XDS metadata 240, 311
 - zoom, in XEdit 189
- Levels
- GlobalAlarm* 118
 - in logical source 77
- Libraries
- displays 161
 - layout elements 167
- Loading layouts 320
- Logical sources. *See Sources.*
- Login, monitor wall 314
- Lookup services 118
- Loudness
- calibration (audio program) 103
- Loudness monitors
- about 166
 - configuration 210
- LTC over IP 216
- M**
- Markers, safe area 325
- Metadata
- AC-3 123
 - closed captions 122
 - display 167, 240, 311
 - Dolby E 123
 - holding time 107
 - SCTE 35 124
 - subtitles 122
 - teletext 122
- Metadata monitors
- about 167, 311
 - configuration 240
- Monitor libraries
- about 167
 - configuration 259
- Monitor wall
- about 309
 - dashboard 318
 - destinations 185, 332
 - disabling dashboard 157
 - full screen zones 323
 - login 314
 - menu font size 278
 - mouse pointer, locating 317
 - mouse pointer. large 278
 - timers 336
- Monitors
- about 165
 - alarm 120, 166, 231
 - audio 166
 - clock 167, 244
 - composite 166, 249, 253
 - duplicating 184
 - loudness 166, 210
 - Metadata 167
 - monitor wall destination 185
 - replication 186
 - resizing 253
 - source assignment 185, 332
 - subtitling 167, 235, 311
 - time code 166, 216
 - timer 166, 221
 - UMD 166
 - V-chip 167, 242, 311
 - video 166, 191
 - XDS metadata 240, 311

Mouse	
large pointer	278
locating on monitor wall	317
RCP-200	317
Multicast transport stream	
any source	46
source filtered	48
specific source	48
Multiviewer	
Kaleido-IP	21

N

network source	43
NMOS devices	64
Nominal level	104

O

OP-47	122
Overscan	
about	168
configuration	196

P

Panning	189
Passthrough	130
Peripheral devices	22
Plura SPT	289
Preferences, RCP user	279
Presets	321
Production switchers	287
K-Frame	301
Profiles	
about	89
calibrations	93
creating	93
deleting	93
Program config	123

R

RCP2. <i>See</i> Kaleido-RCP2.	
RCP-200	
audio monitoring	342

category/index panel	332
login	314
mouse	317
RDD 8	122
Reference levels	104
Refreshing layouts	321
Region editor	255–256
Resolutions	
automatic detection	309
backup	33
changing	157
custom, creating	153, 155
Restoring	
database backup	34
factory defaults	39
Rooms	
4K UHD	145
about	145
assigning layouts to RCP users	281
closing	148
cluster	150
creating	146
dashboard	157
deleting	148
display aspect ratio	158
display diagonal size	158
display height	159
display position	160
display properties	153
display resolution	153, 155, 157
display rotation	159
display width	159
displays	148
full screen layouts	175
full screen zone	151
layouts	174
mouse pointer	278
opening	147
pan view, in XEdit	189
zoom view, in XEdit	189
Rotation	159
RTMP streams	54
RTSP streams	53

S

Safe area	
free-form	193
markers	193

markers, toggling 325
 SCTE 27 subtitling 167, 235, 311, 329
 SCTE 35
 about 124
 profiles 90
 Set duration 90
 SFM transport streams 48
 SMPTE ST 2031 122
 SNMP traps 120, 141
 Source-filtered multicast transport streams ... 48
 Sources
 about 22, 71
 alarm levels 80
 assigning to monitors 185, 332
 color levels 82
 configuration 72
 EXT 81
 external providers 81
 full screen 323
 levels 77
 template 79
 Sources table
 filtering 85
 resizing columns 86
 sorting 85
 Spanning
 layout elements 170
 SSM transport streams 48
 Status
 alarm 116
 Subtitling
 calibration 107
 configuration 201
 holding time 107
 standards 122
 text mode 326
 Subtitling monitors
 about 167, 311
 aspect ratio 239
 configuration 235
 Switchers. *See* Production switchers.
 System
 about 21
 backup 33
 configuration 38
 creation 35
 retrieving backup 34

T

Tally interface devices 287
 Teletext
 about 122
 Teletext profiles
 about 89
 calibrations 93
 Template 79
 Text mode 201, 326
 Third-party devices
 TSL UMD controller (IP) 300
 Time code monitors
 about 166
 configuration 216
 Timer systems 289
 Timers
 about 166
 assigning to RCP users 284
 assigning to rooms 279
 configuration 218
 monitor 221
 operation 336
 Transport stream profile
 calibrations 93
 Transport streams
 ASM 46
 HLS 51
 RTMP 54
 RTSP 53
 SFM 48
 SSM 48
 unicast 50
 Traps, SNMP 120, 141
 TSL
 IP UMD Controller 300

U

UHD 145
 UMD
 about 166
 editing text 330
 static text 224
 text font 224
 Under monitor displays. *See* UMD.
 Underscan
 about 168

configuration 196

V

V-chip monitors
 about 167, 311
 configuration 242

Video monitors
 about 166
 aspect ratio 192
 configuration 191
 cropping 196
 full screen 323
 overscan 196
 resizing 192
 safe area 193, 325
 underscan 196
 zooming 196

Video profiles
 about 89
 calibrations 93

Video stream impact on network bandwidth . 17

Virtual input 44

VLAN 46, 48

W

Widgets. *See* Monitors.

Width, display 159

Workflow, database management 41

WSS
 about 167
 configuration 197

WST 122

X

XDS. *See* Metadata monitors.

XEdit
 about 22
 access control 30
 opening 24
 password 29

Z

Zero VU 104
 digital 90

Zooming
 configuration 196
 layout, in XEdit 189



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To obtain a local phone number for the support center nearest you, consult the Contact Us section of Grass Valley's website (www.grassvalley.com).

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