PRIME Switcher User Guide

Version 5.0

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SINCE DAY ONE.

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Chapter 1: Welcome

About the PRIME Live Platform

PRIME Switcher is an important module of the PRIME Live Platform, a common foundation for a complete ecosystem of production modules that you can use to assemble your ideal workflow. With software-defined architecture and floating I/O resources, you can layer your production modules of choice over any PRIME engine on the fly - each providing intuitive control interfaces, consistent design tools, and integrated, file-based efficiency.

- **Flexible, customizable, and scalable:** Chyron's pioneering PRIME Live Platform bridges your legacy workflows with the future of live content creation and distribution. PRIME's dynamically flexible, customizable, and scalable live production engine provides the functionality and resources to meet your production requirements.

- **Unified Platform:** Since all PRIME production tools exist on the common foundation of the PRIME Live Platform, they seamlessly integrate into a customizable unified production interface.
- **Open Ecosystem Flexibility:** Interoperable with devices from most industry vendors, PRIME can adapt to your requirements and existing infrastructure for automated or

manual workflows. Supported protocols include Chyron Intelligent Interface®, AMP, EAS, PBus, VDCP, Ross Talk, XML, and Oxtel.

- **Wide Range of Standards and Formats:** Combine the SDI, IP, NDI, H.264-stream and H.265-stream signals you need to capture and deliver content across all channels; and take it to air in the SD, HD, UHD-4K, SDR/HDR, IP, GPU, and H.264/H.265 formats of your choice. *See Function and Specification Overview for details*.

- **Environment-Agnostic:** With PRIME's cloud-enabled software architecture, you can deploy and distribute resources as you see fit. Introduce PRIME to your hardware-based control rooms via COTS hardware, custom IT equipment, or virtualized machine, or realize the value of live production in the cloud - on your public (AWS) or private cloud infrastructure. The PRIME Live Platform is adaptable to the content creation, storage, and distribution strategy that best suits your organization.

Please visit chyron.com to learn more about the PRIME Live Platform, and our wide range of advanced solutions and services.

About PRIME Switcher

If you are already familiar with the fundamentals of switcher operations, PRIME Switcher is easy and intuitive. However, even if you have never operated a switcher, this guide can help you become proficient.

PRIME Switcher is a software-based 2ME production switcher built on Chyron's industry-leading PRIME Live Platform, providing an integrated solution that leverages PRIME's unique capabilities. PRIME Switcher delivers a complete live production suite, with control of our legendary real-time graphics, versatile clip player, chroma key, DVE, multichannel audio mixer, and auxiliary audio buses - all within a single engine.

TIP: Does some of this lingo sound unfamiliar? Chapter 2: PRIME Switcher Basics and the Glossary can bring you up to speed!

PRIME Switcher provides a software-based user interface similar to control panels that technical directors typically use. Rather than press buttons on a hard panel, simply click and/or use keyboard shortcuts to switch sources, add graphics, trigger dynamic transitions, and build the complex ME output you need for a compelling show. In addition to the switcher panel, the interface features an audio mixer, CG (graphics)/clip controls and the PRIME playlist from this single interface. Active CG and clip channels provide a multiviewer window with simple playback and file cue controls – and your project file folder with all your clips, images, and graphics scenes is directly browsable from the interface.

Flexible Usability

PRIME Switcher offers greater flexibility than traditional hardware-based switchers, is especially suited for remote workflows, and provides the ability to:

- Spin up additional control rooms, remote or disaster recovery control rooms, or low-cost OTT control rooms. Input and output your sources in a combination of SDI, NDI, and H264 streams.
- Run switching operations in the cloud.
- Perform routing operations in the software configuration.
- Apply transitions via effects created within PRIME, leveraging PRIME's advanced graphics creation capabilities.

- Control PRIME Switcher operation via automation.
- Span the PRIME Switcher user interface across multiple monitors for easier visibility specific components.
- Run PRIME CG, PRIME Clips and PRIME Branding on the same chassis as PRIME Switcher.
- You can use PRIME Master Control Panels for specialized workflows, for example, loading and triggering graphics and clips. Contact Chyron Creative Services for additional information.

Function and Specification Overview

PRIME Switcher Inputs:

- **SDI/UHD-4K/HDR**
- **NDI**
- **Network Stream: H.264/H.265 over (RTMP) SMPTE 2110/SMPTE 2022-6**
- **Embedded audio**

PRIME Switcher Outputs:

- **SDI/UHD-4K/HDR**
- **NDI**
- **Network Stream: H.264/H.265 over (RTMP) SMPTE 2110/SMPTE 2022-6**
- **GPU**
- **Desktop Window**
- **Application Window**
- **PRIME Sub Channels, including:**
    - **Preview Sub Channel**
    - **Two Sub Channels Clips**
    - **Two Sub Channels Graphics**
    - **One Sub Channel Mix Effects**
- **Embedded/System Audio**

The number and types of inputs and outputs are dependent upon the video resolution.

About Playout and Switcher Control

The **Mix Effects Banks** control the switcher output mix, including:

- Background video from a camera, clip server, or other source.
- One or more keys, layered over the background, to display graphics or clips.

See Work with Main and Mix Effect (ME) Banks and Transitions.

PRIME Switcher **Banks**, **Video** and **Audio Buses**, **Sources**, **Keys**, and **Transitions** can be controlled remotely as follows:

- PRIME Audio Director. *See the PRIME Switcher Audio Director User Guide and the Websocket Automation Interface Reference Guide.*
- **WebSocket** using a JSON protocol. *See the Websocket Automation Interface Reference Guide.*
- PRIME Master Control Panels, which can control **Banks**, **Keys**, **Sources**, and **Transitions**. *See the PRIME User Guide for additional information.*

PRIME Switcher can employ multiple methods to control graphics and clips from internal or external sources.

- The PRIME Switcher **Graphics Players** and **Clip Players**. *See Work with Graphics and Work with Clips.*
- A PRIME **Playlist**. *See PRIME Playlist Graphics and Clip Playback within PRIME Switcher.*
- PRIME Master Control Panels. *See the PRIME User Guide.*
- **Chyron Intelligent Interface®**, **XML**, **UDP**, **Generic**, **VDCP**, **PBus**, **Oxtel**, **EAS**, and **AMP** protocols. Automated playout is configured in the Switcher **Automation Panel**. *See the PRIME Automation Guide.*
- **WebSocket** using a JSON protocol. Automated playout is configured in the Switcher **Automation Panel**. *See the PRIME Automation Guide and the WebSocket Automation Interface Reference Guide.*

External Monitor Display

A major benefit of PRIME Switcher is that physical monitors are not required to view **Program**, **Preview**, **Mix Effects**, video inputs, clips, and graphics. The PRIME Switcher interface displays all video, clips, and graphics.

PRIME Switcher can display input sources and output mixes on physical monitors using the following methods:

- Windows Mosaic. *See the PRIME Display Matrix Configuration document.*
- Configure Matrox for SDI outputs and Mosaic for GPU outputs. Note that doing so reduces the available number of available video inputs. *See the PRIME Playout Configuration Guide.*

Device Control

PRIME Switcher interfaces with the following devices:

- **Input Devices:**
    - **PC Keyboard/Touchpad/Mouse:** Works out of the box.
    - **Chyron Advanced Keyboard:** Configure via **Config > Devices**. *See the Chyron Advanced Keyboard User Guide for details.*
    - **X-keys:** Configure via **Config > Devices**. *See the PRIME User Guide for information on **X-keys** configuration.*
    - **GPI In:** Configure via **Config > Devices**. *See the PRIME User Guide for information on **GPI** configuration.*
- **Output Devices:**
    - **GPI Out:** Access configuration via **Config > Devices**. *See Enable GPI Tallies, Configure Tally Pins for details on enabling and configuring **GPI Tallies**. See the PRIME User Guide for information on **GPI** configuration.*

Best Practices

Avoid Last-Minute Configuration Changes

PRIME Switcher provides the ability to quickly and precisely configure the inputs, outputs, and the interface layout. *We strongly advise, however, that you do not modify configuration directly before a production is about to go live, as you may introduce unexpected behavior.*

Do Not Perform Updates without Testing

Do not perform updates to Windows, other applications, drivers, firmware, etc., without testing PRIME Switcher operation prior to going on air. If you are unsure as to whether or not to perform an update, then contact Chyron Support.

Save Layouts and Configurations for Future Use

If PRIME Switcher is configured exactly as you wish, then save the layout and the switcher configuration files for future use. Saving also enables you to revert to a known working configuration if something goes wrong.

See Save a UI Layout and Save PRIME Switcher Configuration for details.

Ensure that Scenes, Images, and Clips are Correctly Formatted

Ensure that scenes and clips have the same resolution and frame rate as PRIME Switcher configuration; otherwise, they may not play correctly.

Ensure that images have the same resolution as PRIME Switcher; otherwise, they may not display correctly.

Ensure that All Necessary Assets Are Available

Ensure that all assets necessary for the show are available in their expected locations.

Ensure that There are No Keyboard Shortcuts Conflicts

If you have created keyboard shortcuts, then prior to going on air, test operation to ensure that there are no inadvertent keystroke conflicts! Also note that numeric keypad numbers may be interpreted differently from the numbers in the top row of your keyboard.

Rehearse!

Test PRIME Switcher before going live, to ensure that it performs as expected. If playing clips and graphics from PRIME Switcher, then ensure that all assets are available.

PRIME Documents

PRIME Document Location

PRIME documents, including this *User Guide*, are located in the *PRIME Documents* folder on the PRIME Platform user desktop.

About this Document

This document comprises the instructional chapters, plus the following supplementary sections:

- Troubleshooting
- Glossary
- PRIME Switcher File Formats

NOTE: Our products are in continuous development. Some screen images or illustrations in this document may differ from your actual user interface, however, you should generally find the instructions valid and useful.

Conventions

Working with the PRIME Switcher UI is similar to working with other computer applications. You can navigate and access many of the functions via the keyboard or mouse/touchpad.

Mouse/touchpad instructions assume that the left button selects an item, and the right button displays the context-sensitive menu. If your mouse/touchpad is set with the buttons reversed, then adjust the instructions to correspond to your configuration.

- **>**
  In a multi-step process, this means "and then click or select." For example, "Go to **View > Layout > Save Layout**" instructs you to click or select the **View** menu, then select **Layout**, and then select **Save Layout**.

- **Active/Grayed Out (Inactive/Unavailable)**
  Specifies the availability of an icon, menu item, etc.
  - When active, the element is displayed in full color.
  - When grayed out and therefore inactive/unavailable, the element appears gray or dark.

- **Click**
  Left-click using a mouse/touchpad to select an item.
- **Click and drag**
  Click a control or an item, and while holding down the mouse/touchpad button, drag the control or item to a new position or location.
- **Click and hold**
  Click a control or an item, and hold down the left mouse/touchpad button. The instructions may also specify that you perform another operation while you click and hold the mouse/touchpad button.
- **Cursor to**
  Use the cursor keys to navigate to an item.
- **Double-click**
  Left-click two times quickly in succession. Typically opens an application or a file.
- **Enable (Activate)/Disable (Deactivate)**
  This control applies to a checkbox or an icon/button.
    - **Checkbox:**
        - To enable the control, click the checkbox so that a check mark displays in the checkbox ☑.
        - To disable the control, click the checkbox so that the check mark does not display in the checkbox ☐.
    - **Icon/Button:**
        - To enable/activate an icon or button, click the button, so that it displays in its activated state. Example: **Clip Player Loop** and **Playlist Play** icons active:

        - To disable/deactivate an icon or button, click the button, so that it displays in its deactivated state. Example: **Clip Player Loop** and **Playlist Play** icons inactive:

          
- **Enter**
  Type a value or string into the field.

- **Highlight**
  Using the mouse/touchpad or the keyboard, place the cursor on the interface element. When highlighted, it changes appearance to indicate that the element is currently selected.

- **Hover**
  Move the mouse/touchpad cursor over a specified item, to either highlight it or to cause something, for example, a horizontal cursor ⟺, to appear.

- **Press**
  Refers to an action performed on a keyboard.

  Keyboard actions that contain a "**+**" indicate that you should press and hold the first key while pressing the second key. For example, **Ctrl+C** specifies that you press and hold the **Ctrl** key while you then press the **C** key.

  You can select items on the menu bar using the mouse/touchpad or the keyboard. Pressing, then releasing **Alt** changes the cursor focus to the menu bar. You can use the left/right cursor keys to scroll through the menu items, and then press **Enter** to open the selected menu.

- **Right-click**
  Right-click using a mouse/touchpad. Typically displays a context menu.

- **Select**
  Left-click or use the cursor keys to select/highlight an item.

Chapter 2: PRIME Switcher Basics

Switcher Operation

A switcher is the center of all live broadcast operations, and controls the video content that is broadcast to viewers. The person who operates the switcher is typically known as either a switcher operator, vision mixer or technical director (TD).

Traditionally, the director of the broadcast instructs all control room (aka gallery) personnel, including the TD, as to when and how various elements triggered, switched, mixed, etc. PRIME Switcher may be used in this type of workflow.

However, with the power of the PRIME Live Platform many tasks previously performed by dedicated operators on multiple devices from a single, fixed control room may now be performed by a single operator, or by multiple operators in various locations.

Basic Functions of a Switcher

A switcher accepts video input (with or without audio) from a variety of sources, including:

- Live cameras
- Clip servers
- Internal/external feeds
- CG/graphics systems
- Webcams
- Live streams

As a switcher operator, you can display any of the sources on air, and create complex layering and effects to enhance your broadcast.

The switcher allows you to specify which video is the **Background (BKGD)**, and the video or graphics that are layered over the background. Layering video over a video background is referred to as **keying**. These layers, or **keys**, commonly have areas of transparency where the background is visible. PRIME Switcher provides **Linear Key** and **Chroma Key**, as well as the ability to apply a **DVE** to each key.

- You can specify which layers to include in the next transition and preview how the transition affects the output in a **Preview** monitor.
- A **Mix Effect** is a composite of one or more sources. You can apply a **Transition** to play a **Mix Effect** to an output channel and view it in the **Program** monitor.
- **Transition Types** include **Cut**, **Wipe**, **Dissolve** and **Custom**.

You can independently control each source, easily select and trigger transitions, and save **Mix Effects** for future use.

PRIME Switcher provides an **Audio Mixer**, with which you can mix audio, set audio to follow video, and create **AUX Audio Buses** for **Mix Minus** outputs.

See the Glossary for definitions of PRIME Switcher terms.

Chapter 3: The PRIME Switcher User Interface

Start PRIME Switcher

The PRIME Switcher UI provides most of the same components as a traditional hardware switcher, and operates in a similar manner.

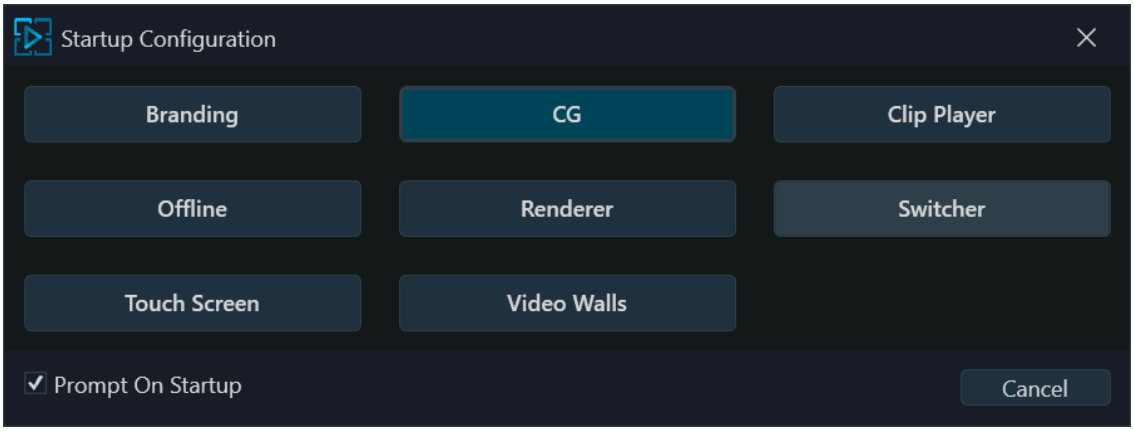
The UI also provides:

- **Video Input**, **Preview**, **Program**, **Graphics**, **Clips** and **Mix Effect** video displays, without the need for physical monitors.
- One or more **Assets Browsers** that provide access to the PRIME assets such as **Scenes** (graphics) and **Clips**.
- An **Audio mixer**.
- A keypad.
- Display of additional components, including **Playlist(s)**, **Workflow Logger**, **Automation Logger**, and **Parameters**.

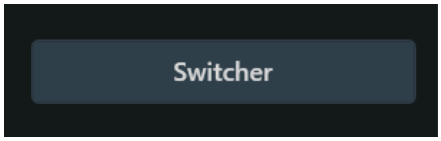
To start PRIME Switcher:

1. On the desktop, double-click the **Chyron PRIME** shortcut icon.

   The **Startup Configuration** panel appears.



2. The name of the last selected application has a thin blue outline around it.



Click the desired **Switcher** item. Depending upon your facility, there may be more than one **Switcher** item. The PRIME Switcher splash screen appears.

The PRIME Switcher interface appears. If **Video Sources** are connected, then they display in the monitors. If graphics are already loaded, then they display, as well.

CAUTION: If the PRIME Engine window appears on top of the PRIME Switcher interface when it opens, then do not close the window. To hide the PRIME Engine window while operating PRIME Switcher, do one of the following:

- **Click the PRIME Switcher interface outside of the PRIME Engine window; or,**
- **Click the PRIME icon in the taskbar at the bottom of the screen.**

If you closed the PRIME Engine window, and the Video Input, Clips and Graphics displays have frozen:

- **Close and reopen PRIME Switcher, making sure not to close the PRIME Engine window.**

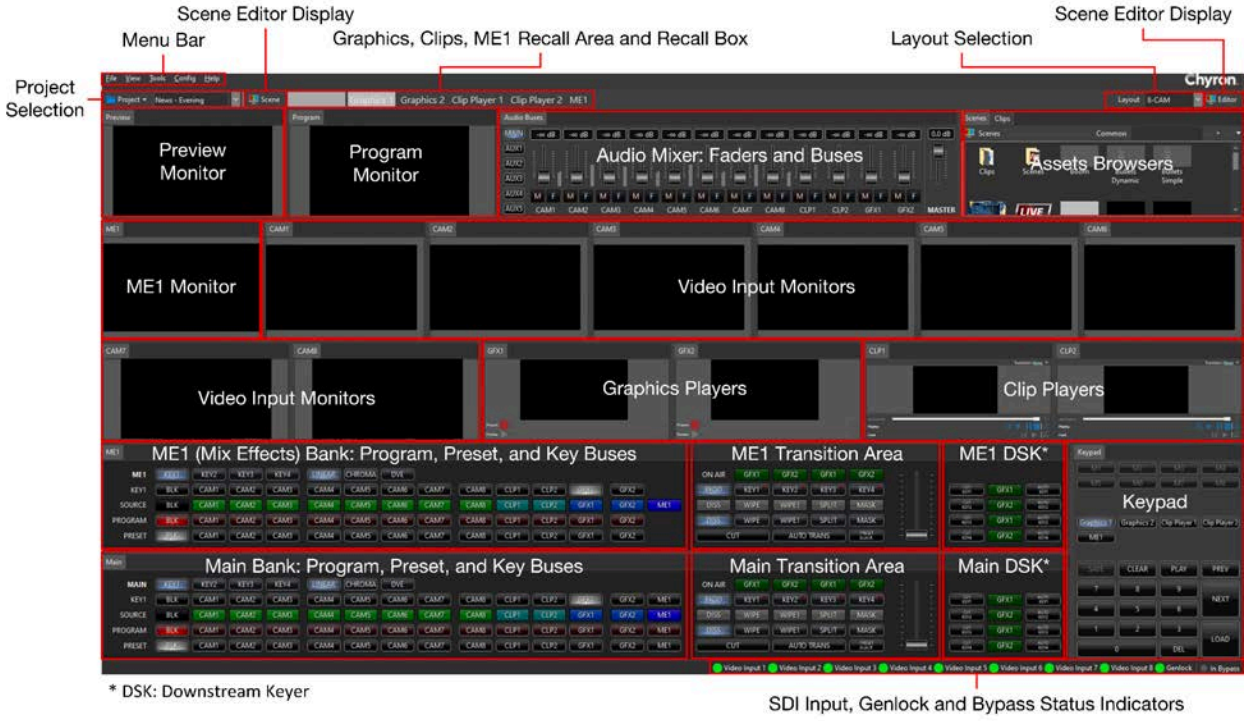
One reason that the PRIME Engine window might display is that the Clean Feed may have been configured to output to a Desktop Window for testing. You can reconfigure the Clean Feed to a different output (typically SDI), or if the production is not using the Clean Feed, you can disable or delete the Clean Feed.

If video sources are connected and configured, then they appear in the PRIME interface. The following figure shows a typical PRIME Switcher UI that is configured for:

- 8 Video Inputs
- 2 Graphics Player Channels
- 2 Clip Player Channels
- 1 Mix Effects Channel
- Audio Mixer

An **Assets Browser** displays **Scenes** and **Clips**, and can display other assets, as well, and a keypad provides the same functionality as a hardware keypad.

The following figure shows the main areas of the PRIME Switcher UI. For clarity, the monitors are blank. Normally, the Video Input monitors display video.



The PRIME Switcher UI is composed of the following main components:

- **Menu Bar:** Provides access to PRIME Switcher display parameters, configuration, and other functions.
- **Project Operation and Selection:** Provides the ability to select a project and perform project operations.
- **Graphics, Clip and ME1(Mix Effects) Recall Box:** Provides the ability to enter graphics, clips or mix effects in sequence.
- **Layout Recall Dropdown:** Provides the ability to recall layouts.
- **Scene Editor Display Selection:** Displays the PRIME **Scene Designer**.
- **Preview/Program Monitors:** Displays PRIME Switcher **Preview** and **Program** output.
- **Mix Effect (ME1) Monitor:** Displays **ME1 Bank Program** output.
- **Video Input Monitor(s):** Displays **Video Input(s)**. If audio is present, enabled, and added as a **Switcher Audio Source**, then the **Video Monitor** displays the audio level(s).
- **Graphics Player(s):** Displays currently loaded graphic(s). The **Graphics Player** can preview and play graphics. One or more graphics can be queued for playout.

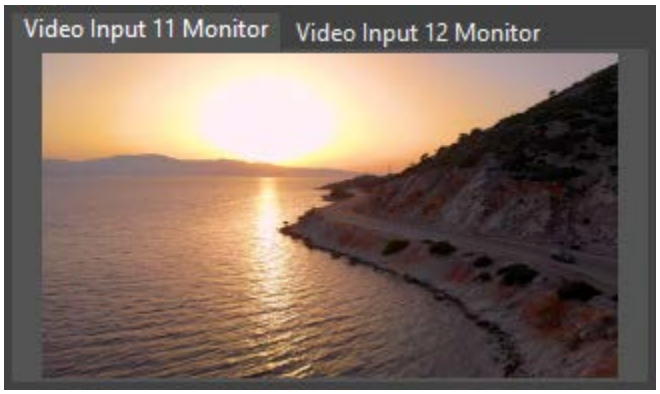
- **Clip Player(s):** Displays currently loaded clip. The **Clip Player** can preview, play, pause, return to frame **0**, loop, and stop a clip. A clip can be queued for playout. If audio is present, enabled, and added as a **Switcher Audio Source**, then the **Clip Player** displays the audio level(s).
- **Assets Browsers:** Displays the **Clips** and **Scene** assets. You can create additional browsers to access other asset types.
- **Switcher Banks: Main** and **Mix Effect Banks**, each composed of a **Preset**, **Program** and **Key Bus**, a **Transition Area**, and a **Downstream Keyer**.
    - **Preset**, **Program, Key Buses** control:
        - The video that is in **Program**.
        - The video that is about to transition to **Program**.
        - The **Key** source active in the **Key Bus**.
    - **Transition Area:** Each **Bank** has its own independently controllable **Transition Area**. The **Transition Area** has the following functions:
        - Controls that specify which sources transition.
        - Controls the transition type (e.g., **Wipe**, **Dissolve**, **Custom**) to be applied to the transition.
        - Performs transitions involving video and/or one or more keys, and indicates which keys are in Program.
        - In the **ME1 Bank**, can save and load **Mix Effect Presets**.
    - **Downstream Keyer:** Key video channel source selection and control. Each **Bank** has its own independently controllable **Downstream Keyer**.
- **Audio Buses: Audio Mixer** controls. May also display **Auxiliary Buses**.
- **Keypad:** Provides keypad functions, including clip, graphic, and **Mix Effects Preset ID** entry, plus **Load**, **Play**, **Save**, **Delete** and **Clear**.
- **SDI Input and Bypass Status Indicators:** Indicates active/inactive status for each **SDI Input** and the **Bypass**.

The UI can also display the following components:

- **Playlist:** Provides the ability to play graphics and clips from a PRIME playlist to the PRIME Switcher **Graphics Player** and **Clip Player**.
- **Workflow Logger:** Logs specific events in the PRIME application. *See the PRIME User Guide for additional information.*
- **Automation Monitor:** Displays the automation connections. *See the PRIME Automation User Guide and the PRIME User Guide for additional information.*
- **Parameters:** Displays the list of the PRIME scene parameters. *See the PRIME User Guide for additional information.*

Each component (**Monitor**, **Bus**, **Audio Mixer**, **Assets Browser**) on the PRIME Switcher UI displays in its own tab. The following figure shows the **Main Bank** tab.

To save space, the switcher can display multiple components in the same physical space as a single component, by combining multiple tabs in **Tab Groups**, or by displaying smaller side-by-side or stacked components. The following figure shows a **Tab Group**.



See Resize and Reposition Components and Tab Groups for details.

Close and Restart PRIME

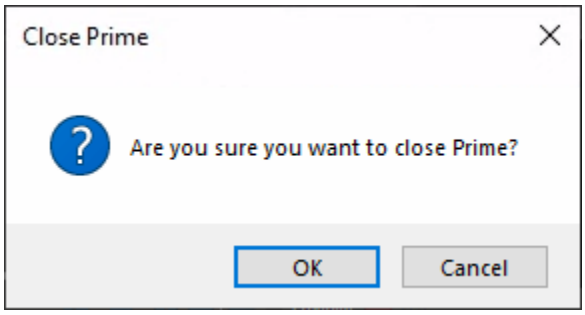
Close PRIME

To apply any change in PRIME configuration or PRIME Switcher configuration, you must close and restart PRIME.

Certain hardware firmware changes may require a system restart. PRIME will display a prompt if a restart is required. *See the PRIME Playout Configuration Guide.*

To close PRIME:

1. Go to **File > Exit**, or click the **Close** icon (**x**) at the upper right of the PRIME Switcher interface. The following message appears.



2. Click **OK**.

PRIME Settings - General

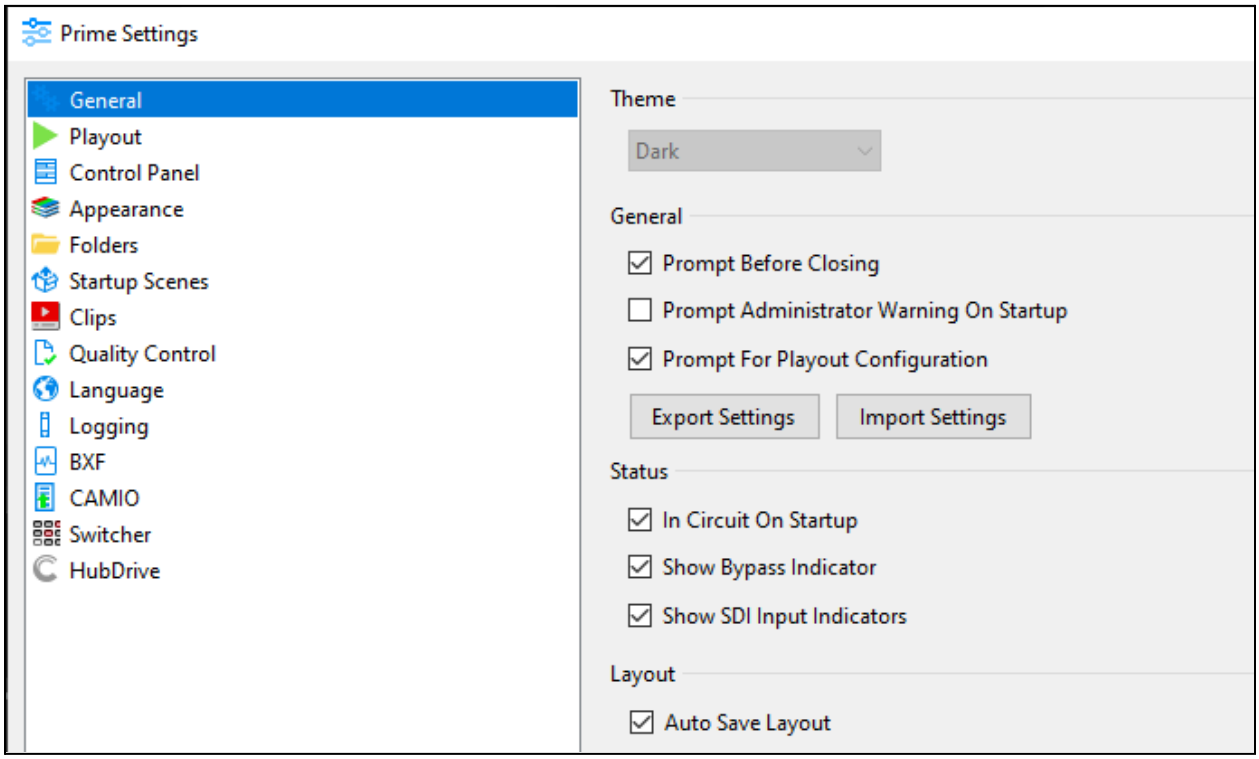
Overview and Access PRIME Settings - General

The PRIME **General** settings specify the behavior pertaining to PRIME startup, status, closing and layout.

NOTE: Certain setting modifications require you to close and restart PRIME Switcher. PRIME Switcher displays a message when close and restart are required.

To access the settings:

- Go to **Config Menu > Settings**, and then click **General**. The **PRIME Settings** dialog appears:

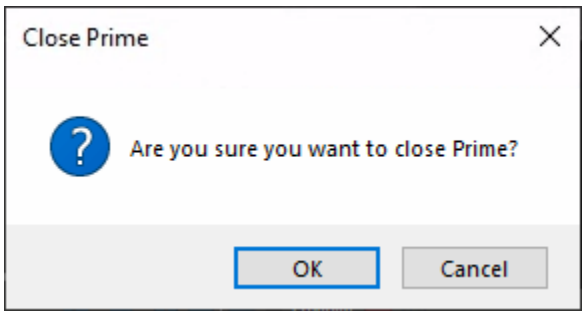


Theme: Specifies the appearance of the interface. The theme is set to **Dark**, and is the only theme available at this time.

General Settings

Prompt Before Closing

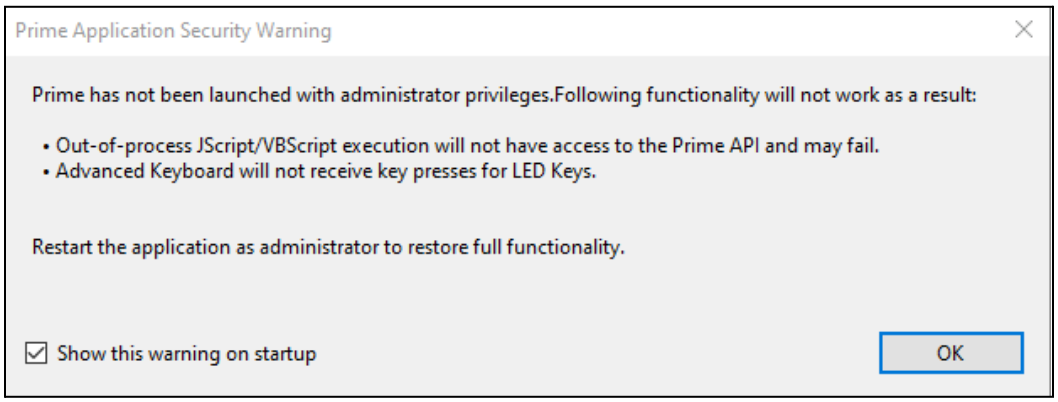
- If enabled, then when you close PRIME Switcher, PRIME displays the **Close PRIME** prompt:



- If disabled, then when you close PRIME Switcher, PRIME Switcher closes without displaying the prompt.

Prompt Administrator Warning on Startup

- If enabled, displays an **Administrator Warning** upon startup.
- If disabled, does not display an **Administrator Warning** upon startup.

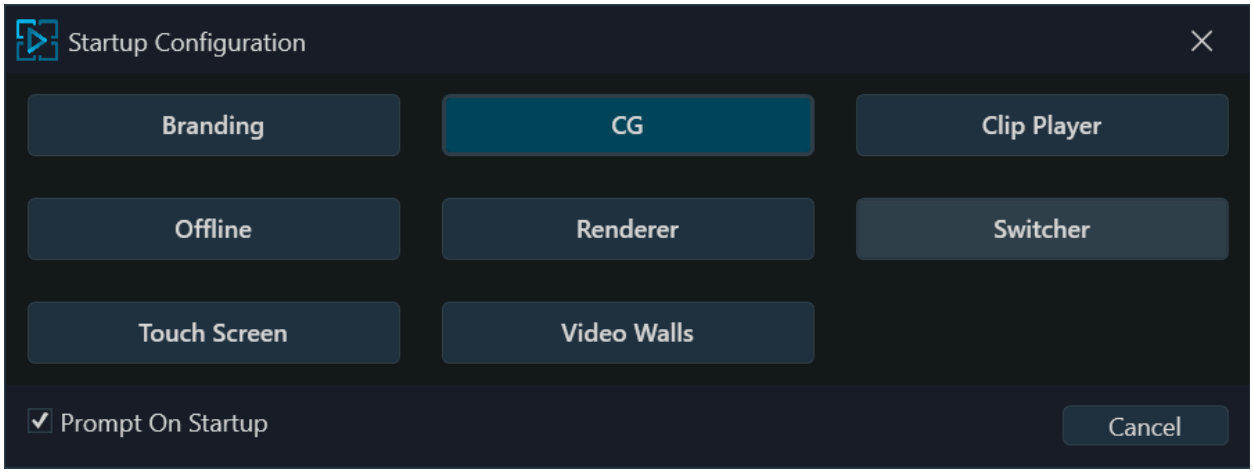


You can also disable display of this warning directly from warning:

  - Uncheck **Show this warning on startup**.

Prompt for Playout Configuration

- If enabled, then when you open PRIME, the list of available playout configurations displays:



- If disabled, then PRIME opens the most recently opened playout configuration.

  You can also disable display of this warning directly from the **Startup Configuration** panel:

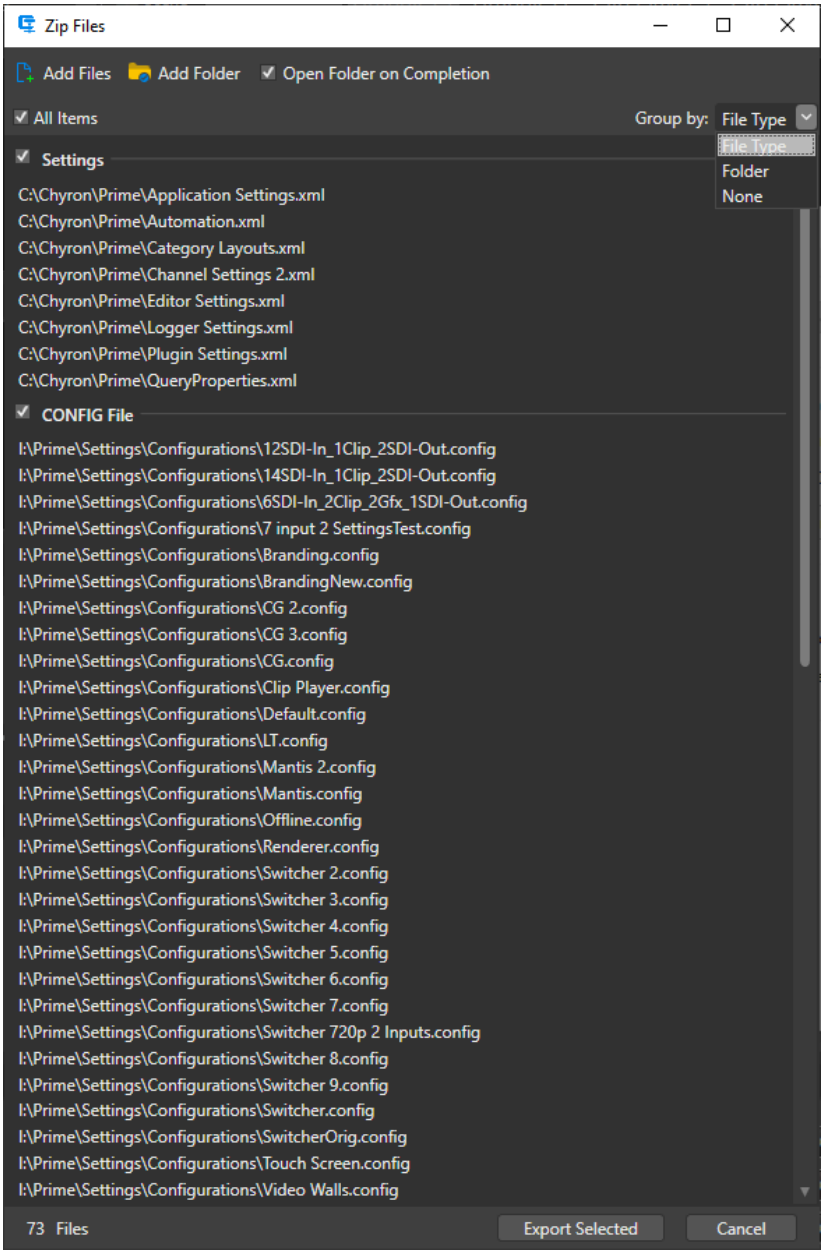
  - Uncheck **Prompt On Startup**.

Export Settings

PRIME settings and configurations are stored in individual files. You can export one or more PRIME settings and configuration files for future use in PRIME Switcher or for import into other PRIME switchers.

To export PRIME Settings:

1. Click **Export Settings**. The **Zip Files** dialog appears, and lists settings or configuration files from which you can choose full categories of settings/configurations to export, or one or more individual items within the categories to export. The following figure shows the **Group by** dropdown expanded.


Zip Files
Add Files
Add Folder
Open Folder on Completion
All Items
Group by:
File Type
File Type
Folder
None
Settings
C:\Chyron\Prime\Application Settings.xml
C:\Chyron\Prime\Automation.xml
C:\Chyron\Prime\Category Layouts.xml
C:\Chyron\Prime\Channel Settings 2.xml
C:\Chyron\Prime\Editor Settings.xml
C:\Chyron\Prime\Logger Settings.xml
C:\Chyron\Prime\Plugin Settings.xml
C:\Chyron\Prime\QueryProperties.xml
CONFIG File
I:\Prime\Settings\Configurations\12SDI-In_1Clip_2SDI-Out.config
I:\Prime\Settings\Configurations\14SDI-In_1Clip_2SDI-Out.config
I:\Prime\Settings\Configurations\6SDI-In_2Clip_2Gfx_1SDI-Out.config
I:\Prime\Settings\Configurations\7 input 2 SettingsTest.config
I:\Prime\Settings\Configurations\Branding.config
I:\Prime\Settings\Configurations\BrandingNew.config
I:\Prime\Settings\Configurations\CG 2.config
I:\Prime\Settings\Configurations\CG 3.config
I:\Prime\Settings\Configurations\CG.config
I:\Prime\Settings\Configurations\Clip Player.config
I:\Prime\Settings\Configurations\Default.config
I:\Prime\Settings\Configurations\LT.config
I:\Prime\Settings\Configurations\Mantis 2.config
I:\Prime\Settings\Configurations\Mantis.config
I:\Prime\Settings\Configurations\Offline.config
I:\Prime\Settings\Configurations\Renderer.config
I:\Prime\Settings\Configurations\Switcher 2.config
I:\Prime\Settings\Configurations\Switcher 3.config
I:\Prime\Settings\Configurations\Switcher 4.config
I:\Prime\Settings\Configurations\Switcher 5.config
I:\Prime\Settings\Configurations\Switcher 6.config
I:\Prime\Settings\Configurations\Switcher 7.config
I:\Prime\Settings\Configurations\Switcher 720p 2 Inputs.config
I:\Prime\Settings\Configurations\Switcher 8.config
I:\Prime\Settings\Configurations\Switcher 9.config
I:\Prime\Settings\Configurations\Switcher.config
I:\Prime\Settings\Configurations\SwitcherOrig.config
I:\Prime\Settings\Configurations\Touch Screen.config
I:\Prime\Settings\Configurations\Video Walls.config
73 Files
Export Selected
Cancel

2. If desired, then click the **Group by** dropdown arrow to display the list by one of the following:

    1. **File Type:** Lists the files by type.
    2. **Folder:** Lists the files by folder.
    3. **None:** Lists the files in alphabetical order by filepath.

3. Select the files that you would like to export. You can select one or more individual items, or use the following selection shortcuts to quickly select/deselect groups of files:

    1. Enable/disable the **All Items** checkbox to select all/no items in the list.
    2. Enable/disable the checkbox at the top of a category to select all/no items in that category.

4. When you have completed selection, click **Export Selection**, and then save to a ***.zip*** file at the desired location. The saved settings and configuration files can then be imported in the future on the same PRIME Switcher, or into a different PRIME Switcher.

Import Settings

To import PRIME settings:

1. Click the **Import Settings** button.
2. Browse to the desired ***.zip*** file, and then click **Open**. The **Unzip Asset** dialog appears. It is similar in appearance and operation to the **Zip Files** dialog.
3. Select the files that you would like to import, and then click **Import Selected**. The files replace their corresponding current settings and configuration files.
4. Close and restart PRIME.

Status Settings

Status Overview

The **Status Indicators** display at the bottom of the PRIME Switcher interface, and govern if the PRIME Switcher starts up in **In Circuit** or **Bypass Mode**, and specifies which indicators display.

See SDI Input, Bypass Indicators for additional information about these indicators.

In Circuit on Startup

- If enabled, then PRIME Switcher starts in **In Circuit Mode**.
- If disabled, then PRIME Switcher starts in **Bypass Mode**.

Show Bypass Indicator

- If enabled, then the **Bypass Indicator** displays on the PRIME Switcher interface.
- If disabled, then the **Bypass Indicator** does not display on the PRIME Switcher interface.

Show SDI Input Indicators

- If enabled, then the **SDI Input indicators**, including **Genlock**, display on the PRIME Switcher interface.
- If disabled, then the **SDI Input indicators**, including **Genlock**, do not display on the PRIME Switcher interface.

Layout Setting

Auto Save Layout

- If enabled, then the state of the layout upon closing PRIME Switcher is preserved. When you reopen PRIME Switcher, then the layout is the same as when you last closed it.
- If disabled, then the state of the layout upon closing PRIME Switcher is not preserved. When you reopen PRIME Switcher, then the default layout displays.

Close and Restart PRIME without Change to Configuration

If you close and then restart PRIME without changing configuration, then the configuration upon closing is retained upon opening. The state of the PRIME Switcher upon restart is as follows:

- **Video Inputs** remain as is.
- **Main and ME1 Switcher Bank** settings revert to their default states.
- **Main and ME1 Transition Area** settings revert to their default states.
- **Main and ME1 Downstream Keyer** sources revert to their default states.
- **Graphics Player(s)** is cleared, unless you configured one or more **Startup Scenes**.
- **Clip Player(s)** is cleared.
- **Playlist Player(s)** is cleared.
- **Master Audio Mixer Fader:** Resets to **0.0 dB**.
- **Audio Bus Faders:** For each **Audio Fader**:
    - **Main Audio Bus Fader** not set to **Follow Video** reverts to **-∞ dB.**
    - **Auxiliary Bus Fader** reverts to **-∞ dB**.
    - **Mute** status reverts to inactive.
    - **Delay** setting is retained.
    - **Follow Video - Main Audio Bus Only:**
        - **Follow Video** active/inactive status is retained.
        - **Follow Sources** selection(s) is retained.

Close and Restart PRIME with Change to Configuration

If you close and then restart PRIME after changing the configuration, then the new configuration is applied. For example, if two **Clip Players** had been displayed, and one had been removed during reconfiguration, then a second **Clip Player** does not display when PRIME Switcher restarts.

The new configuration now becomes the default state of the PRIME Switcher.

See UI Layout, Switcher Components Overview, Assets Browser and Configure PRIME Switcher for details on customizing the PRIME Switcher UI.

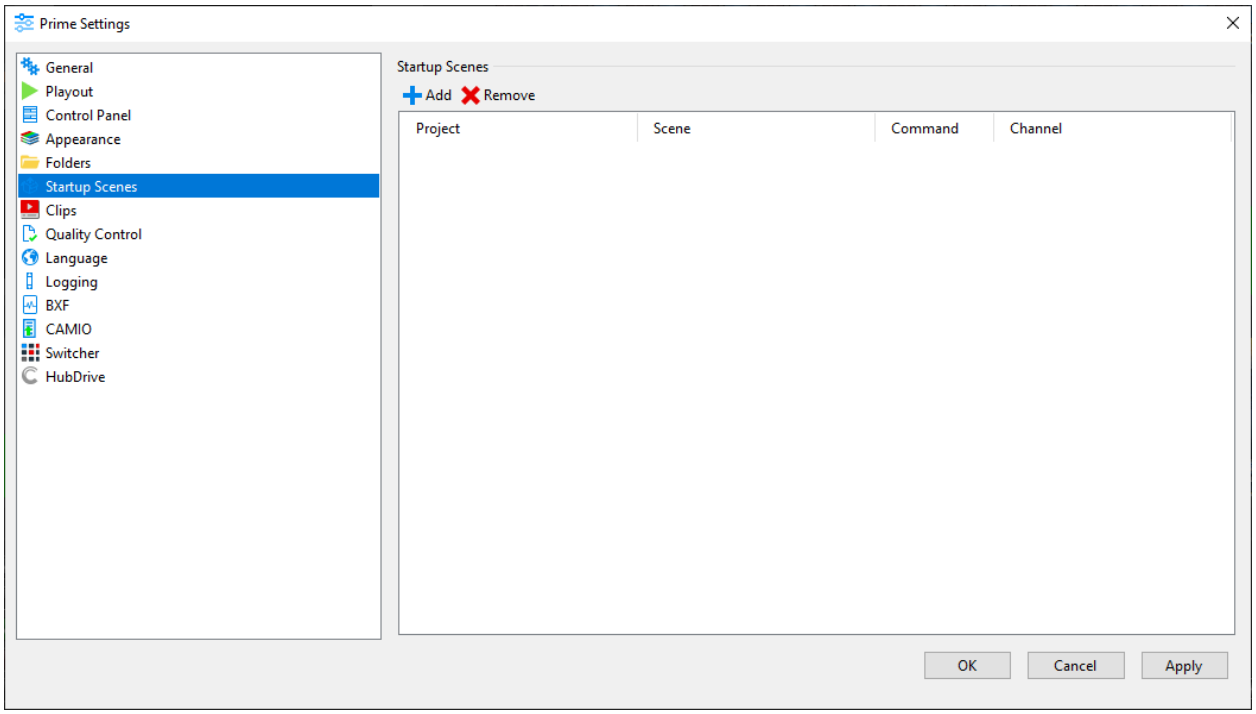
Configure Startup Scenes

Startup Scenes Overview

When PRIME Switcher launches, the UI displays, by default, blank **Graphics Players**. You can configure one or both **Graphics Players** to play and/or load scenes upon startup.

To access **Startup Scene** configuration:

- Go to **Config > Settings**. The **PRIME Settings** panel displays. If not already selected, then select **Startup Scenes**.



You can select the following::

- **Project:** The project in which the graphic resides.
- **Scene:** The scene file
- **Command:** The action that the selected **Graphics Player** will perform when PRIME Switcher opens.
- **Channel:** The **Graphics Player** that on which the graphic will be loaded/played.

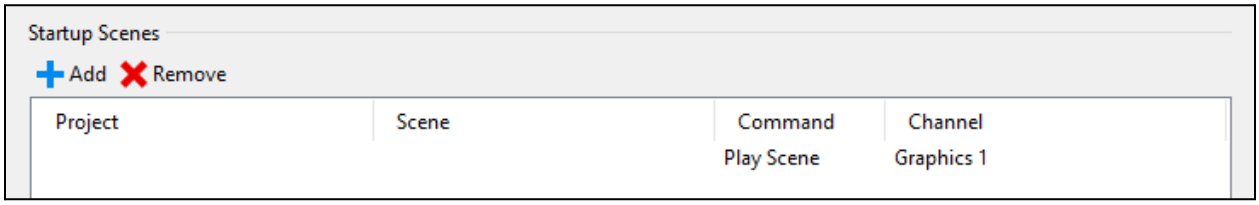
Add Startup Scenes

For this exercise, you will set:

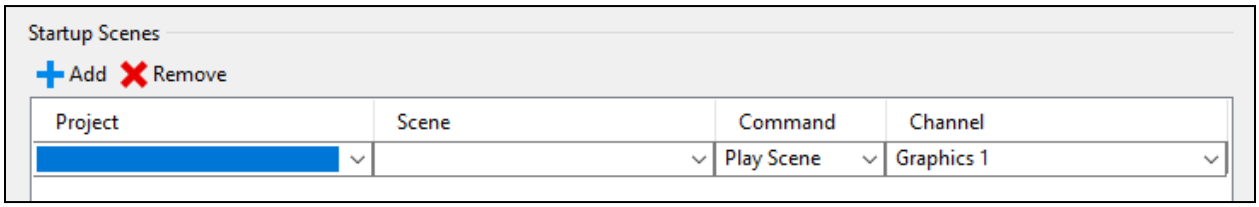
- **Graphics Player 1** to play a live bug scene and load a series of OTS messages.
- **Graphics Player 2** to load series of lower third messages.

To set:

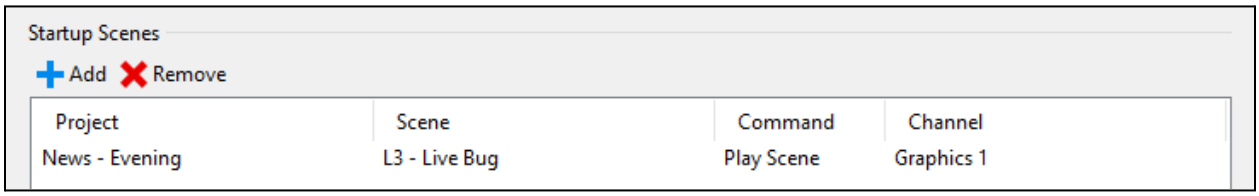
1. Click the **Add** icon  at the top of the **Startup Scenes** panel. The **Startup Scene** panel displays a new item. By default, **Graphics 1** is selected and set to **Play Scene**.



2. Click the item. The drop-down fields display.

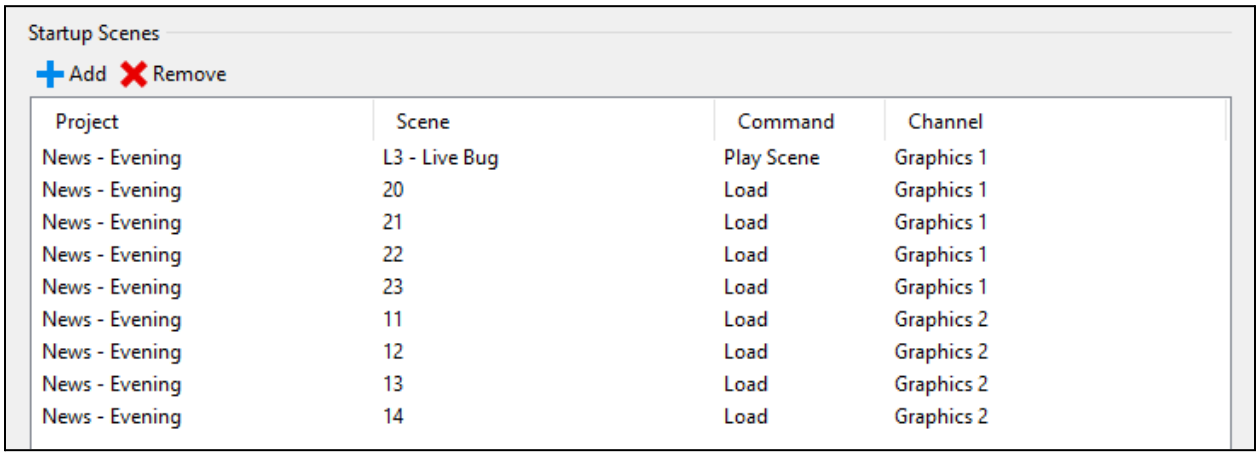


3. For the first item:
    - Select the project and scene. All graphics in the project's **Scene** and **Message** folders are listed, including their sub-folders.
    - Select the action that the **Graphics Player** performs when PRIME Switcher opens:
        - **Load:** Loads the selected graphic into the **Graphics Player Preview** channel of the selected **Graphics Player**.
        - **Play:** Plays the selected graphic in the selected **Graphics Player**.



4. For the next item, click the **Add** icon and set a graphic to load in **Graphics Player 1**. Repeat this step for each graphic to load.

5. Repeat step 4 as needed to add the graphic to load in **Graphics Player 2**.



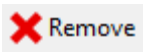
6. Click **Apply** to save the settings and continue PRIME Settings configuration, or click **OK** to exit **PRIME Settings** configuration and save the settings.

7. Close and restart PRIME Switcher. The specified graphic in **Graphics Player 1** plays, and the specified graphics in **Graphics Player 1** and **2** are loaded.

8. To review the list of loaded graphics, click **Preview** to the right of the **Graphics Player Play** icon. The list displays. The following shows the list of graphics loaded in **Graphics Player 1**.

Remove Startup Scenes

To remove a graphic from the **Startup Scenes** configuration:

- In the **Startup Scenes** list, click the item, and then click the **Remove** icon 

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UI Layout

Overview

PRIME Switcher's flexible layout enables you to configure the UI to suit a specific operator or production.

- Move, resize, and group switcher components. *See Switcher Components Overview and Tab Groups.*
- Set switcher components to visible or not visible. *See Enable/Disable Component Display.*
- Save, recall, recall recent, and reset switcher layouts.

Component Display

The remainder of this chapter assumes that the video/audio inputs/outputs, clip players, graphics players, playlists, audio channels and audio buses have been configured for use in PRIME Switcher. If they have not been configured, then perform the configurations outlined in:

- Configure PRIME Video and Audio
- Configure PRIME Switcher
- Configure Sources
- Configure Atlas
- Configure Clip Players
- Configure Transitions
- Configure Playlist Players
- Configure Audio Channels
- Configure Audio Buses – Mix Minus

Also ensure that you have enabled the components for visibility via the **View** menu.

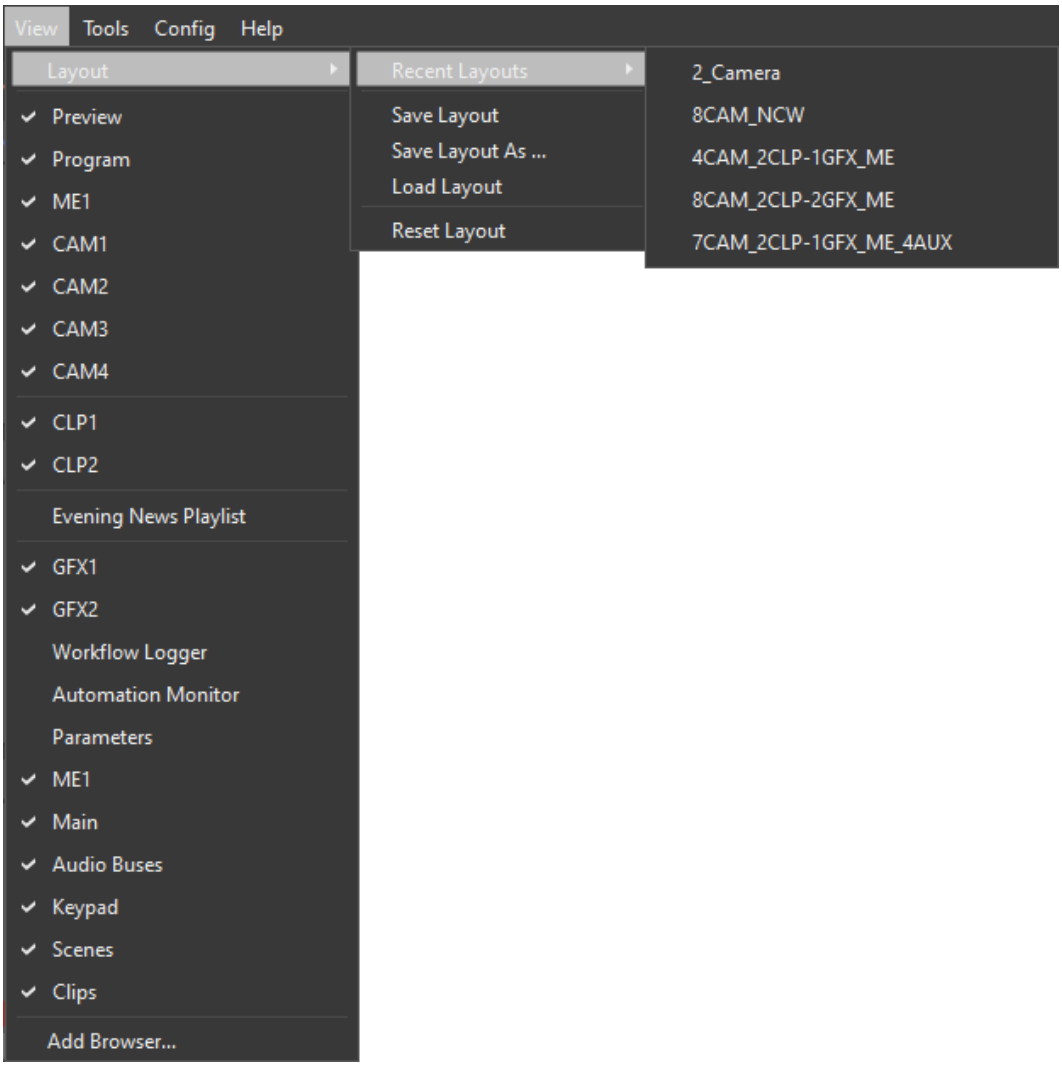
About the Default Layout

The PRIME interface default layout displays all components specified for display in the View menu. The components are arranged in an evenly distributed manner. The following figure shows a typical default layout:

Display Recent Layout

You can display recently used layouts. To display a recently used layout:

- Go to **View > Layouts > Recent Layouts**, and then choose the desired saved layout.



Reset Layout to Default

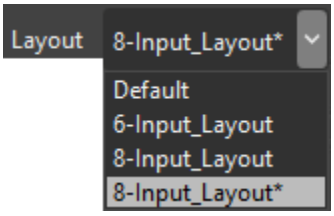
The default layout displays all source monitors and other components, evenly distributed on the UI. To reset the layout to default:

- Go to **View > Layouts > Reset Layout**.

Edit the Layout

You can customize the layout for a specific show or purpose. *See Switcher Components Overview for details on customizing the PRIME Switcher UI.*

If you make a change to the PRIME Switcher UI, e.g., move a component from one location to another, or resize a row, then a temporary layout, which is the name of the current layout, plus an asterisk, is added to the **Layout Recall** dropdown.



The edited UI persists, even if you close and restart PRIME Switcher.

This item remains in the list until the layout is either saved to the current or a different name, or a different layout is selected.

TIP: There is no "**Undo**" or "**Esc**" (**Escape**) once you start to move or resize a component. As such, it is good practice to save interim versions of a layout as you create it. You can delete unneeded layouts later.

Revert from Edited Layout to Saved Layout

To revert to the saved layout, i.e., the layout that was loaded, with no edits:

- Select the layout name that does not contain an asterisk.

If you perform this operation, then edits are lost, and the layout with the asterisk no longer appears in the list.

Save a Layout

A saved layout preserves the positions and sizes of the:

- **Main and ME1 Banks**
- **Preview, Program, Mix Effects and Video Inputs monitors**
- **Assets Browsers**
- **Graphics Players**
- **Clip Players**
- **Audio Mixer**
- **Keypad**
- **Other Components, including Playlist(s), Workflow Logger, Automation Logger, and Parameters**

To save a UI layout:

1. Go to **View > Layouts > Save Layout**.
2. Enter **File name**.

Save a Layout under a Different Name

To save a layout under a different name:

1. Go to **View > Layouts > Save Layout As**.
2. Enter **File name**.

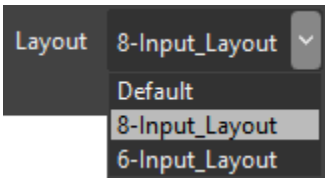
Load a Layout

To load a saved UI layout:

1. Go to **View > Layouts > Load Layout**.
2. From the **Open** dialog, choose the desired layout, and then click **Open**.

or

- From the **Layout Recall** dropdown at the top right of the PRIME Switcher UI, click the dropdown, and then choose the desired layout.



Delete a Layout

You cannot delete a layout from the PRIME Switcher interface. You must perform a deletion from the file structure. Prior to doing so, ensure that the layout is not being used by others.

To delete a layout:

1. Go to the location at which the file is located, typically, ...\PRIME\Settings\Layouts.
2. Delete the file.

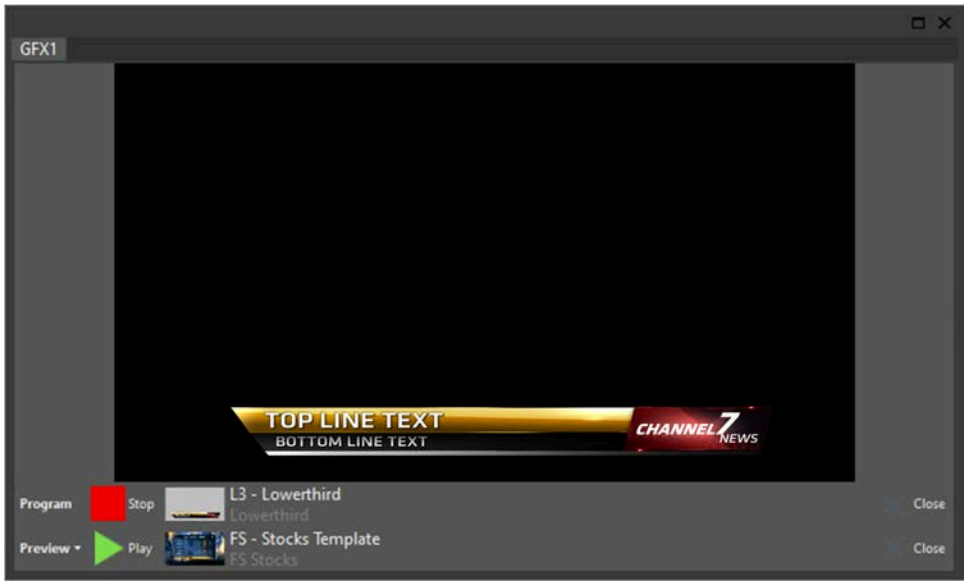
Note that if you delete the file of a layout that is currently loaded in PRIME Switcher, then the layout name displays with an asterisk.

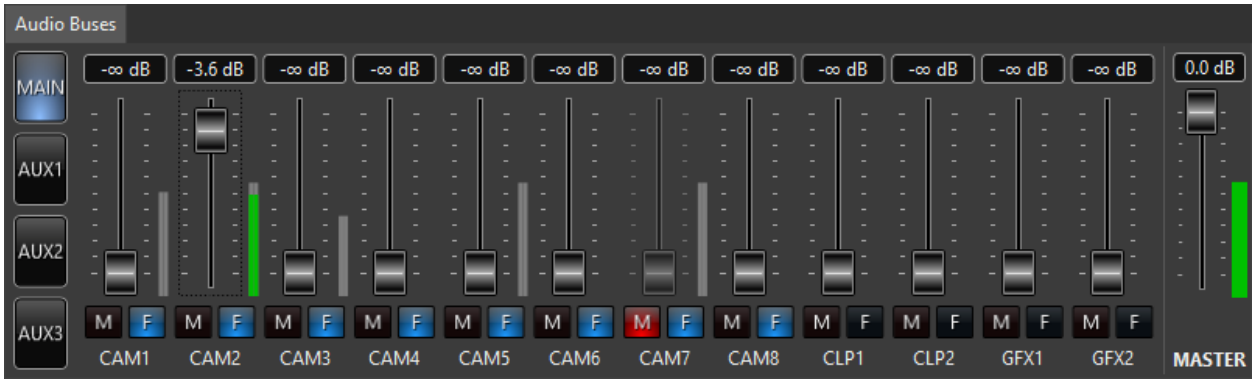
Switcher Components Overview

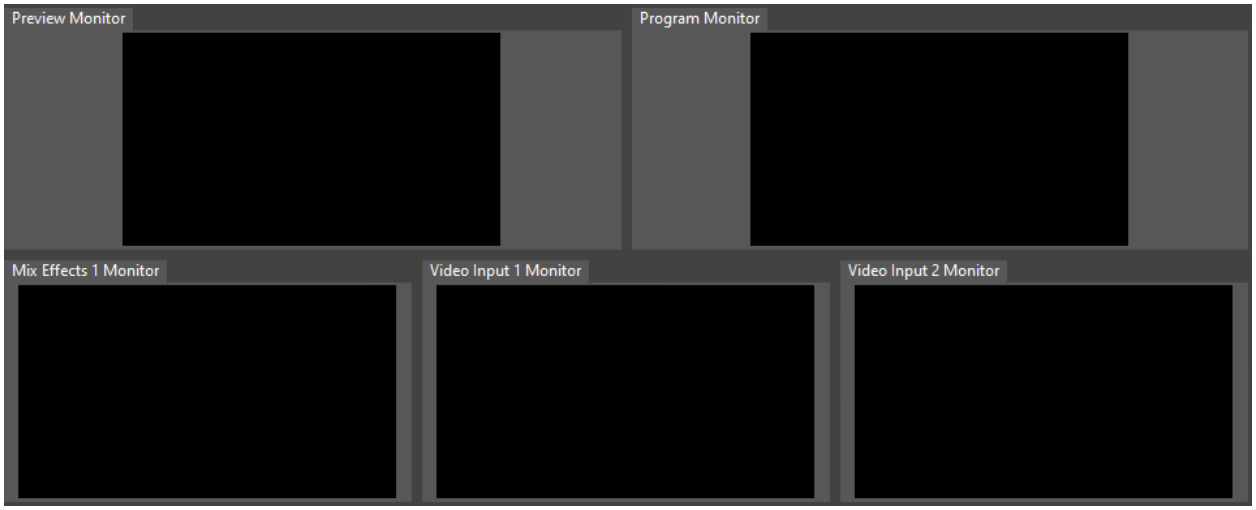
What is a PRIME Switcher Component?

A component is any element of the switcher that is contained within its own tab, e.g., the **Main Bank**, the **ME1 Bank**, the **Program Monitor**, the **Preview Monitor**, **Video Input**, the **Audio Mixer**, a **Graphics Player**, a **Clip Player**, an **Assets Browser**, etc.

Examples of **Graphics 1**, **Audio Buses**, and **Program/Preview/Mix Effects 1/Video Input 1/Video Input 2 Monitor** tabs:







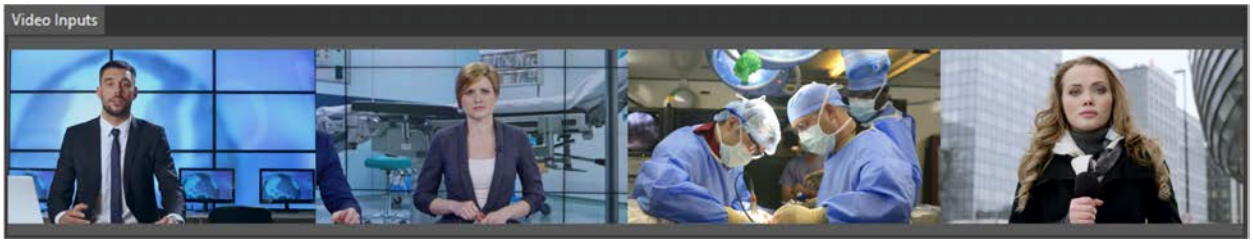
You can customize the UI to meet the needs of your production:

- Enable/disable visibility of switcher components.
- Resize, move, and group individual components.
- Resize entire rows.

To save space, multiple components can display in space of one component in a **Tab Group**. The following figure shows **Video Input 5** and **Video Input** 6 in a **Tab Group**.

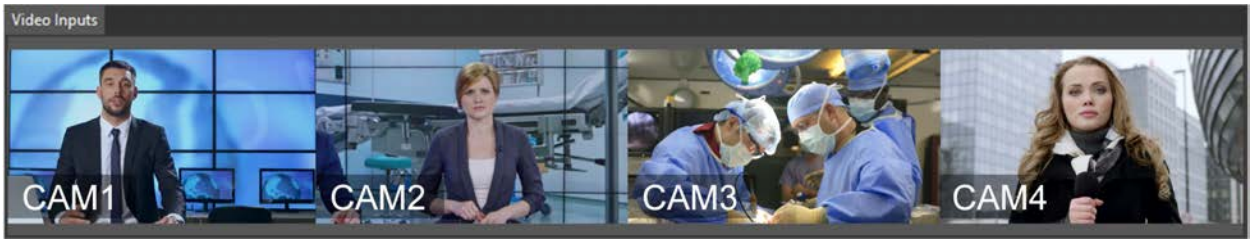
Video input monitors can display in individual windows, or in a continuous strip. *To configure, see Set Video Input Display.*

Video Sources Displayed in Single Grid Window



Since the sources are not individually labeled, then it may be advantageous to display on the source monitors.

Video Sources Displayed in Single Grid Window with Labels



To configure label display, see Configure Label Display - Show Label.

Video Sources Displayed in Individual Windows

Almost all component labels of the PRIME Switcher UI can be customized for purpose or language. The exceptions are as follows:

- **Bank** names: **Main** and **ME1**.
- **Bus** names: **Preset**, **Program**, **KeyX**, where **X** specifies the active **Key**.
- **Transition Area BKGD** button.
- **Transition Area KEY** buttons: **KEY1**, **KEY2**, **KEY3**, **KEY4**.
- **Transition Area CUT**, **AUTO**, **PRESET BLACK** buttons.
- **Recall Box** at the top left of the UI, from which **Graphics 1**, **Graphics 2**, **Clip Player 1**, **Clip Player 2**, and **ME 1** can be recalled.

The PRIME Switcher can display **Main** and **ME1 Bank** video source and transition names on only the **Source** name row, or on each of the individual buttons. *See Set Video Source Name Location.*

Source Names on Bus Buttons

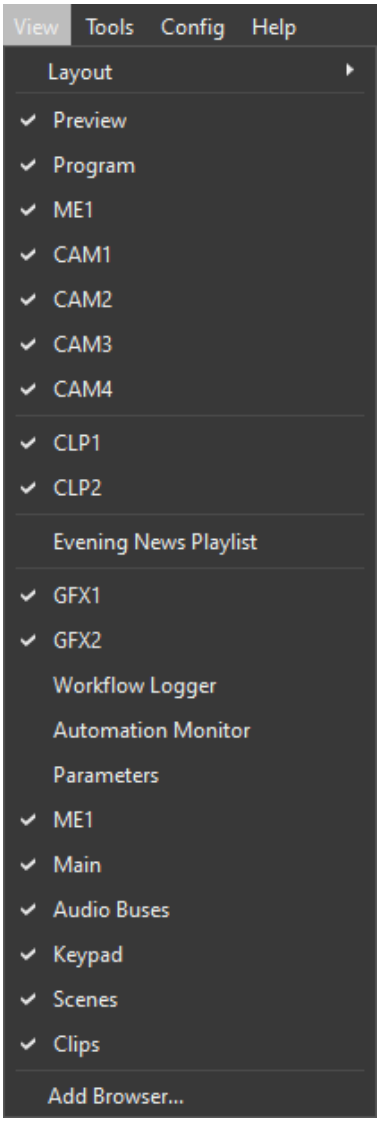
Source Names Only on Source Name Row

Enable/Disable Component Display

You can enable or disable the display of configured components in the switcher UI. For example, a specific production may use fewer video inputs that are configured. As such, there is no need to display the unused video inputs. *See NOTE at the end of this section for information on configured components.*

To enable/disable the display of a component:

1. Go to **View**. The **View** menu appears and displays a list of configured components.
    - Components that have a checkmark to the left of the component name are enabled for display.
    - Components that do not have a checkmark to the left of the component name are disabled for display.



NOTE: If the View menu is missing components that you expect to see, then ensure that the components are properly configured for use in PRIME Switcher:

- Configure PRIME Video and Audio
- Configure PRIME Switcher
- Configure Sources
- Configure Atlas
- Configure Clip Players
- Configure Transitions
- Configure Playlist Players
- Configure Audio Channels

2. Enable or disable as follows:

    - To enable the display of a component, select the unchecked component name. The **View** menu closes, and the component displays.
    - To disable the display of a component, select the checked component name. The **View** menu closes, and the component no longer displays.

    Note that visibility of only one component at a time can be enabled/disabled.

3. Repeat steps 1 and 2 to set the visibility for each additional component.

Depending upon the current layout, when you enable visibility of a component, it may be added to an existing component as an additional tab, instead of as a separate component.

If this occurs, then you can drag a tab to the desired location. *See Resize and Reposition Components, Tab Groups, and Remove a Tab from Tab Group for additional information.*

NOTE: The Video Input Display setting affects how the Video Inputs are listed in the View menu:

- **If set to Individual Windows, then each Video Input is listed separately in the View menu. You can set the visibility of each independently.**
- **If set to Single Grid Window, then the Video Inputs are all included in the Video Inputs item in the View menu. You can set the all or none to display.**

Close a Component

To close a component tab:

- Right-click the tab of the component, and then select **Close** from the context menu.
    - If you close an **Assets Browser** tab, then it is removed from the **View** menu, and therefore, from the PRIME Switcher UI. To restore, add the **Assets Browser** to the UI, via the **View** menu. *See* *Add an Assets Browser*.
    - If you close any other tab, then it is not removed from the **View** menu. Visibility of the tab is simply disabled. To restore, enable view of the tab, via the **View** menu. *See* *Enable/Disable Component Display*.

Resize and Reposition Components

Overview

You can resize and reposition components to create the UI that works best for your production.

Component Aspect Ratio

When you reposition, resize, or insert components, aspect ratio may or may not be preserved, depending upon type of component:

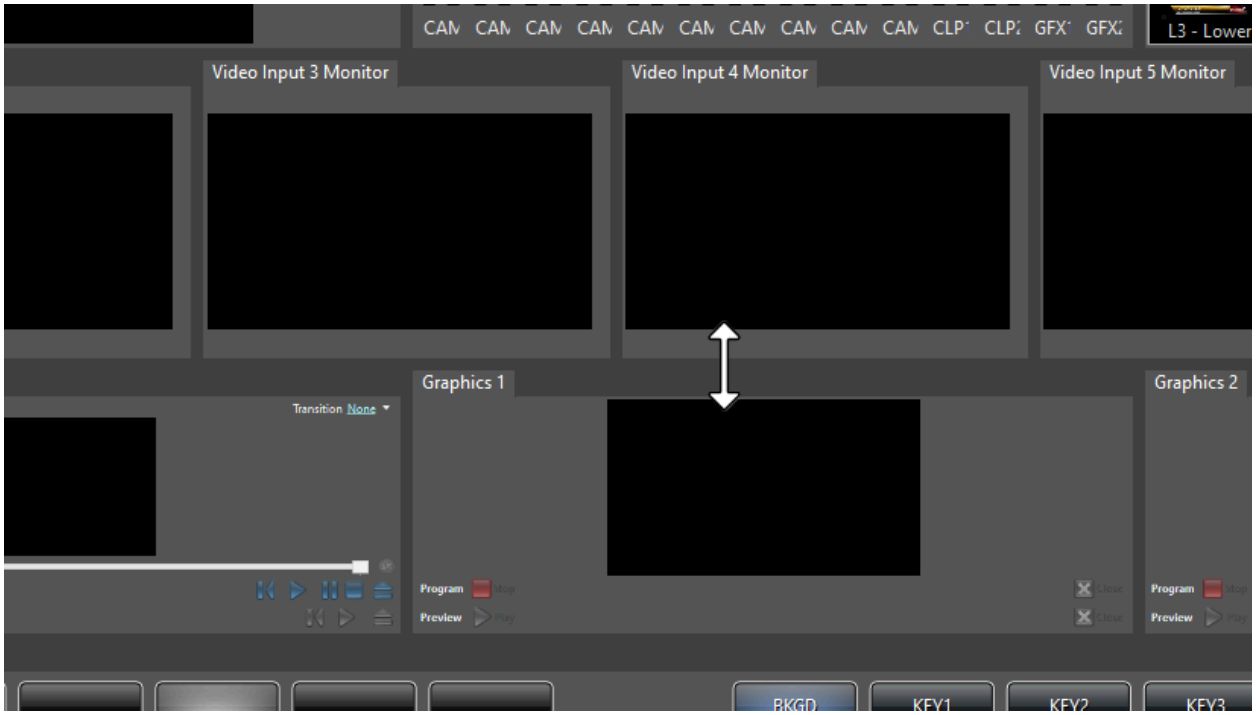
- A monitor does not change aspect ratio upon resizing or repositioning. The tabs in which it resides may stretch to accommodate row width.
- All other components, i.e., banks and the **Audio Mixer**, may change aspect ratio upon repositioning, resizing or insertion.

Resize Monitor Row or Switcher Bank Height

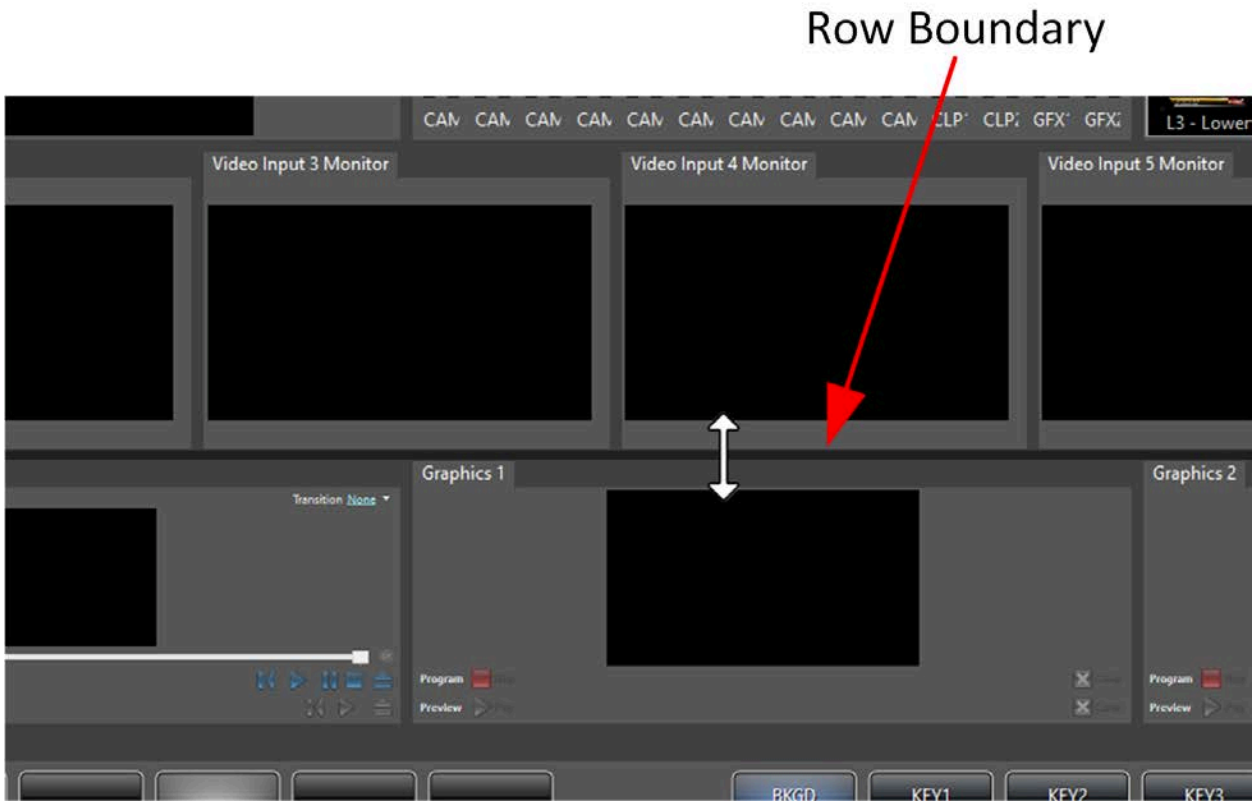
You can resize the height of a row or switcher bank by repositioning its top and/or bottom boundaries.

To resize the height of a row of monitors or a switcher bank:

1. Hover over the boundary of the row that you would like to resize, until a vertical double arrow appears.



2. Press and hold the mouse/touchpad select button. A dark bar that marks the **Row Boundary** appears.



3. While holding the select button, drag the **Row Boundary** up or down to the desired position, and then release the select button. The monitors in the row display with the new dimensions, maintaining the aspect ratio of the monitors. The height of the other row that shares the same boundary adjusts to accommodate the new height of the row that was originally adjusted.

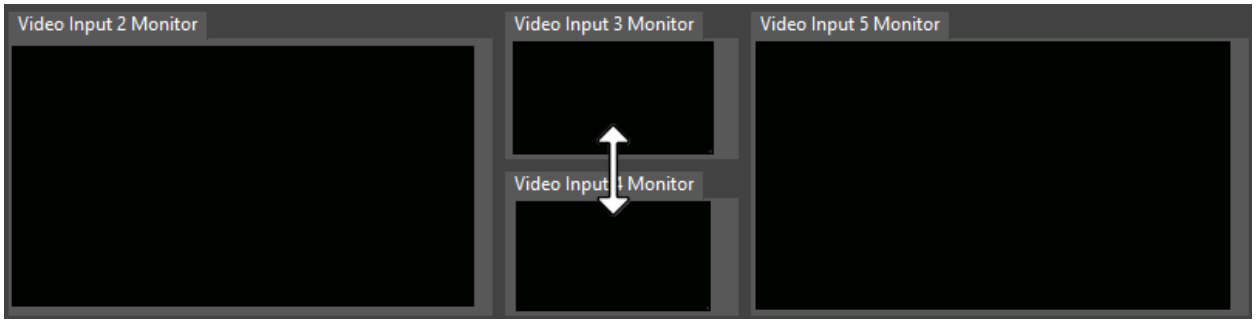
Resize Component Height

You can resize the width of a component by adjusting its top/bottom **Component Boundary**. There are two restrictions:

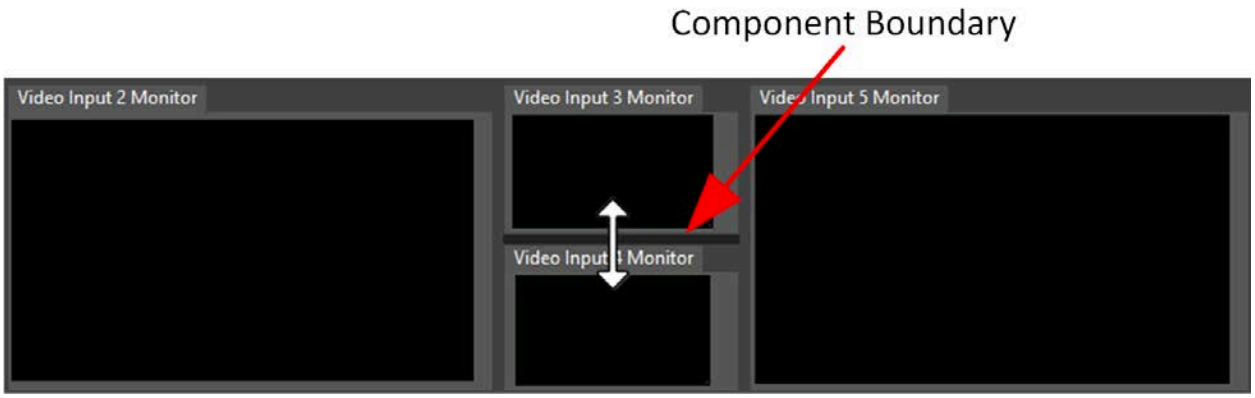
- If the component occupies the entire height of the row, then it cannot be independently resized. If you move the top or bottom border, then the entire row resizes.
- You can resize the height of a component that shares the row height; however, only the inner top and bottom borders can be moved, not the borders that are concurrent with the row border. Doing so changes the height of the row.

To resize the height of a height of a component:

1. Hover over the boundary that you would like to move to resize the component, until a vertical double arrow cursor appears.



2. Press and hold the left mouse/touchpad select button. A dark bar that marks the **Component Boundary** appears.



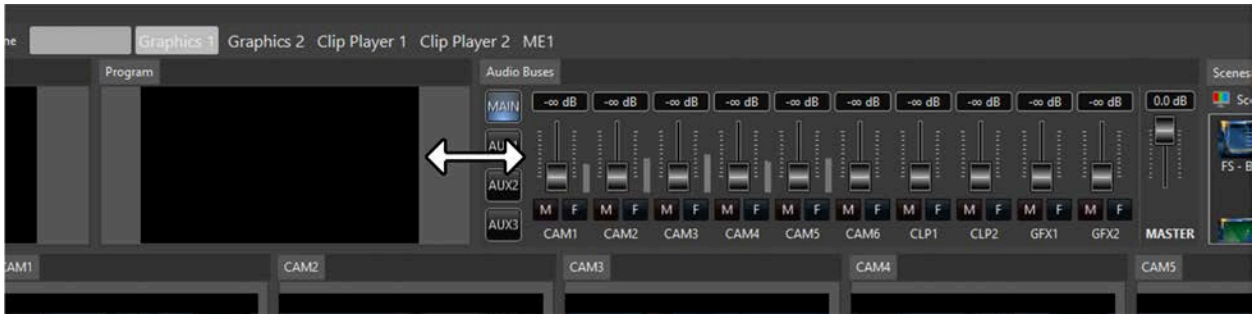
3. While holding the select button, drag the **Component Boundary** up or down to the desired position, and then release the select button. The component resizes. The height of the other component that shares the same **Component Boundary** adjusts to accommodate the new height of the component that was originally adjusted.

Resize Component Width

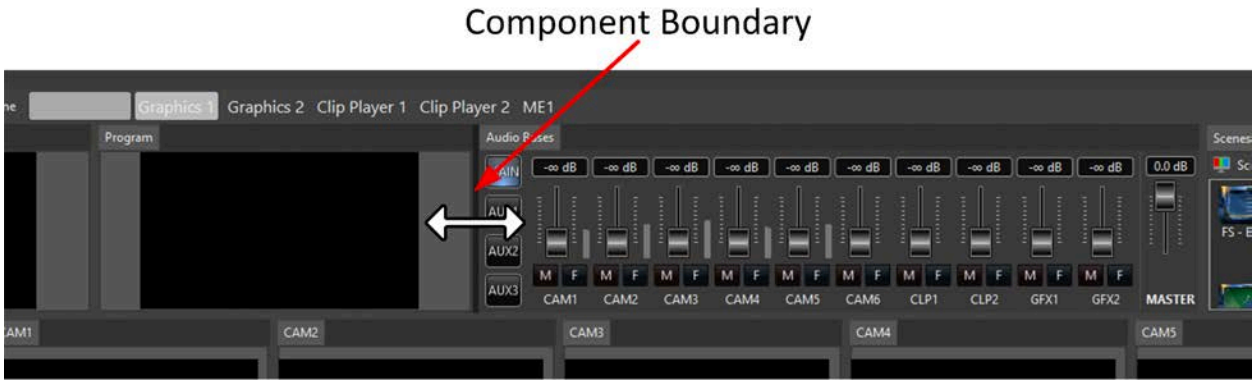
You can resize the width of a component by repositioning its left and/or right **Component Boundaries**.

To move the left or right boundary of a component:

1. Hover over the boundary of the component that you would like to resize, until a horizontal double arrow appears.



2. Press and hold the mouse/touchpad select button. A dark bar that marks the **Component Boundary** appears.



3. While holding the mouse/touchpad select button, drag the **Component Boundary** left or right to the desired position, and then release the mouse/touchpad select button. The adjacent tab boundary moves to accommodate the fixed width of the monitor row.

Reposition an Individual Component

You can move an individual component to a different location in the interface. There are different types of repositioning operations:

- Insert a component between:
    - Two components.
    - A component and the end of a row.

  See Insert a Component to the Left, Right, Above or Below Another Component.

- Add a component to a **Tab Group**. *See Tab Groups.*
- Float a component on top of the other components. *See Float a Component.*

Note that only individual components can be moved in a move operation. **Tab Groups** cannot be moved as a unit.

Float a Component

A component can float, i.e., display, on top of other components, not anchored to other interface elements.

To float a component:

- Right-click the tab of the component that you would like to float, then select **Float** from the dropdown. The component appears at the top left of the UI.

or

1. Click and hold the mouse/touchpad select button on the tab of the component that you would like to float.
2. Drag the component by its tab or top bar, from its current position. The **Guide Diamond** appears.
3. Drag the component to the desired location. Make sure to not select a drop zone on the **Guide Diamond**.
4. Release the cursor. The component floats on top of the UI.

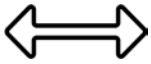
A floating component displays the familiar **Maximize** (□) and **Close** (**x**) icons.

You can maximize the component for closer inspection. When maximized, the floating component displays the familiar **Restore** (❐) and **Close** (**x**) icons.

Resize a Floated Component

To change the width of a floated component:

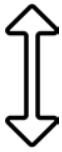
1. Hover over the left or right border of the component, until the horizontal arrow appears.



2. Press and hold the mouse/touchpad select button. While holding the mouse/touchpad select button, drag the boundary left or right to the desired position, and then release the select button.

To change the height of a floated component:

1. Hover over the top or bottom border of the component, until the vertical arrow appears.



2. Press and hold the mouse/touchpad select button. While holding the select button, drag the boundary up or down to the desired position, and then release the select button.

To simultaneously change the width and height of a component:

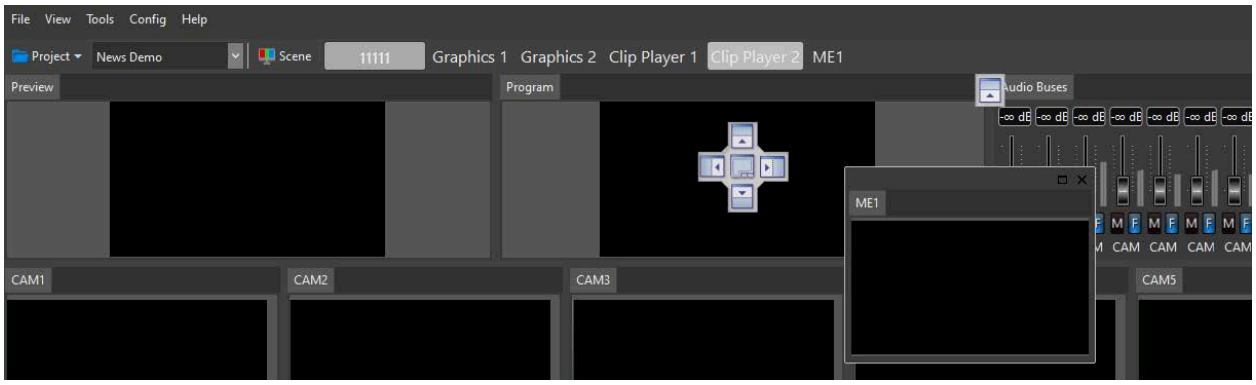
1. Hover over a corner of the component, until the diagonal arrow appears.

2. Press and hold the mouse/touchpad select select button. While holding the select button, drag the corner to the desired position, and then release the select button.

Insert a Component to the Left, Right, Above or Below Another Component

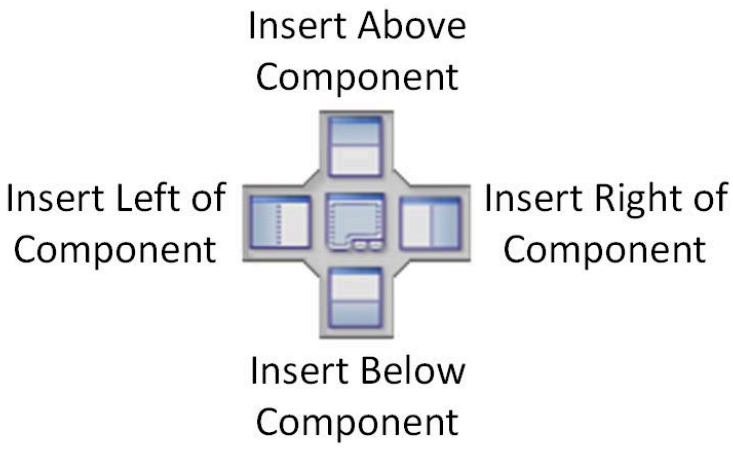
To insert a component to the left, right, above or below another component:

1. Depending on the initial position of the component:
    - If the component is not in a **Tab Group**, then press and hold the mouse select button on the tab of the component that you would like to insert to the left, right, above or below another component.
    - If the component is in a **Tab Group**, then press and hold the mouse select button on the tab of the component that you would like to insert to the left, right, above or below another component.
2. Drag the component that is to be inserted, to the approximate location of the point of insertion, until the **Guide Diamond** appears. In this example, the **ME1Monitor** is to be inserted between **Program Monitor** and the **Audio Buses**.

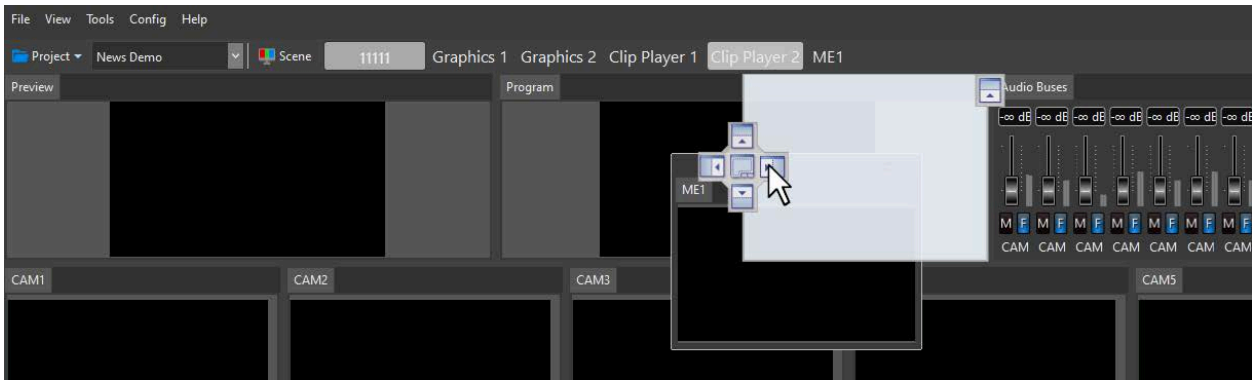


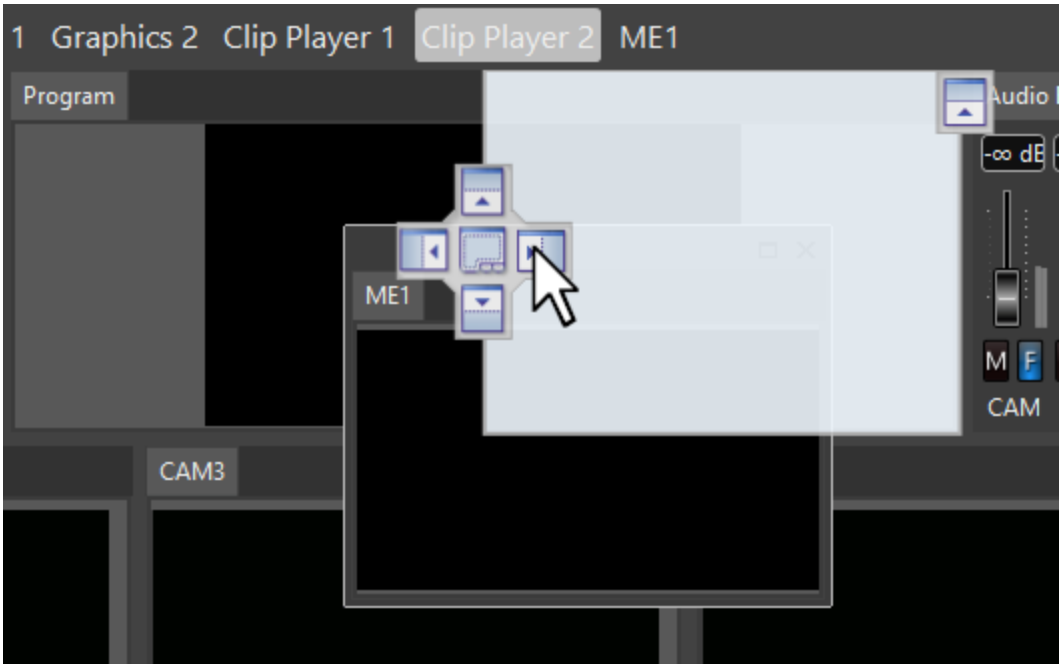
You may see a smaller arrow tracking along with the larger arrow. The smaller arrow disappears once the larger arrow is over the **Guide Diamond**.

3. Continue to drag the component until the arrow cursor is over the drop zone within the **Guide Diamond** that specifies the direction in which you would like to insert the component:

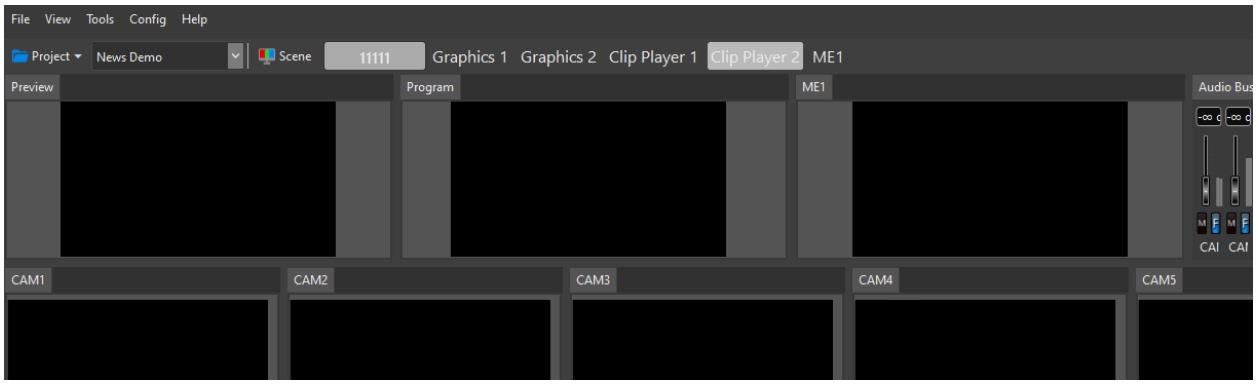


A white box appears at the point of insertion, and shows the area to be occupied by the inserted component. The following figure shows that the **Mix Effects 1** tab is about to be inserted to the right of the **Program Monitor** tab. Note the position of the arrow over the **Insert Right** drop zone on the **Guide Diamond**.





- Release the mouse/touchpad select button. The component inserts at the position outlined by the white box.

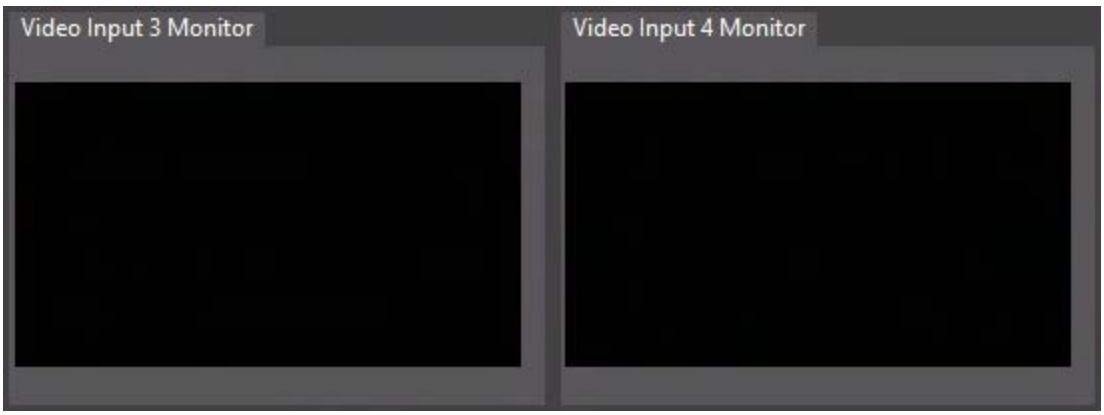


4. If desired, then resize the components.

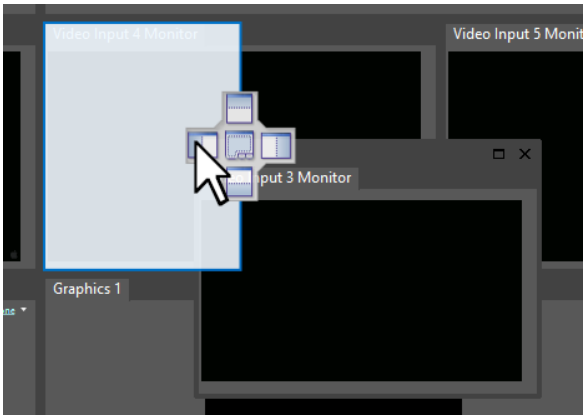
Experiment with inserting a tab to the left, right, above and below a tab. The following example shows **Video Input 3** being moved to the left, right, above and below **Video Input 4**.

When trying each exercise, reset the UI so that you start from the same point each time.

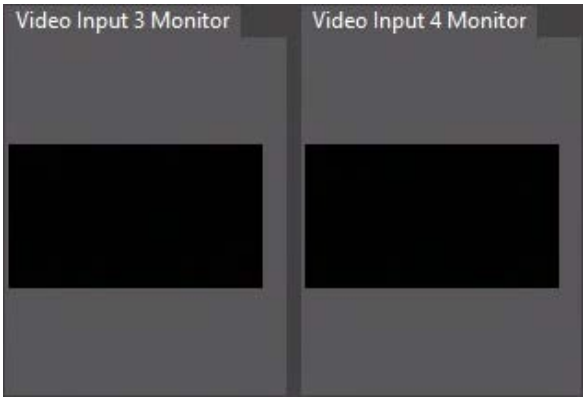
Initial Tab Positions



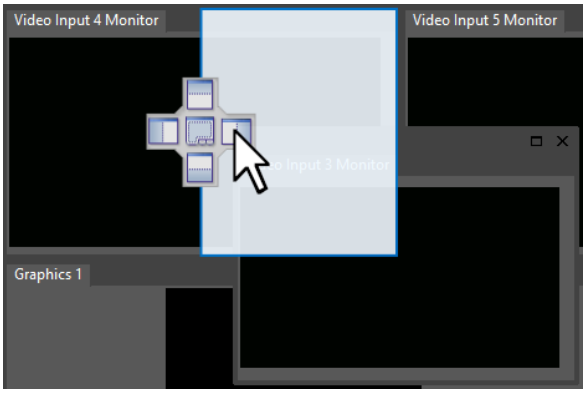
Insert to the Left



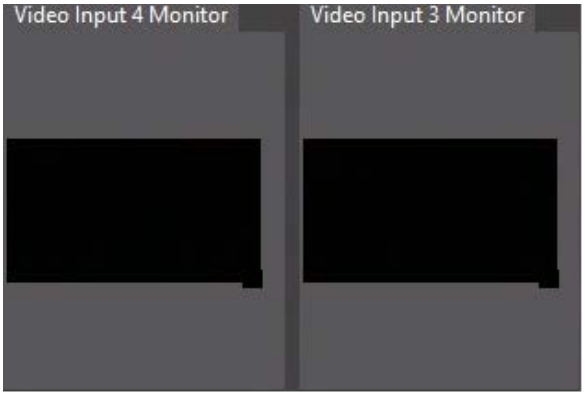
Result

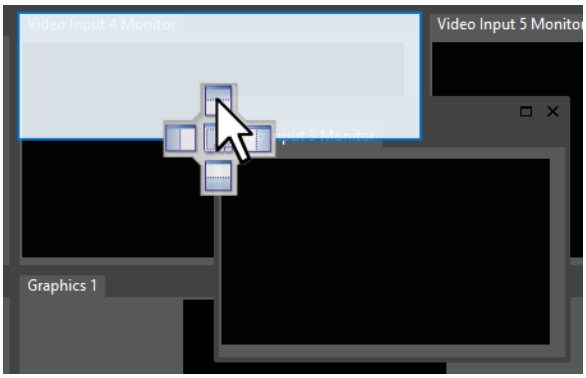
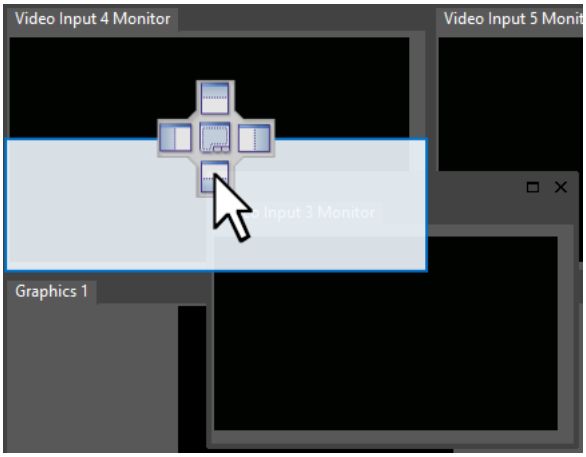
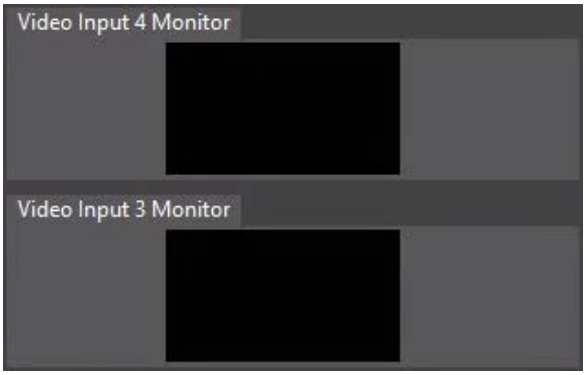


Insert to the Right



Result



Insert Above	Result
	
Insert Below	**Result**
	

Insert a Component at the Edge of the PRIME Switcher UI

You can insert a component at the edge of the UI. To do so, use a similar method as when working with the central element of the **Guide Diamond**, except use an outer element/drop zone of the **Guide Diamond** to insert the component. The outer elements/drop zones are located at the edges of the PRIME Switcher UI.

- **Insert Left of UI Border**
- **Insert Right of UI Border**
- **Insert above Top Row**
- **Insert below Bottom Row**

When you insert a component in this manner, the repositioned component resizes to the same width as the UI (if inserted above or below the UI), or the same height as the UI (if inserted to the left or right of the UI). You may need to further adjust the UI to create an optimal layout. If you would like to reuse the layout, then make sure to save it.

Tab Groups

Tab Group Overview

You can create **Tab Groups** to logically group components and/or to save space on the PRIME Switcher UI. Each component is in its own tab, with only the contents of the selected tab displayed, but other tabs are visible and selectable.

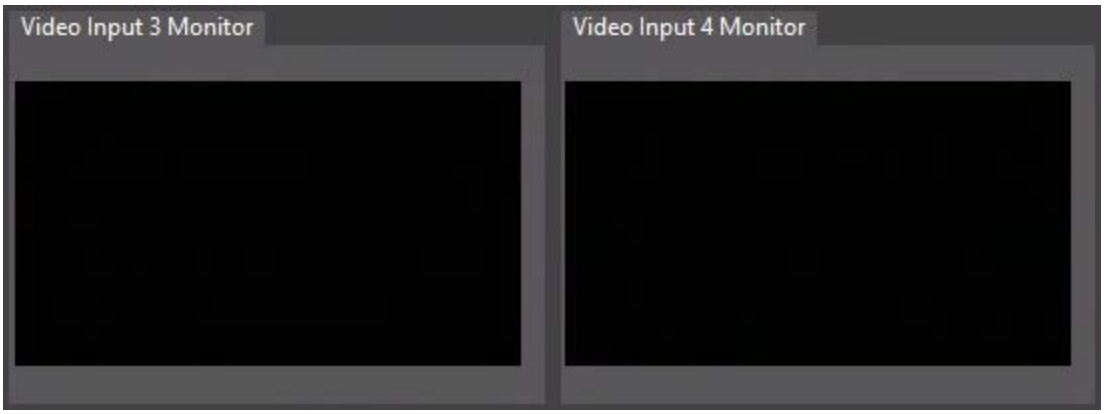
A **Tab Group** can contain two or more tabs.

If the component is not wide enough to display the names of all of the tabs, then only one tab appears. You can resize the component to display the tab names. *See Resize Component Width.*

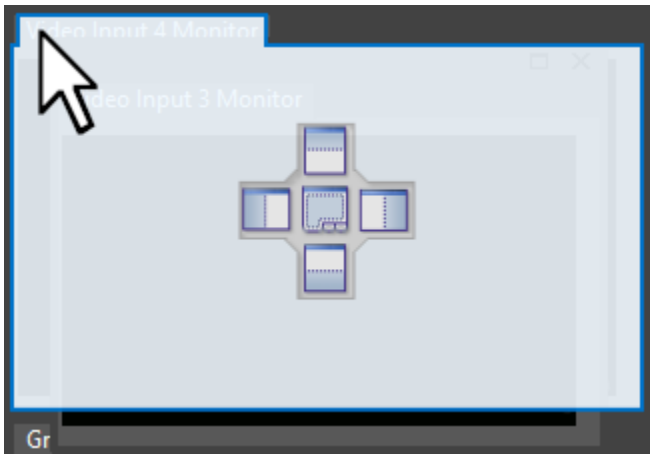
Display Multiple Components in a Tab Group

To display multiple components in a **Tab Group**:

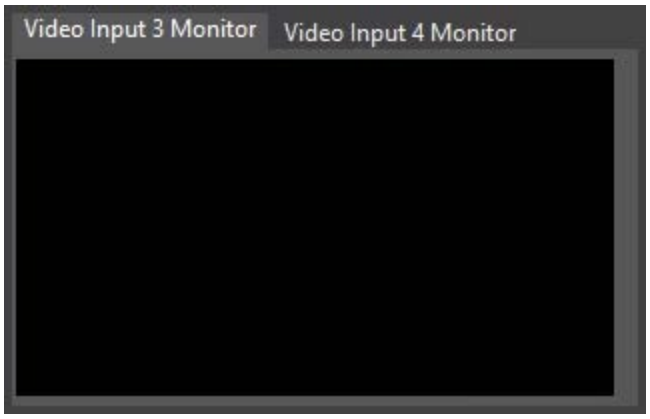
1. Select the tab of the component that you would like to merge into the space of a second component.



2. Drag the selected tab on top of the second component, until the white **Insert Tab** appears.



3. Drag the white tab to the desired position, and then release the mouse/touchpad select button. The **Tab Group** appears.



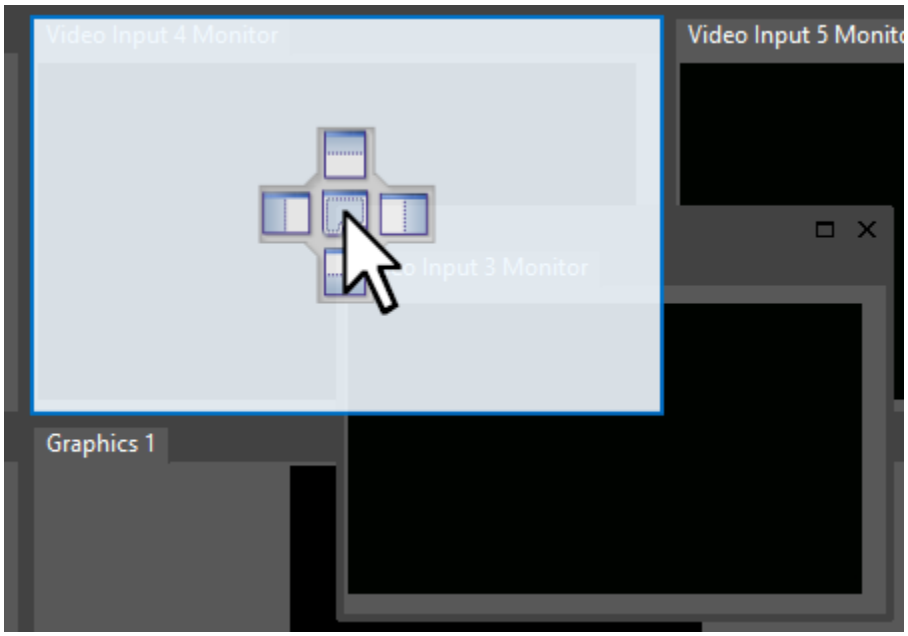
4. If desired, then do one of the following to resize the component:
    - Drag the left and/or right boundaries to remove the excess space to the left and right of the tab group.
    - If only one tab is visible, then drag the left and/or right boundaries to widen the tab group until all tabs display.

If the tab that receives the merging tab is not wide enough to display multiple tabs, then the added tab is automatically positioned on top of the tab(s) to which it is added.

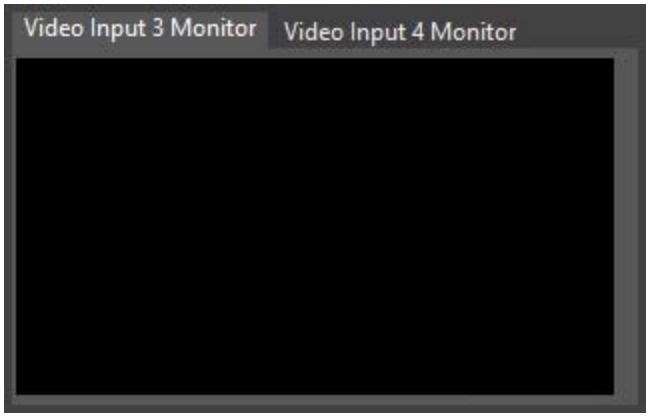
Create Tab Group Using the Guide Diamond

To create a **Tab Group** using the **Guide Diamond**:

1. Select the tab that you would like to merge into the space of a second component.
2. Drag the selected tab on top of the second component, until the white **Insert Box** appears.



3. Release the mouse/touchpad select button. The **Tab Group** appears. Note that the tab that was dragged to merge with the second tab is positioned at the left of the **Tab Group**.



4. If desired, then do one of the following to resize the component:
    - Drag the left and/or right boundaries to remove the excess space to the left and right of the **Tab Group**.
    - If only one tab is visible, then drag the left and/or right boundaries to widen the **Tab Group** until all tabs display.

If the tab that receives the merging tab is not wide enough to display multiple tabs, then the added tab is automatically positioned on top of the tab(s) to which it is added.

To add additional tabs:

- Repeat the above procedure.

Display a Specific Component of a Tab Group

To display a specific component of a **Tab Group**:

- Select the component's tab.

Reposition a Tab within a Tab Group

To reposition a tab within a **Tab Group**:

- Drag the tab to the desired position.

Remove a Tab from a Tab Group

To remove a tab from a **Tab Group**, do one of the following:

- Right-click the tab, then select **Float** from the dropdown menu.
- Drag the tab out of the **Tab Group** to the desired location.

Other Tab Operations

How Do I Locate a Hidden Tab?

When grouping tabs, one or more tab(s) may be completely covered by another tab, or may completely cover another tab(s). When this occurs, the **Tab Group** looks like a single tab, or in a **Tab Group** with more than two tabs, not all tab names in the **Tab Group** may be visible.

If you do not see a specific component on the UI, first check the **View** menu to make sure that the display of the component is enabled. *See* *Enable/Disable Component Display*. If the component is enabled for display, then perform one of the following three procedures:

I. Drag Border

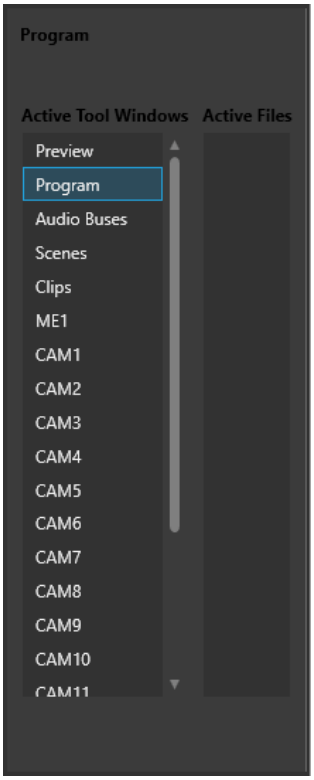
- Drag the left or right border ⟺ of the tab that may be hiding the lost tab, in order to widen the component. If the tab is in the same **Tab Group**, then it should appear.

II. Right-Click Tab

1. Right-click the tab that may be hiding the missing tab.
2. Float the tab, or drag the tab to a different location to reveal the missing tab.

III. The Active Tool Windows/Active Files Panel

1. Select (click) any component tab on the UI.
2. Press and hold the **Ctrl** key and while holding the **Ctrl** key, press the **Tab** key. The **Active Tool Windows/Active Files** panel appears.



The selected tab name appears as the title of the panel and the name is highlighted in the **Active Files** list.

The order of the components in the list may be different than shown in the figure, depending upon the switcher configuration, the presence of one or more **Tab Groups**, and/or if you have previously selected an item from the list.

3. While holding the **Ctrl** key, perform one of the following operations:
    - Press the **Tab** key to advance through the list until you reach the component that you would like to view on the UI. When you reach the end of the list, pressing the **Tab** key cycles to the beginning of the list. As you tab through the list, the tab name at the top of the panel reflects the name that is highlighted. While holding the **Ctrl** key, you can use the mouse to drag the scroll bar to view hidden items.
    - Do one of the following:
        - Release the **Tab** key. The panel closes and the selected tab appears on the UI.
        - Click the name of the component that you would like to view on the UI. You can use the scroll bar to view hidden items. The panel closes and the selected tab appears on the UI.

    Note that displaying the tab may hide one or more other tabs.

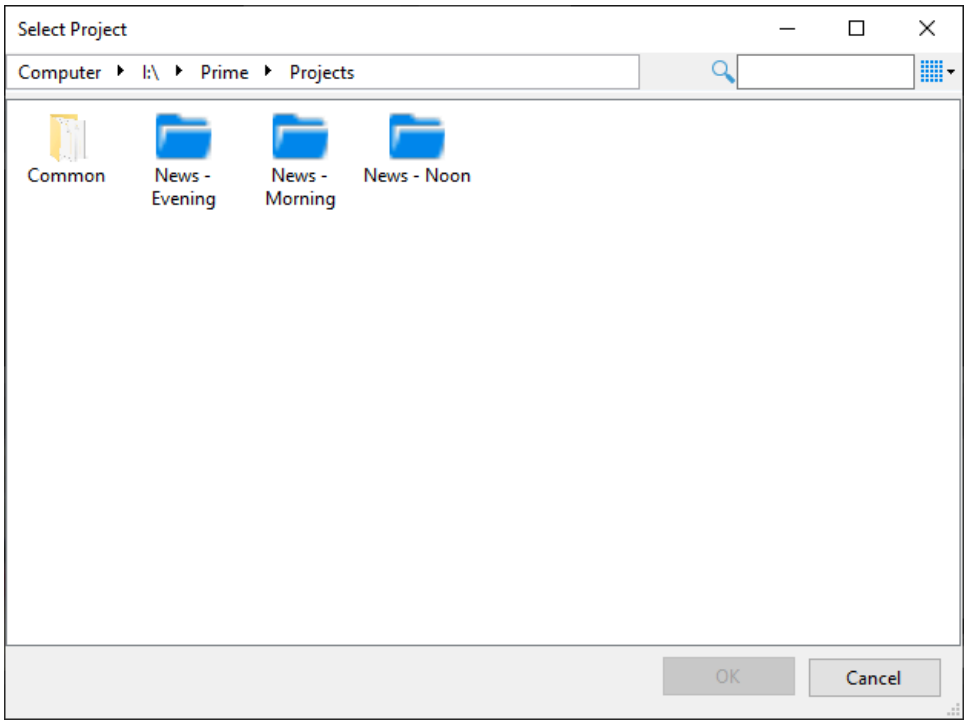
How Do I Reset the Tabs on the PRIME Switcher Interface?

See Reset Layout to Default.

Project Operations

Project Overview

A project is the main PRIME “container” that holds all of the assets associated with a specific show, production, look, etc. Assets include scenes, images, clips, playlists, scripts, and more. A project is defined by a project folder, and the name of the project folder is the name of the project. The following shows that the PRIME Projects folder contains three projects: **News - Evening**, **News - Morning**, and **News - Noon**.



The **Common** folder can contain assets that are common to multiple projects, so as to save the duplication of assets among projects, ensure consistency and save space. Note, however, that when you copy/publish a project to a location that does not have access to the **Common** folder assets, the project will be missing assets. Therefore, ensure that the assets necessary for the project are included in the copy/publish.

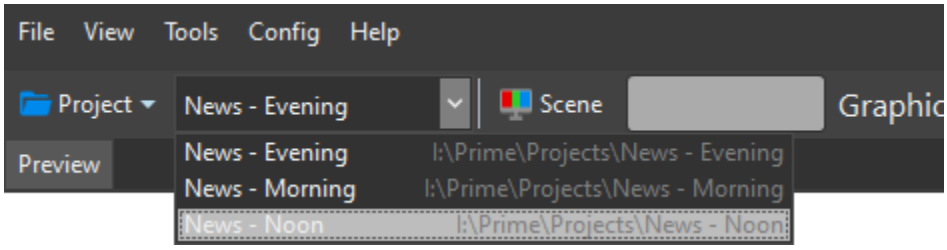
*See **Assets Browser** for additional information on managing projects and assets.*

Open a Project

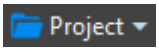
You can select the project to load into the PRIME Switcher.

To select a project, do one of the following:

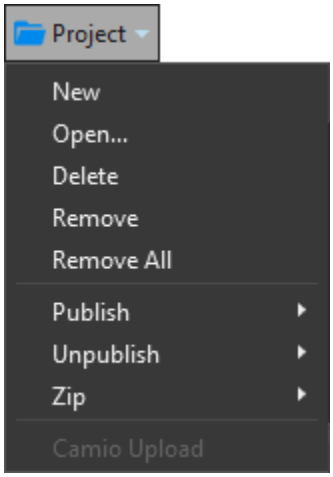
- Click the **Project Recall** dropdown arrow, then select the project that you would like to open. The white outline indicates the currently loaded project. The blue outline indicates the project about to be loaded.



- From the **Project Folder** icon:

1. Click the **Project Folder** icon 

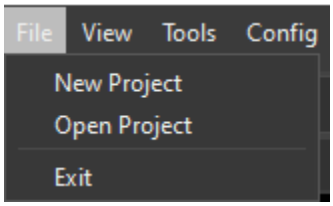
, and then select **Open**.



2. Browse to and select the project that you would like to open, and then click **OK**.

- From the **File** menu:

    1. Go to **File > Open Project**.



    2. Browse to and select the project that you would like to open, and then click **OK**.

Opening a project loads the project's assets (**Scenes**, **Clips**, etc.).

Create a New Project

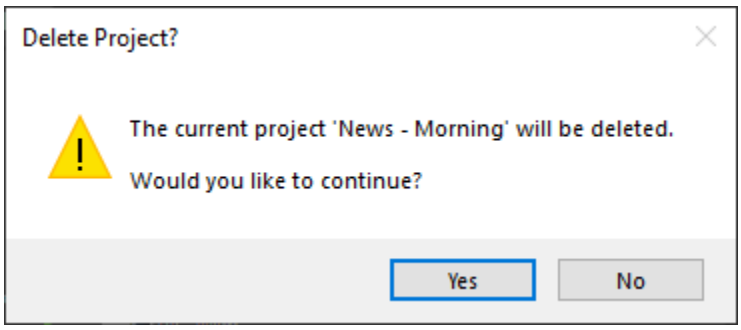
To create a new project, do one of the following:

- Click the **Project Folder** icon, select **New**, browse to the location where you would like to create the new project, click the **New Project Folder** button, enter the name of the project as the folder name, and then click **OK**.
- Go to **File > New Project**, browse to the location where you would like to create the new project, click the **New Project Folder** button, enter the name of the project as the folder name, and then click **OK**.

Delete a Project

To delete the currently open project and all files associated with it:

1. Go to **File > Delete Project**. **The Delete Project?** Prompt appears.



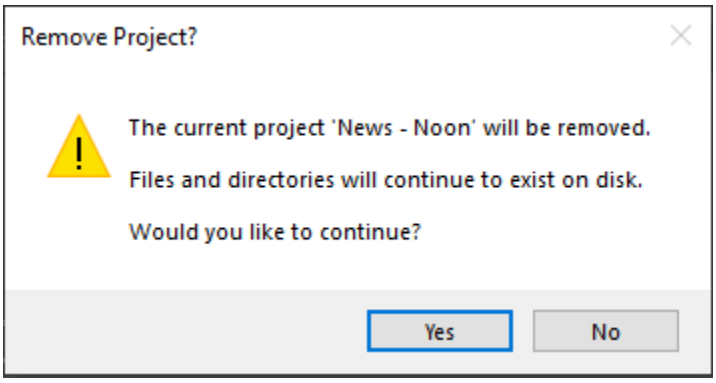
2. Click **Yes**.

The project and its files are deleted.

Remove a Project

To remove the currently open project from the PRIME Switcher interface, i.e., remove the display of the project from the Project **Recall** dropdown:

1. Go to **File > Remove**. The **Remove Project?** prompt displays.



2. Click **Yes**. The project no longer appears in the **Project Recall** dropdown.

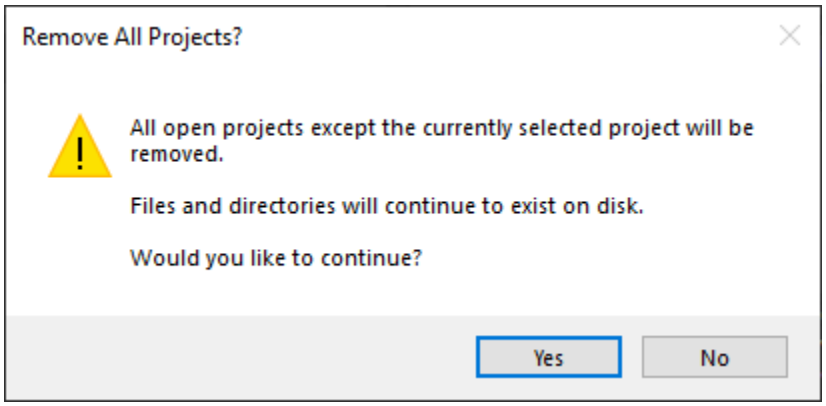
Removing a project does not delete the project or its assets. To display a project that you have removed:

- Open the project.

Remove All Projects

To remove all open projects, except the currently selected project from the PRIME Switcher interface, i.e., remove the display of the projects from the Project **Recall** dropdown:

1. Go to **File > Remove All**. The **Remove All Projects?** prompt appears.



2. Click **Yes**. The project no longer appears in the **Project Recall** dropdown.

Removing the projects does not delete the projects or their assets.

Display a Project that Has Been Removed

To display a project that you have removed:

- Open the project.

Publish, Unpublish a Project

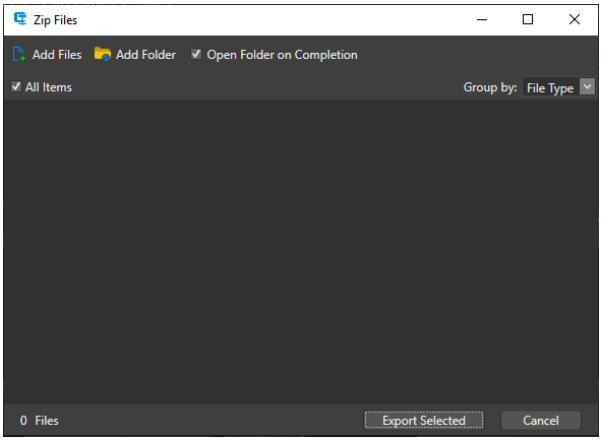
See the PRIME User Guide and the Content Distribution User Guide for information on publishing and unpublishing projects.

Zip a Project

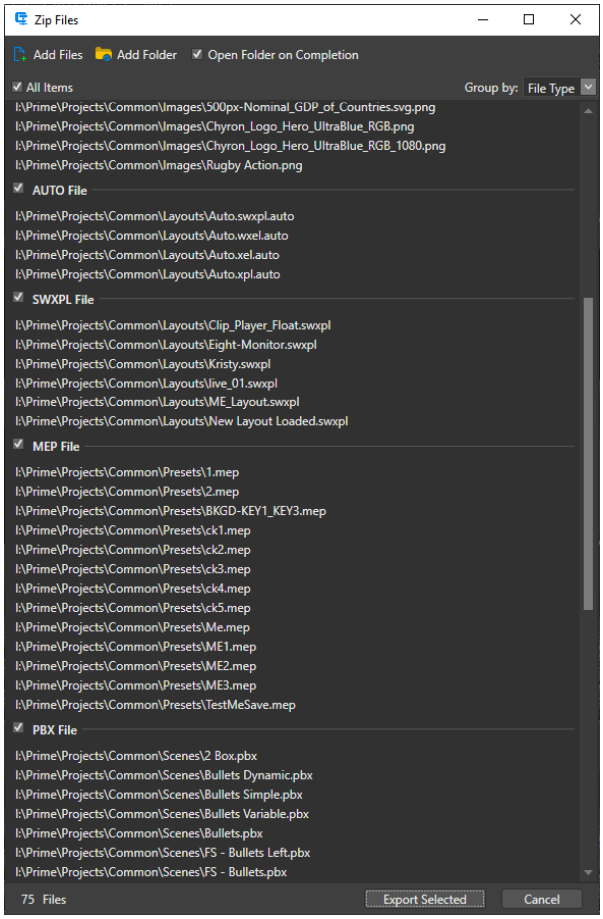
You can zip a project's assets for future use on the same or other systems. To zip a project's assets:

1. Click the **Project Folder** icon, and then select **Zip**.
2. From the sub-menu, select one of the following:
    - **Project:** Zips only the project files.
    - **Project and Common Folder:** Zips the project and **Common** folder files.
3. The **Zip Files** dialog appears. Add the files that you would like to zip. Note that the **Zip Files** dialog that displays if you selected **Zip Project** is different from the **Zip Files** dialog that displays if you selected **Project** and **Common Folder**.

Zip Project



Zip Project and Common Folder



4. Click **Export Selected**.

5. Browse to the desired location, and then click **Save**.

Recall Elements

Recall Element Overview

PRIME **Recall** elements provide the ability to open/create/save projects, enter **Clip**, **Graphic (Scene)**, **Mix Effect Preset**, UI **Layout** names and ID numbers.

Actions that you perform in the **Recall Area**, on the **Keypad**, on your system keyboard, or an external keypad or keyboard, are reflected in the **Recall Area** and the **Keypad**. For example:

- If you select **Graphics 1** in the **Recall Area** on the **Keypad**, the **Graphics 1** button becomes active in the **Recall Area**.
- If you then enter **1234** from an external keypad, then it displays in the **Recall Box**.

NOTE: If, when entering an ID, the ID does not appear in the Recall Box, then you must change the cursor focus to the Recall Box. To do so:

- **Click the Recall Box. You can also set a Keyboard Shortcut to change focus to the Recall Box.**

You can select a **Clip Player**, **Graphics Player**, or **ME1** using any of the following methods:

- Click the **Clip Player** or **Graphics Player** in the UI. Does not apply to **ME1**.
- Click the **Clip Player** or **Graphics Player** button on the **Keypad**.
- Click the **Clip Player** or **Graphics Player** button in the **Recall Area**.

NOTE: You can set Keyboard Shortcuts to perform any of the functions provided by the Recall Area and the Keypad.

Recall Area/Recall Box

Recall Area/Recall Box Overview

From the **Recall Box**, located in the **Recall Area** at the top left of the UI, you can recall **Clip**, **Graphic (Scene)**, **Mix Effect Preset** names and **ID** numbers.

Recall Area component selection is reflected in the **Keypad.**

*See Clip Player, Graphics Player and Mix Effect Presets for information on **Recall Area/Recall Box** operations specific to each.*

Select a Graphics Player, Clip Player, or ME1 (Mix Effects) Bank

Using the **Recall Area/Recall Box**, you can perform **Load**, and **Play** operations on any of the following components: **Graphics Player 1**, **Graphics Player 2**, **Clip Player 1**, **Clip Player 2**, and the **ME1 Bank**. Each component has its own button. When a button is selected (highlighted), then you can enter an **ID**, and perform the operations.

Note that only components configured in PRIME Switcher display in the **Recall Area**. For example, if only **Graphics 1**, **Clip Player 1**, and **ME1 Bank** are configured, then the **Recall Area** displays only the **Graphics 1**, **Clip Player 1**, and **ME1 Bank** buttons.

To select the active component, i.e., **Graphics 1**, **Graphics 2**, **Clip Player 1**, **Clip Player 2**, **ME1**:

- Click the component name.

The following figure shows **Graphics 1**, **Graphics 2**, **Clip Player 1**, **Clip Player 2** and **ME1**. **Clip Player 2** is highlighted, which enables you to perform operations with **Clip Player 2**.

Set Visibility of Recall Area Components

*You can set the visibility/operability of individual **Clip**, **Graphics** and **ME1** components in the **Recall Area**. See Set Visibility/Operability of Recall Area and Keypad Components.*

Enter Clip, Graphic, or Mix Effect Preset ID Number Directly in the Recall Box

To enter a clip, graphic, or **Mix Effects ID** number directly in the **Recall Box**:

1. Click the **Clip Player**, **Graphics Player** or **ME1 Bank** for which you would like to enter the **ID** number.
2. If the focus is not already in the **Recall Box**, then click the **Recall Box**.
3. Enter (type) the **ID** in the **Recall Box**.

The **ID** number displays in the **Recall Box**.

Keypad

Keypads and Keyboards

Keypad/Keyboard Type Overview

You can perform **Clip**, **Graphic**, and **ME1 ID** entry, layout and other operations using the PRIME Switcher numeric keypad, a physical numeric keypad, an alphanumeric keyboard, the Chyron Advanced Keyboard, or an X-Keys keyboard. You can use them in any combination.

PRIME Switcher Numeric Keypad

The **PRIME Switcher Numeric Keypad** is a component of the PRIME interface. To enter ID numbers, click the number keys. In this User Guide, it is referred to as a "**Keypad**" or "**PRIME Switcher Keypad**."

Physical Numeric Keypad

The physical numeric keypad is a physical set of keys, with a layout similar to the PRIME Switcher **Keypad** that may be located on a PC keyboard, the Chyron Advanced Keyboard, or may be a separate physical component. The number keys may also function as cursor keys, depending whether or not **NumLock** is enabled. To enter an **ID** number, press the number keys. In this User Guide, it is referred to as a "**physical keypad**" or "**external keypad**." From the PRIME interface, you can set the use of the physical keypad to allow or not allow numeric entry.

Alphanumeric Keyboard

The alphanumeric keyboard is the PC or Chyron keyboard that includes letters, symbols and numbers. The numbers that you enter are located in a row near or at the top of the keyboard. You can enter numeric and alphanumeric **IDs** using the alphanumeric keyboard.

Keypad Overview

The **Keypad** is typically located at the bottom right of the PRIME Switcher interface, but you can reposition it. You can perform operations pertaining to **Clips**, **Graphics (Scenes and Messages)** and **Mix Effect Presets**.

You can perform the following functions from the **Keypad**:

- Select **Clip Player 1** or **2**, **Graphics Player 1** or **2**, or **ME1** component.
- Enter **ID** numbers.
- **SAVE Mix Effect Preset**. Not available to clips, graphics.
- **CLEAR** graphic, clip. Not available to **ME1**.
- **PLAY** graphic, clip, **Mix Effect Preset**.
- Display **ID** of **PREV**ious available graphic, clip, **Mix Effect Preset**.
- Display **ID** of **NEXT** graphic, clip, **Mix Effect Preset**.
- **LOAD** graphic, clip, **Mix Effect Preset**.
- **DEL**ete **ID** from the **Recall Box**.

Keypad component selection, **ID** entry, **PLAY**, **PREV**, **NEXT**, **LOAD** and **DEL** operations are reflected in the **Recall Area/Recall Box.**

The **Macros** (labeled **M1** - **M8**) buttons have not yet been implemented, and will be operational in a future release.

*See Clip Player, Graphics Player and Mix Effect Presets for information on **Keypad** operations specific to each.*

Set Operability of Keypad Components

*You can set the operability of individual **Clip**, **Graphics** and **ME1** components in the **Keypad**. See Set Visibility/Operability of Recall Area and Keypad Components.*

Select a Graphics Player, Clip Player, or ME1 (Mix Effect) Bank

Using the PRIME Switcher keypad, you can perform operations such as **LOAD** and **PLAY** on any of the following components: **Graphics Player 1**, **Graphics Player 2**, **Clip Player 1**, **Clip Player 2**, and the **ME1 Bank**. Each component has its own button. When a button is selected (highlighted), then you can enter an **ID**, and perform the operations provided by the keypad.

Note that only components configured in PRIME Switcher are available to the keypad. For example, if only **Graphics 1**, **Clip Player 1**, and **ME1 Bank** are configured, then only those buttons on the **Keypad** are active. The **Graphics 2** and **Clips 2** buttons would be grayed out.

To select the active component (i.e., **Graphics 1**, **Graphics 2**, **Clip Player 1**, **Clip Player 2**, or **ME1 Bank**):

- Click the component's button. The following shows **Graphics 2** selected.

Enter Clip, Graphic, or Mix Effect Preset ID Number

To enter an **ID** number:

1. Click the **Clip Player**, **Graphics Player** or **ME1 Bank** for which you would like to enter the **ID** number.
2. If the focus is not already in the **Recall Box**, then click the **Recall Box**.
3. Click the numbers in the keypad.

The **ID** number displays in the **Recall Box**.

Enter a Clip, Graphic, or Mix Effect Preset ID Number by Navigating the Browser

To enter a clip, graphic, or **Mix Effects ID** number by navigating the **Browser**:

1. Click the **Clip Player**, **Graphics Player** or **ME1 Bank** for which you would like to enter the **ID** number.
2. If the focus is not already in the **Recall Box**, then click the **Recall Box**.
3. Click **PREV** or **NEXT** to navigate through the browser until the desired **ID** displays in the **Recall Box**.

Clear the Recall Box in the Recall Area

To clear the **Recall Box** in the **Recall Area**:

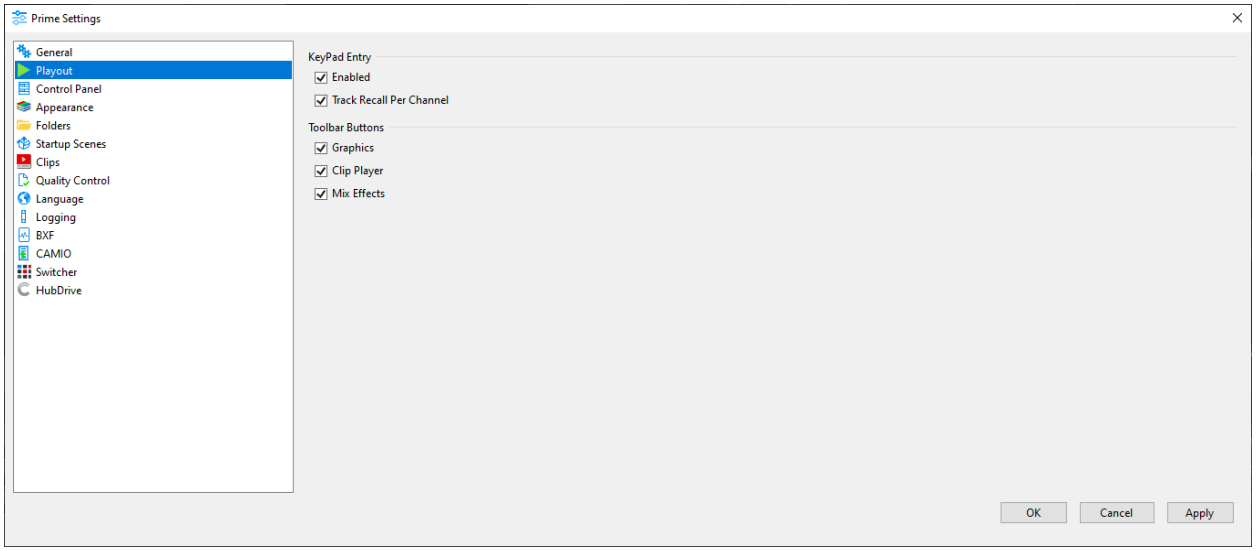
- Click **DEL**.

Playout Settings

Playout Settings Overview

Playout settings include enabling/disabling the automatic focus for the physical keypad, tracking recall per channel, and enabling/disabling **Recall Box**/PRIME Switcher keypad entry for clips, graphics and **ME1**. To access **Playout** settings:

- Go to **Config > Playout Configuration > Settings**.



Set Physical Keypad Automatic Focus Enable/Disable

You can set whether or not using a physical keypad automatically enters an **ID** into the **Recall Box**, or if you must first click the **Recall Box** or use a **Keyboard Shortcut** to change the focus to the **Recall Box**.

Regardless of the setting, the PRIME Switcher keypad displayed in the PRIME Switcher UI always focuses on the **Recall Box**, as are the number keys located in the top row of a computer keyboard.

To enable the use of a physical keypad:

- Check the **Enabled** checkbox.

To disable the use of a physical keypad:

- Uncheck the **Enabled** checkbox.

Set Keypad Entry Track Recall per Channel

The **Recall Area** and the PRIME Switcher keypad can keep track **IDs** for each channel, or not keep track per channel.

To keep track per channel:

- Check (enable) the **Track Recall per Channel** checkbox. When enabled, the keypad independently tracks the IDs for each channel, i.e., **Clip1**, **Clip 2**, **Graphics 1**, **Graphics 2**, and **ME1**, so that the **Recall Box** contains the most recent **ID/Name** for the selected channel.

To not track each channel:

- Uncheck (disable) the **Track Recall per Channel** checkbox.

Set Visibility/Operability of Recall Area and Keypad Components

You can enable/disable the visibility of the **Recall Box Components** and operability of the **Keypad** components. Components are as follows: **Graphics 1/2**, **Clips 1/2**, and **ME1**.

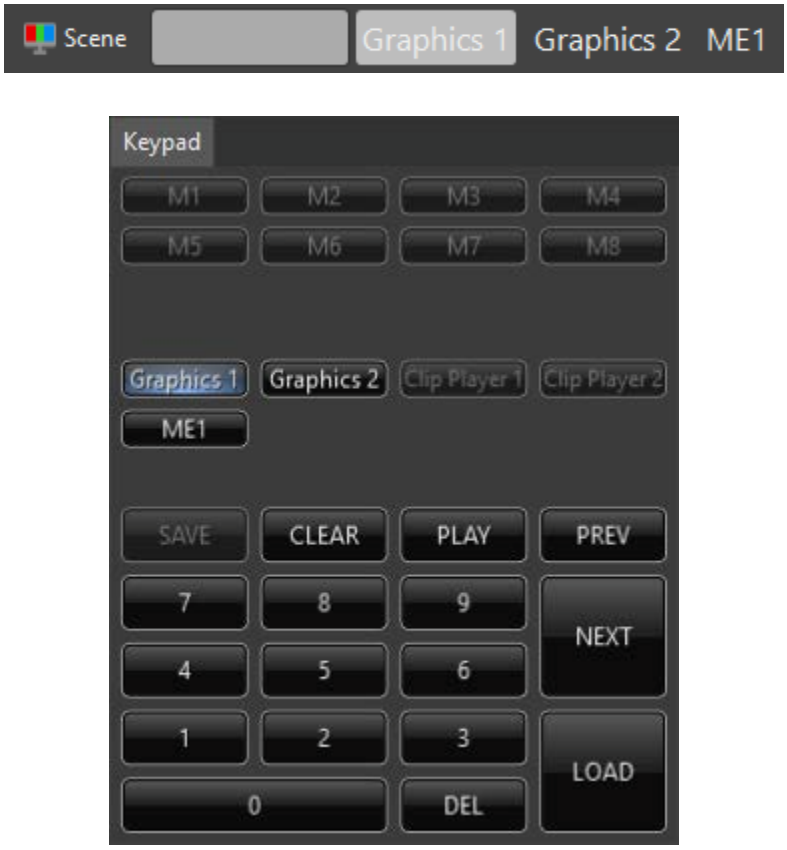
- When a component is enabled, you can perform **Recall Area** and **Keypad** operations involving the component, e.g., select a **Clip Player**, enter an **ID** number, load a clip, and play the clip.
- When a component is disabled:
    - You cannot access the component from the **Recall Area** or from the **Keypad**.
    - If **Clip Player** is disabled, then none of the **Clip Player** buttons display in the **Recall Area**, and the **Graphics Player** buttons in the keypad are grayed out and are non-functional. You can still drag and drop clips from the **Clips Browser** into a **Clip Player's Playing** or **Cued** channels.
    - If **Graphics** is disabled, then none of the **Graphics Player** buttons display in the **Recall Area**, and the **Graphics Player** buttons in the keypad are grayed out and are non-functional. You can still drag and drop graphics from the **Scenes Browser** into a **Graphics Player's Preview** or **Program** channels.
    - If **Mix Effects** is disabled, then the **Mix Effects Bank** is still operational.

You can disable a maximum of two out of the three items; i.e., **Graphics** and **Clip Player**, **Clip Player** and **Mix Effects**, or **Mix Effects** and **Graphics**.

To set:

1. Go to **Config Menu > Settings > Playout**. The **PRIME Settings Playout** dialog appears.
2. In the **Toolbar Buttons** checkboxes, check the desired component(s) to enable visibility of the **Recall** elements and operability:
    - **Graphics**
    - **Clip Player**
    - **Mix Effects**
3. Click either:
    - **Apply**, if you are continuing to modify other settings; or,
    - **OK** to close the dialog. The **Playout** settings are applied. There is no need to restart PRIME Switcher.

The following example shows the **Recall Area** and the **Keypad** with **Clip Player** disabled. The **Clip Player** buttons do not appear in the **Recall Area**, and they are grayed out in the **Keypad**.



Mix Effects Load/Save Recall Field

The **Mix Effects Recall** provides the ability save and recall (load) **Mix Effects Presets**. *See Mix Effect Presets.*

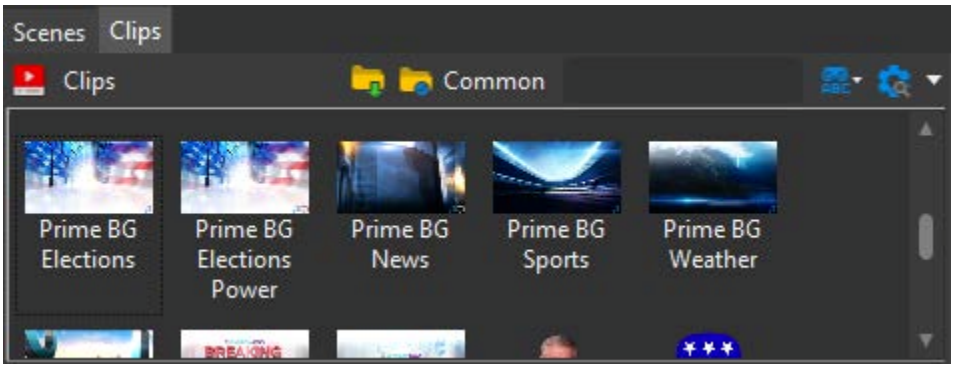
Layout Recall Dropdown

The **Layout Recall Dropdown** provides the ability to recall saved PRIME Switcher UI Layouts. *See Load a UI Layout.*

Assets Browser

The **Assets Browser** provides access to assets, such as graphics and clips, that PRIME Switcher may use. By default, PRIME Switcher displays the **Scenes Browser** and **Clips Browse**. Also by default, multiple **Assets Browsers** display within the same **Tab Group**. You can change the **Assets Browser** display and save to a custom layout.

The following figure shows a **Scenes Browser** tab, and a **Clips Browser** tab, which displays thumbnails of the available clips. You can isolate, resize, and reposition a tab. *See Tab Groups for details on tab operations.*



You can add, remove, and change the display mode of an **Assets Browser**, navigate to other folders from within the browser, and perform operations such as **Cut**, **Paste**, and **Delete**.

*See Assets Browser for details on **Assets Browser** operations.*

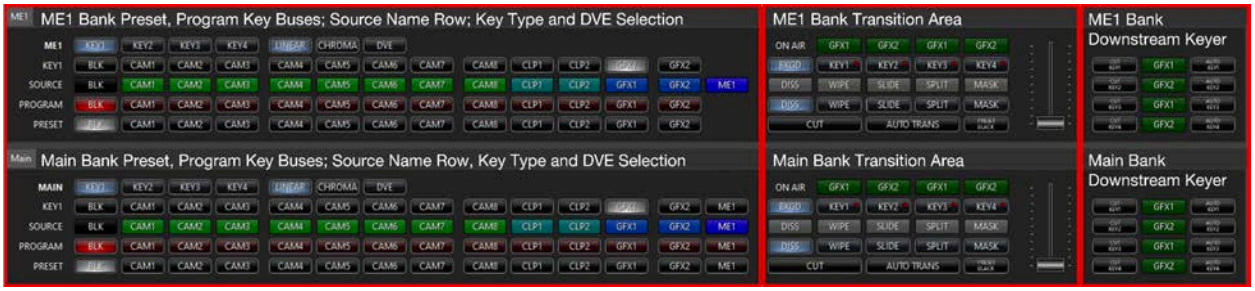
Banks and Buses

Switcher Bank

A switcher bank is comprised of three main areas:

- **Buses and Key Settings**
- **Transition Area**
- **Downstream Keyer**

The following figure shows two switcher banks, **Main** and **Mix Effects (ME1)**:



Bus Overview

A bus is a row of buttons, with each button capable of activating a video, graphics, clip, or **Mix Effects** source. Switchers usually provide three buses per bank, and the PRIME Switcher does, as well:

- **Program:** The selected source is set to display in **Program**.
- **Preset:** The selected source is set to transition to **Program**.
- **Key:** The **Key Bus** can specify:
    - A **Key** source that is set to display in **Program** or **Preview** (when lit red); or,
    - A **Key** source that is set to transition from **Preview** to **Program** (when lit white).

  The **Key Bus** can reflect a **Key** that has been set in the **Transitions Area** or the **Downstream Keyer**.

Each button on each bus is associated with a source, either input or internal. When you press a button, the source is sent to the output of that bus. The **Program** and **Preset** buses indicate their respective sources.

In addition:

- The middle row in the **Bus** area displays the names of the sources.
- The middle row in the **Transition Area** displays the names of the transitions.
- The top row of the **Bus Area** displays provides the ability to:
    - Select a **Key Bus** to view and set.
    - Select the type of **Key** to apply: **Linear** or **Key**.
    - Set a **DVE**.
- The top row of the **Transition Area** indicates the **Keys** that are **On Air**, i.e., in **Program**.

In the following figure, **Main Bank** switcher buses are configured for eight **Video Inputs**, two **Clip Players**, two **Graphics Payers**, and **ME1** (output of the **ME1 Bank** feeding the **Main Bank**).

- A red-lit button indicates that the selected source is sent to **Program** output.
- A white-lit button indicates that the selected **Preset** source is set for transition to **Program**.

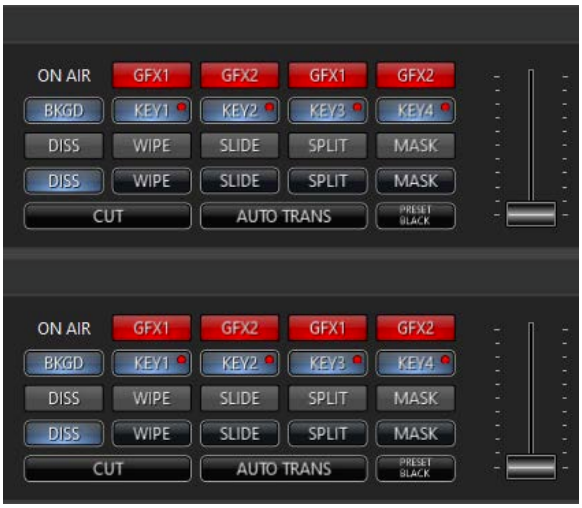
Note that there are situations specific to the **Next Transition Selection** buttons, where the behavior may be different. *See* *Next Transition Selection*.

You can edit video source names in **PRIME Switcher Source Configuration**. *See* *Rename a Video Source*.

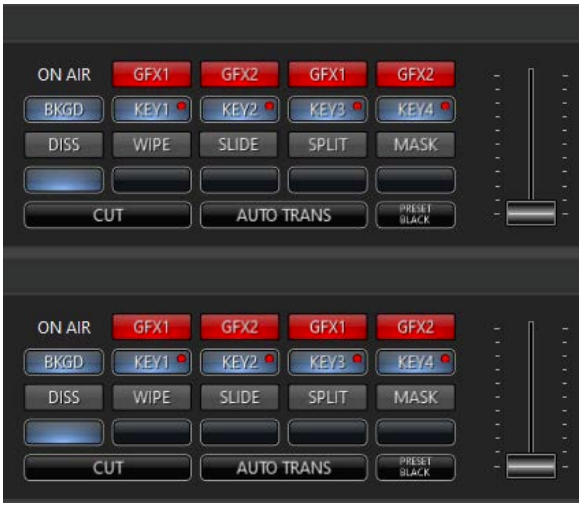
Set Source Names on Buttons

PRIME Switcher can display the video source and transition names either on only the **Source Name** row, or on the individual buttons as well. The following shows the **Bus** and **Transition** buttons labeled and unlabeled, and close-ups of the **Bus** and **Transition** buttons.

Source and Transition Names on Bus Buttons



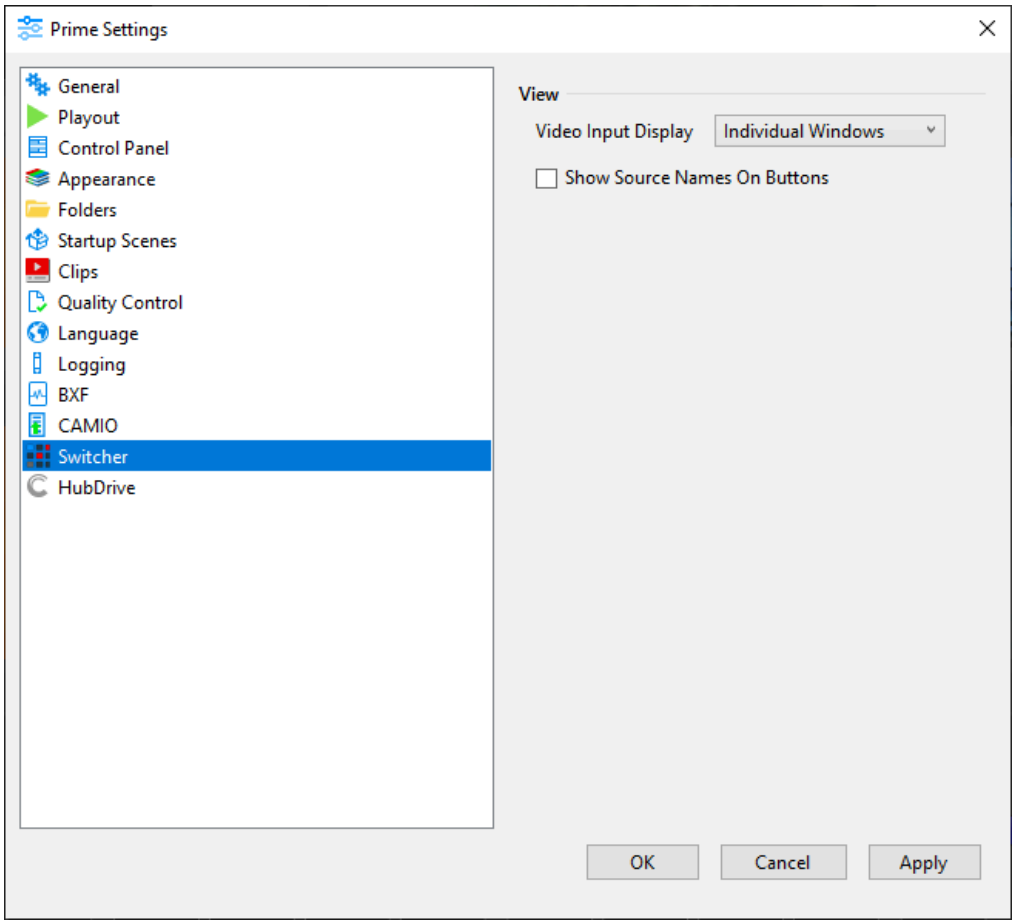
Source and Transition Names on Source Name Only



Throughout this User Guide, UI examples are shown with and without source names on the individual **Bus** and **Transition** buttons.

To set **Source Names on Buttons**:

1. Go to **Config Menu > Settings > Switcher**. The **PRIME Settings View** dialog displays.



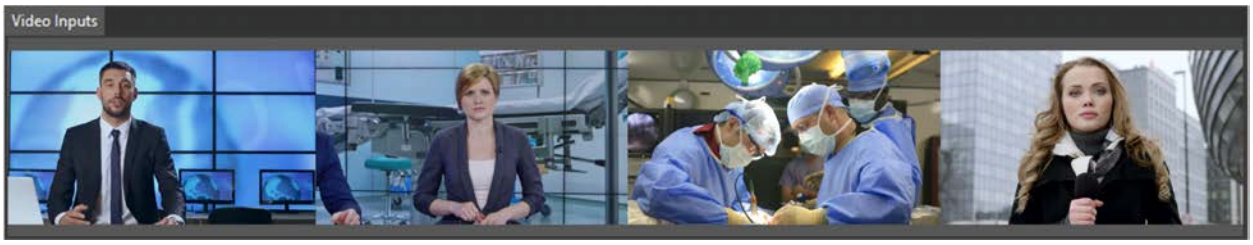
2. Do one of the following:
    - To display the source and transition names on the individual buttons, check (enable) **Show Source Names on Buttons**.
    - To display the source and transition names only on the **Source Name** row, uncheck (disable) **Show Source Names on Buttons**.
3. Click either:
    - **Apply**, if you are continuing to modify other settings; or,
    - **OK** to close the dialog. The **Switcher** settings are applied. There is no need to restart PRIME Switcher.

Set Video Input Display

Set Single Grid Window or Individual Windows

The video input monitors can display in a single grid window or individual windows.

Video Inputs Displayed in Single Grid Window



Video Inputs Displayed in Individual Windows

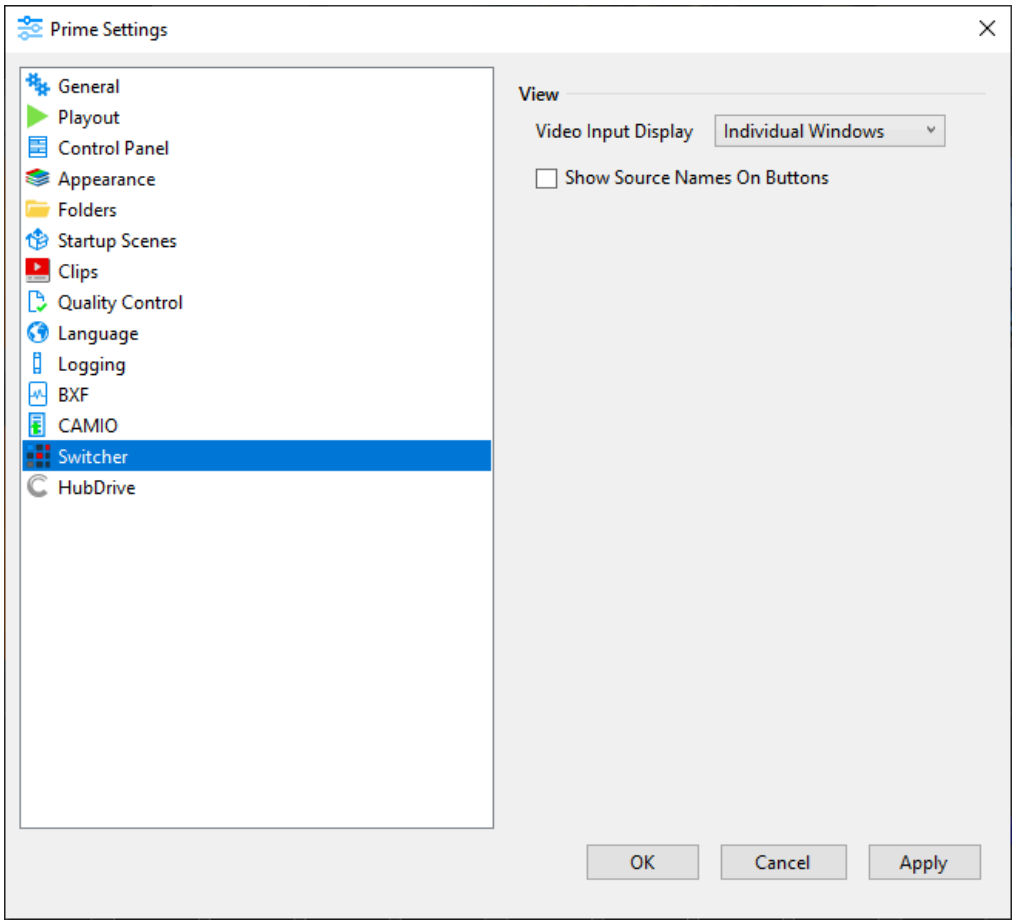
NOTE: If displaying video input monitors in a single grid window, as opposed to each in its own individual window, then it is advisable to show labels, in order to quickly identify the inputs.

Video Inputs Displayed in Single Grid Window with Labels

See Configure Label Display - Show Label.

To set the PRIME Switcher **Video Input Display**:

1. Go to **Config Menu > Settings > Switcher**. The **PRIME Settings View** dialog displays.



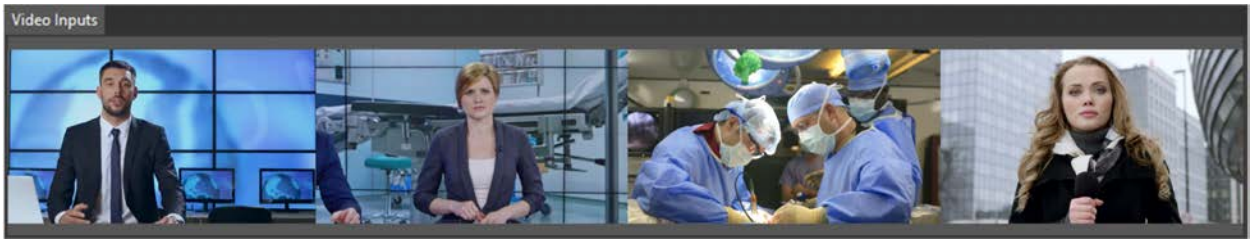
2. From the **Video Input Display** dropdown, select either **Individual Windows** or **Single Grid Window**.
3. Click either:
    - **Apply**, if you are continuing to modify other settings; or,
    - **OK** to close the dialog.
4. Close and restart PRIME Switcher.

NOTE: The Video Input setting affects how the Video Inputs are listed in the View menu:

- **If set to Individual Windows, then each Video Input is listed separately in the View menu. You can set the visibility of each independently.**
- **If set to Single Grid Window, then the Video Inputs are all included in the Video Inputs item in the View menu. You can set the all or none to display.**

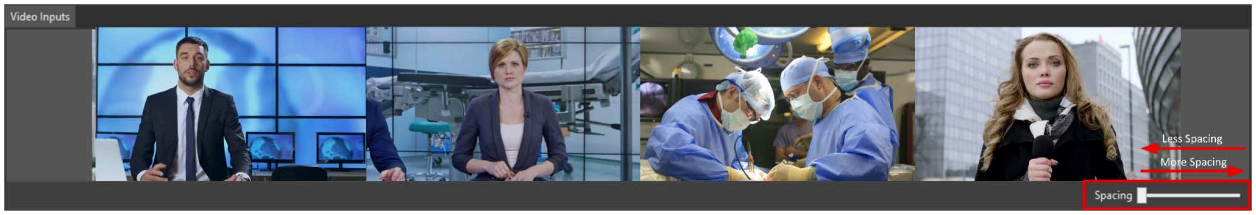
Adjust Spacing between Monitors in Single Grid WIndow

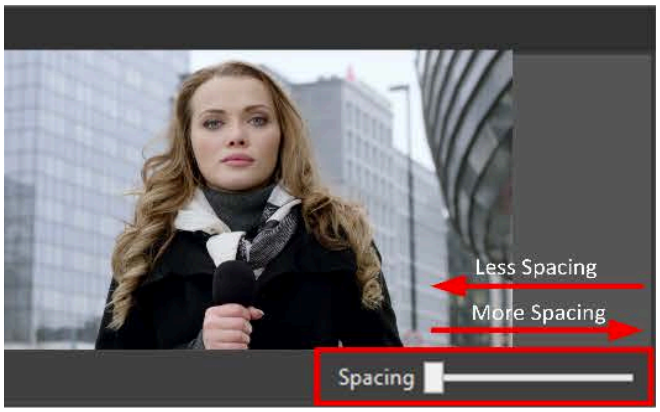
You can adjust the spacing between the monitors in a **Single Grid Window**. The following shows monitors with no spacing between them.



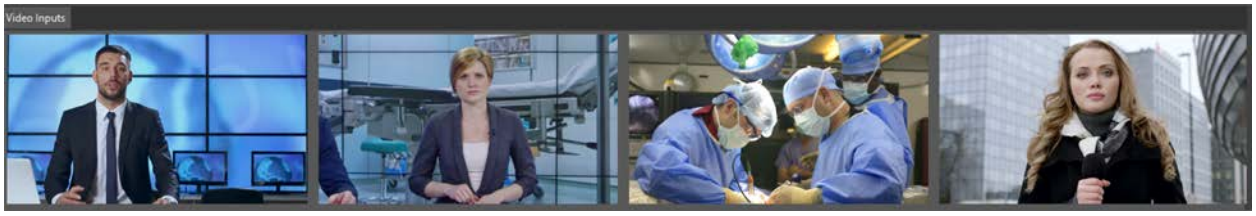
To adjust spacing between the monitors:

1. Hover the mouse over the **Single Grid Window**. A slider appears:





2. Drag the slider to the desired position. As you drag, the spaces between the monitors change widths.
    - Drag the spacer to the right to increase spacing between the monitors.
    - Drag the spacer to the left to decrease spacing between the monitors.
3. When finished adjusting, move the cursor off of the **Single Grid Window**. The monitors display with the adjusted spacing.



Preset Bus

The **Preset** bus indicates the video source that is available to transition to **Program**.

- If the **Main Bank BKGD** is turned **ON**, then the **Preview Monitor** displays the video input that is selected in the **Preset Bus**. When a transition is performed, the video in **Preview** transitions to **Program**.
- If the **Main Bank BKGD** is turned **OFF**, then the **Preview Monitor** displays the video input that is in **Program**. When a transition is performed, the video in **Program** does not change.

See Next Transition Selection for additional information.

Program Bus

The **Program Bus** indicates the video source that is in **Program**. A red button specifies the **Video Source**.

Key Bus

The **Key Bus** both reflects the state of a key and provides the ability to change a key.

- A red button indicates that a **Key** source is in **Program**.
- A white button indicates that a **Key** source is in **Preview**.
- The **Key Bus** label indicates the **Key** state (in **Program** or **Preview**) for that **Key Bus**.

See Work with Main and Mix Effect (ME) Banks and Transitions for information on how to set and perform key operations.

Transition Area

The **Transition Area** settings determine which sources change state when transitioning from **Preview** to **Program** when a transition is performed, and which transition is applied. The video source, and each of individual keys can each be specified to transition, or to maintain their current state. Both the light above each **KEY** button and the small light on each **KEY** button indicate whether or not the key is in **Program**.

In the **ME1 Bank Transition Area**, you can create, save, load, and modify a **Mix Effect Preset**. *See Set Transition Area and Mix Effect Presets for additional details.*

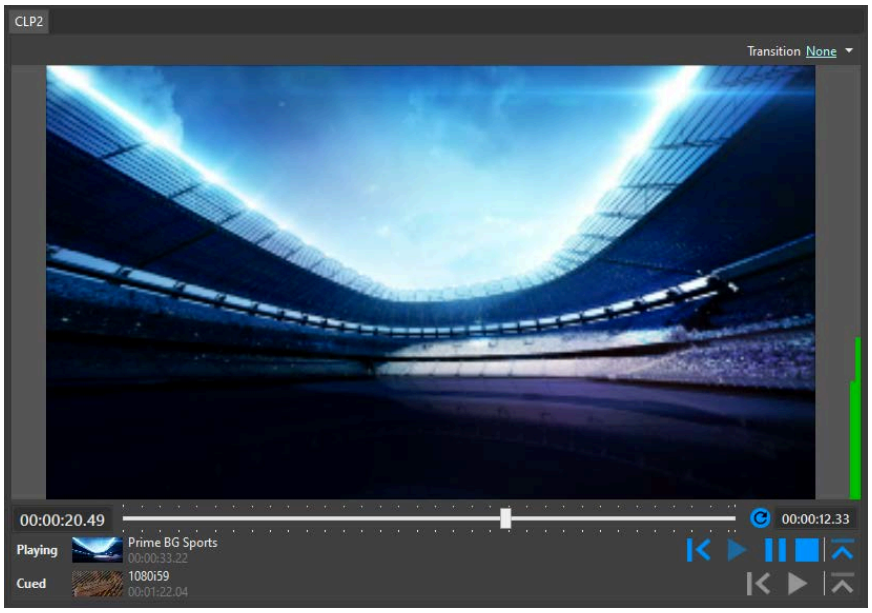
Downstream Keyer

The **Downstream Keyer** provides the ability to set the type (**Linear** or **Chroma**) and source for each **Key**, and to perform either a **Cut** or the transition selected in the Transition Area to transition a **Key** to **Program**.

See Downstream Keyer for additional information.

Clip Player

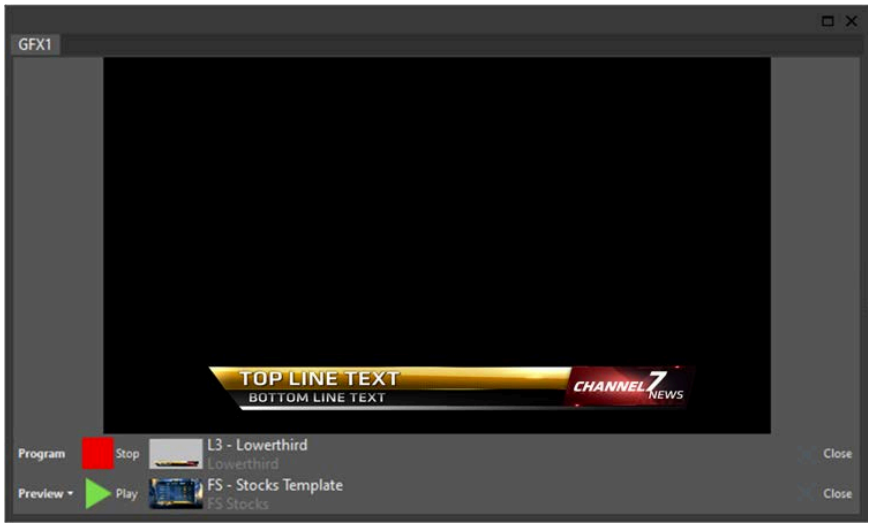
PRIME provides a **Clip Player** in which you can cue, load, preview, scrub, play, pause, stop, rewind, and loop, as well as apply a transition between clips.



See Work with Clips for details on operation.

Graphics Players

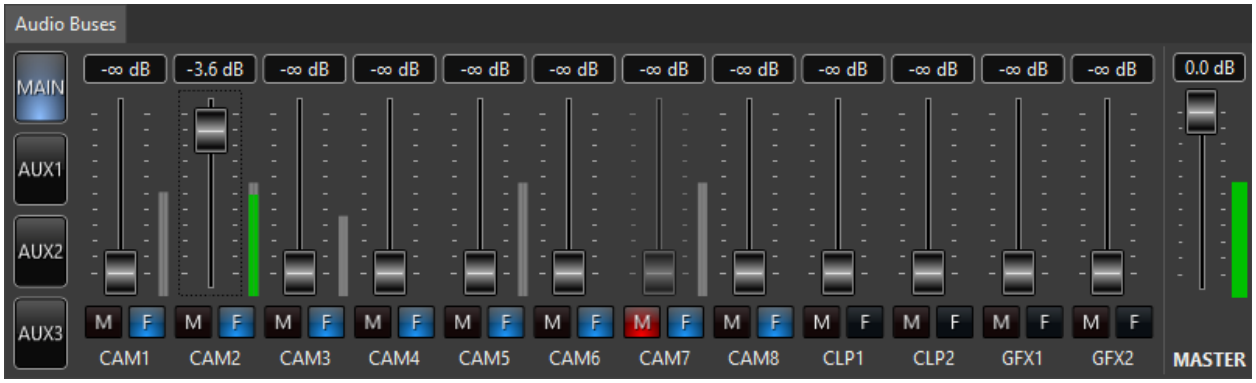
PRIME provides two **Graphics Players**, in which a scene (graphic) can be cued, previewed, and played.



See Work with Graphics for details on operation.

Audio/Audio Mixing

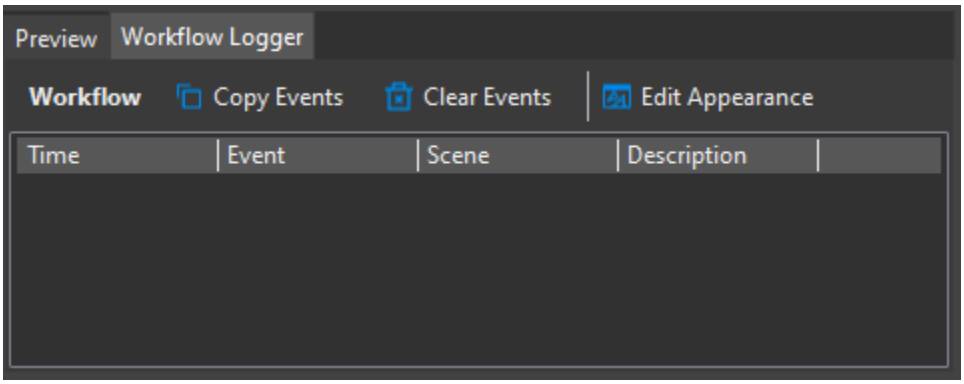
All inputs that have embedded audio are supported. As in a hardware audio mixer, faders control the audio level, and audio channels can be muted. You can set audio for a channel to follow one or more video sources. You can also configure Auxiliary Audio Buses to output **Mix Minus** and/or for **Pre Fade Listen**.



See Work with Audio for details.

Workflow Logger

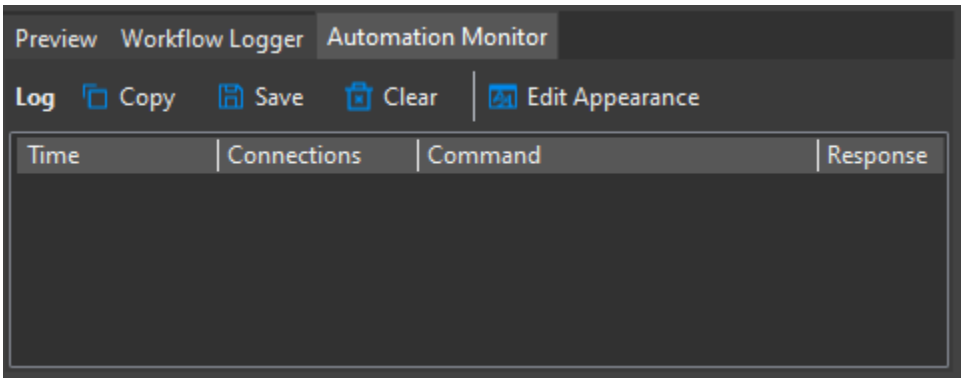
The **Workflow Logger** logs specific events in the PRIME application. *See the PRIME User Guide for additional information.*



When you enable display of the **Workflow Logger**, it becomes part of a **Tab Group** that includes the **Preview Monitor**.

Automation Monitor

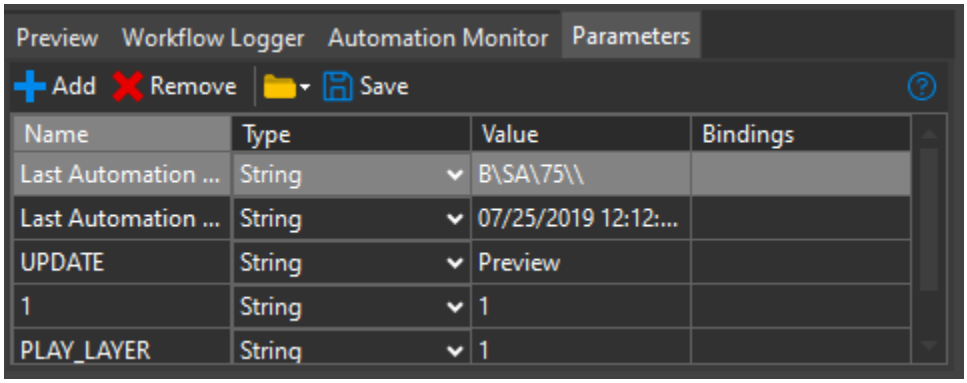
The **Automation Monitor** displays the automation connections. *See the PRIME Automation User Guide and the PRIME User Guide for additional information.*



When you enable display of the **Automation Monitor**, it becomes part of a **Tab Group** that includes the **Preview Monitor**.

Parameters

Parameters displays the list of the PRIME scene parameters. *See the PRIME User Guide for additional information.*



When you enable display of the **Parameters**, it becomes part of a **Tab Group** that includes the **Preview Monitor**.

Playlist Player

A **Playlist Player** can play playlists created in PRIME. You can configure one or more **Playlist Players**. *See Play Back Graphics/Messages/Images/Clips from the PRIME Playlist.*

SDI Input, Genlock, Bypass Status Indicators

The **SDI Input**, **Genlock**, and **Bypass Status Indicators**, located along the bottom of the PRIME Switcher interface, show the status of the inputs, including **Genlock** and **Video Bypass**.

- A green indicator specifies an active input.
- A red indicator specifies an active, but disabled input. Its corresponding monitor displays a black screen. The input is configured in **Config Menu > Playout Configuration > Video Channels**, but the **Channel** checkbox at the top of its settings is disabled.
- A gray indicator indicates an inactive input.

The following figure shows the 8 **Video Inputs** and **Genlock** active, and **Bypass** inactive:

The following shows 6 **Video Inputs** active, 2 **Video Inputs** inactive, and **Genlock Active**:

To view the format of a video input:

- Hover the mouse over the indicator for that input, until its tooltip displays. The following figure shows the **Video Input 1** format.

To confirm that **Genlock** is present:

- Hover the mouse over the **Genlock** indicator.

The **In Bypass Indicator** provides the ability to **Go to Bypass** or **Go In Circuit**. To select:

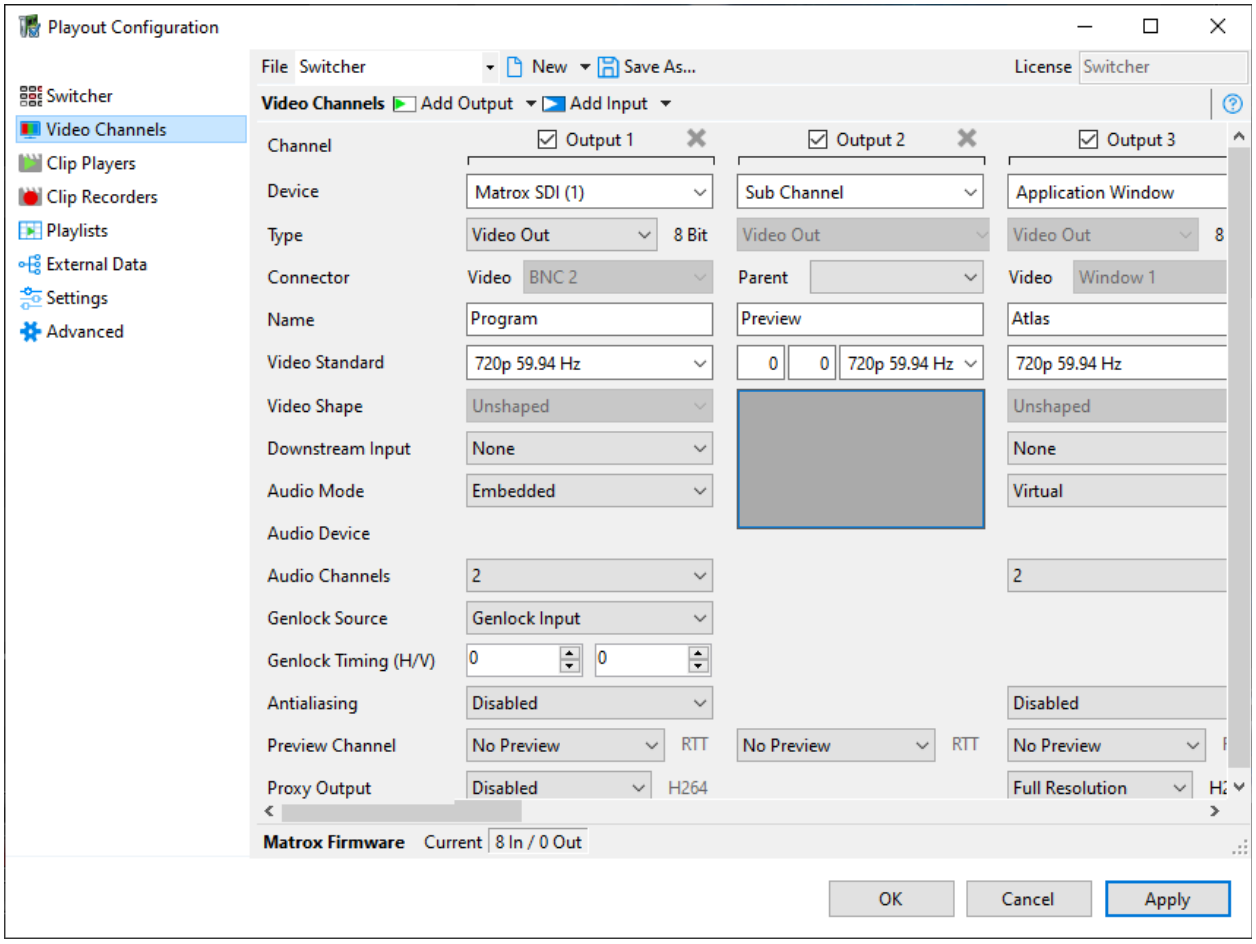
- Click the In **Bypass Indicator**, and then select either **Go to Bypass** or **Go In Circuit**.

Chapter 4: Configure PRIME Video and Audio Channels

Overview

You must configure PRIME video and audio inputs and outputs prior to using PRIME Switcher. To access video and audio configuration:

1. Go to **Config Menu > Playout Configuration**.
2. The **Playout Configuration Video Channels Panel** displays.



Video inputs and outputs are configurable as follows:

PRIME Switcher Inputs:

- **SDI/UHD-4K/HDR**
- **NDI**
- **Network Stream: H.264/H.265 over (RTMP) SMPTE 2110/SMPTE 2022-6**
- **Embedded Audio**

PRIME Switcher Outputs:

- **SDI/UHD-4K/HDR**
- **NDI**
- **Network Stream: H.264/H.265 over (RTMP) SMPTE 2110/SMPTE 2022-6**
- **GPU**
- **Desktop Window**
- **Application Window**
- **PRIME Sub Channels, including:**
    - **Preview Sub Channel**
    - **Two Sub Channels Clips**
    - **Two Sub Channels Graphics**
    - **One Sub Channel Mix Effects**
- **Embedded/System Audio**
- **Auxiliary Audio Channels, e.g., Mix Minus**

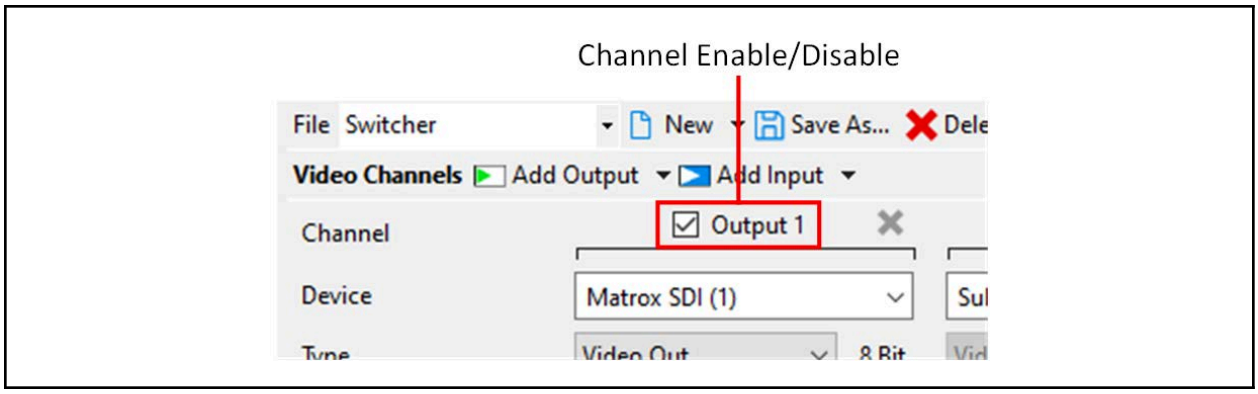
To configure the PRIME Switcher video and audio inputs and outputs:

- Follow the input/output setup procedures in the *PRIME Playout Configuration Guide*, located in the *PRIME Documents* folder on the PRIME user desktop.

For additional information about Matrox IP configuration:

- Click the **Help** icon  at the upper right of the **Video Channels** dialog. The *PRIME Matrox IP Playout Configuration Guide* opens.

NOTE: Ensure that the inputs and outputs that you intend to display in PRIME Switcher are enabled, i.e., the Channel checkbox at the top of the channels' settings are checked; otherwise, they will not be available to PRIME Switcher.



Switcher Component Display

When input/output configuration is complete, and the channels are enabled, then the channels are available to PRIME Switcher. To use in PRIME Switcher, however, you must perform the following configurations:

- **Make Clip Player(s) Available to PRIME Switcher:** Go to **Config Menu > Playout Configuration**, and then click **Clip Players** in the left navigation. Add and enable one or more **Clip Players**. *See Configure Clip Players for details.*
- **Make Playlist Player(s) Available to PRIME Switcher:** Go to **Config Menu > Playout Configuration**, and then click **Playlists** in the left navigation. Add and enable one or more **Playlist Players**. *See Configure Playlist Players for details.*
- **Add Video Input, Clips, Graphics, Mix Effect as Sources:** Go to **Config Menu > Playout Configuration**, click **Switcher** in the left navigation, and then click the **Sources** tab. Add each source. *See Configure Sources for details.*

- **Add Switcher Component to Atlas:** This provides the ability to display the **Program**, **Preview**, **Mix Effects** and **Video Input** monitors, in the PRIME Switcher UI. Go to **Config Menu > Playout Configuration**, then click **Atlas** in the left navigation. Add each component to Atlas. *See Configure Atlas for details.*

- **Enable Visibility in the View Menu:** Once the components become available to the switcher, then you can enable/disable visibility of each component. Go to the **View Menu** and click to add a checkmark next to each component that you would like to display. The **View** menu also controls the visibility of the **Audio Buses**, **Playlist Player(s)**, (if configured), **Workflow Logger**, **Automation Monitor**, **Parameters**. *See Enable/Disable Component Display for details.*

To display **Audio Channels** in the PRIME Switcher **Audio Mixer**:

- **Add Audio Channels:** Go to **Config Menu > Playout Configuration**, click **Switcher** in the left navigation, and then click the **Audio Channels** tab. Add each source. *See Configure Audio Channels for details.*

To display **Auxiliary Audio Buses** in the PRIME Switcher **Audio Mixer**:

- **Add Audio Buses:** Go to **Config Menu > Playout Configuration**, click **Switcher** in the left navigation, and then click the **Audio Buses** tab. Add each source. *See Configure Audio Buses - Mix Minus for details.*

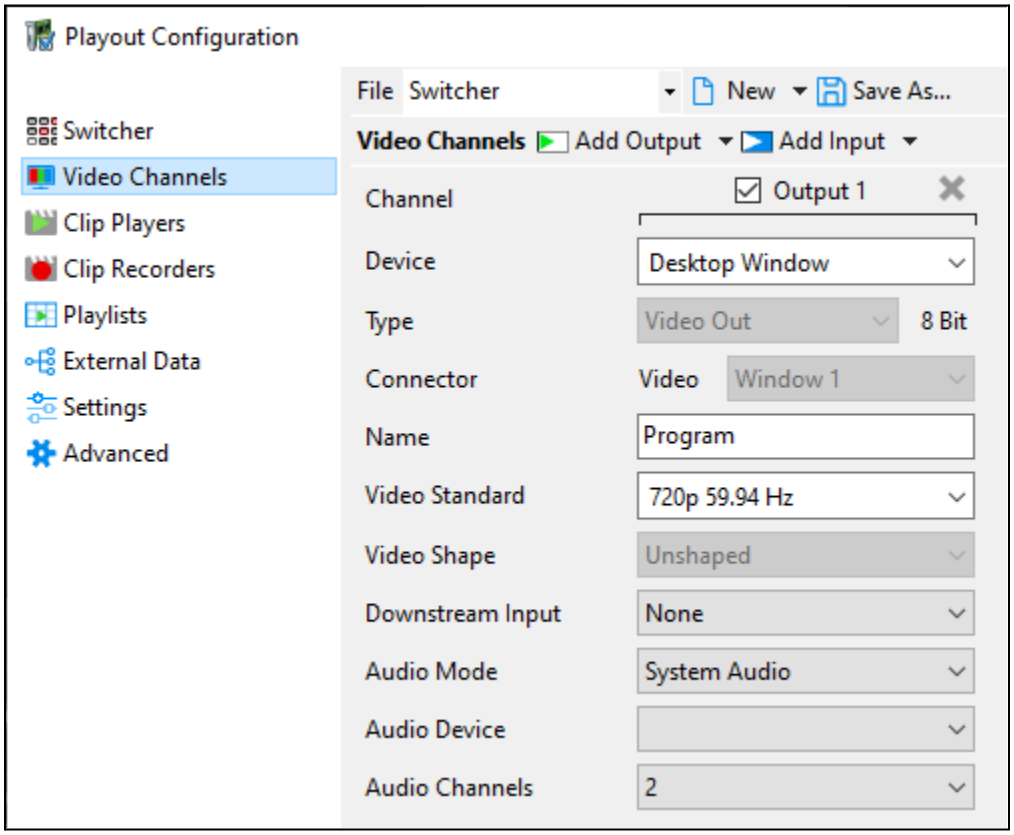
Configuration also determines the labels and identifiers on the PRIME Switcher interface. The following diagram shows how the labels and identifiers originate. For brevity, **Config** refers to the **Config Menu**, and **Playout Config** refers to the **Playout Configuration** menu item.

Configure System Audio as an Output

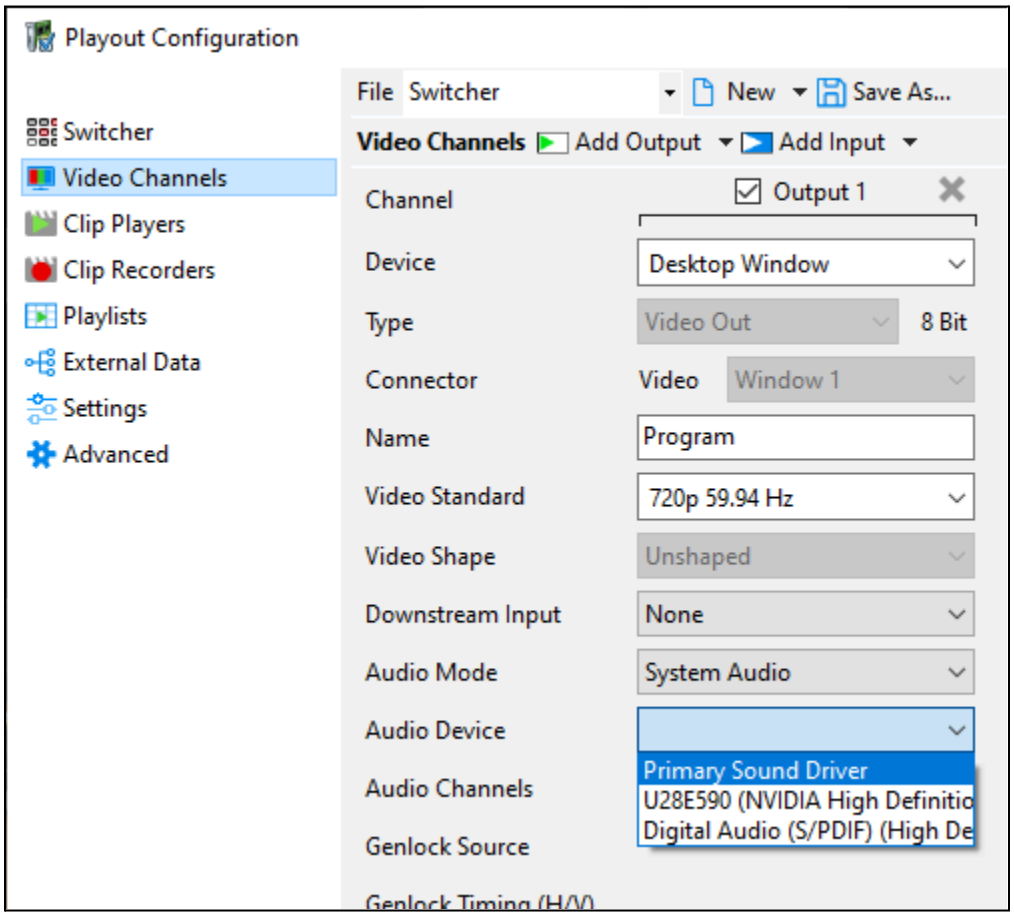
Prime Switcher can output **System Audio**.

To configure:

1. Go to **Config Menu > Playout Configuration**, and then select **Video Channels**.



2. Set **Audio Mode** to **System Audio**, and **Audio Device** to **Primary Sound Driver**.



3. Restart the PRIME system to apply configuration.

Troubleshoot Configuration

If the interface does not display properly, ensure that you have performed the following configurations:

- **Config Menu > Playout Configuration > Video Channels:** Ensure that you have added and enabled channels.
- **Clips: Config Menu > Playout Configuration > Clip Players:** Ensure that you have added and enabled the clip player(s).
- **Config Menu > Playout Configuration > Atlas:** Ensure that you have enabled **Atlas**, and added channels.
- **Config Menu > Playout Configuration > Switcher > Sources:** Ensure that you have added channels as **Switcher Sources**.
- **Playlists: Clips: Config Menu > Playout Configuration > Playlists:** Ensure that you have added and enabled **Playlist Players**.
- **View Menu:** Ensure that you have enabled channels and other components for display.
- **Audio Channels:** Ensure that you have added **Audio Channels**.
- **Audio Buses:** Ensure that you have added **Audio Buses**.

The following may occur if PRIME Switcher is not correctly configured:

- ***Channel is green in the Status Indicator, but the monitor does not appear in the interface.***
  Add the channel in **Config Menu > Playout Configuration > Atlas** and to **Config Menu > Playout Configuration > Switcher > Sources**. Ensure that the **Atlas Grid** and/or **Size** settings accommodate the display of the monitor.

- ***Channel is red in the Status Indicator. Monitors for the channels display black screens.***

  Enable the channel in **Config Menu > Playout > Configuration > Video Channels**.

- ***Channel is completely missing.***

  Add the channel in **Config Menu > Playout > Configuration > Video Channels**.

- ***All monitors are missing.***

  Enable **Atlas** in **Config Menu > Playout Configuration > Atlas**.

- ***Some of the monitors are missing.***

  Ensure that the **Atlas Grid** dimensions accommodate all monitors. For example, PRIME Switcher requires a minimum **4x4 Grid** to display the **Program**, **Preview**, **ME1**, 8 **Video Input**, 2 **Clip Player**, and 2 **Graphics Player** monitors.

- ***Clip Player and/or Graphics Player displays in the interface, but there is no monitor.***

  Add the **Clip Player** and/or **Graphic Player** to **Atlas** in **Config Menu > Playout Configuration > Atlas**. Ensure that the **Atlas Grid** and/or **Size** settings accommodate the display of the **Clip/Graphics Player**.

- ***ME1 Bank is missing.***

  Potential reasons that the **ME1 Bank** does not display:

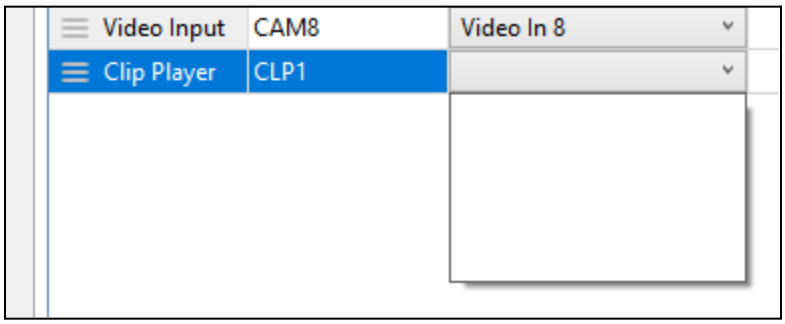
  - It is not enabled for display in the **View Menu**.
  - It has not been added as a **Switcher Source** in **Config Menu > Playout Configuration > Switcher > Sources**.
  - It has not been added as a **Mix Effects Channel** in **Config Menu > Playout Configuration > Video Channels**.

- ***Auxiliary Audio Bus does not display in Audio Mixer***.

  Potential reasons that an **Auxiliary Audio Bus** does not display:

  - It has not been added as a **Switcher Audio Bus** in **Config Menu > Playout Configuration > Switcher > Audio Buses**.
  - It has not been added as an **Output Channel** in **Config Menu > Playout Configuration > Video Channels**.

- ***When adding a Clip Player in Config Menu > Playout Configuration > Switcher > Sources, the Source dropdown is blank or is missing a Clip Player.***



Ensure that you have configured the **Clip Player** in **Config Menu > Playout Configuration > Clip Players**.

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Chapter 5: Configure PRIME Switcher

Overview

For PRIME Switcher to work, you must configure the video, clip and graphics sources and transitions. If outputting audio, then you must configure audio sources, as well.

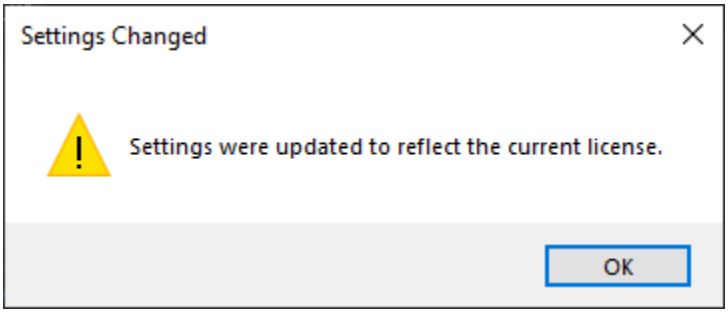
BEST PRACTICE: Save Layouts and Configurations for Future Use
If PRIME Switcher is configured exactly as you wish, then save the layout and the switcher configuration files for future use. Saving also enables you to revert to a known working configuration if something goes wrong.

See Save a UI Layout and Save PRIME Switcher Configuration for details.

Access PRIME Switcher Configuration

To access PRIME Switcher configuration:

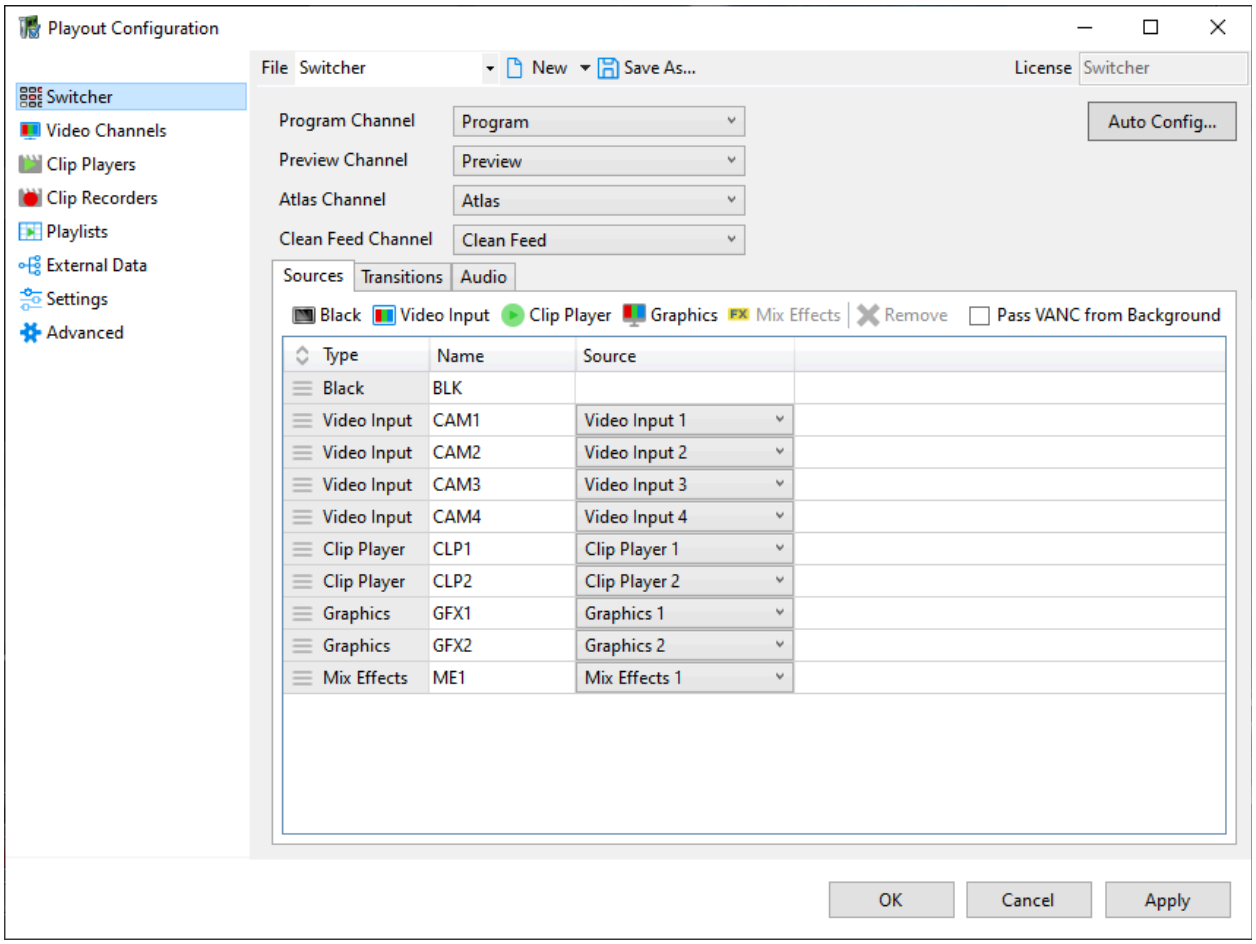
1. If the **Playout Configuration** panel is not open, then from the PRIME interface, go to **Config Menu > Playout Configuration.** The following message may display:



   Click **OK**.

   This message displays the first time that you access PRIME configuration during a PRIME Switcher session. For the sake of brevity, this step is omitted from subsequent sets of instructions.

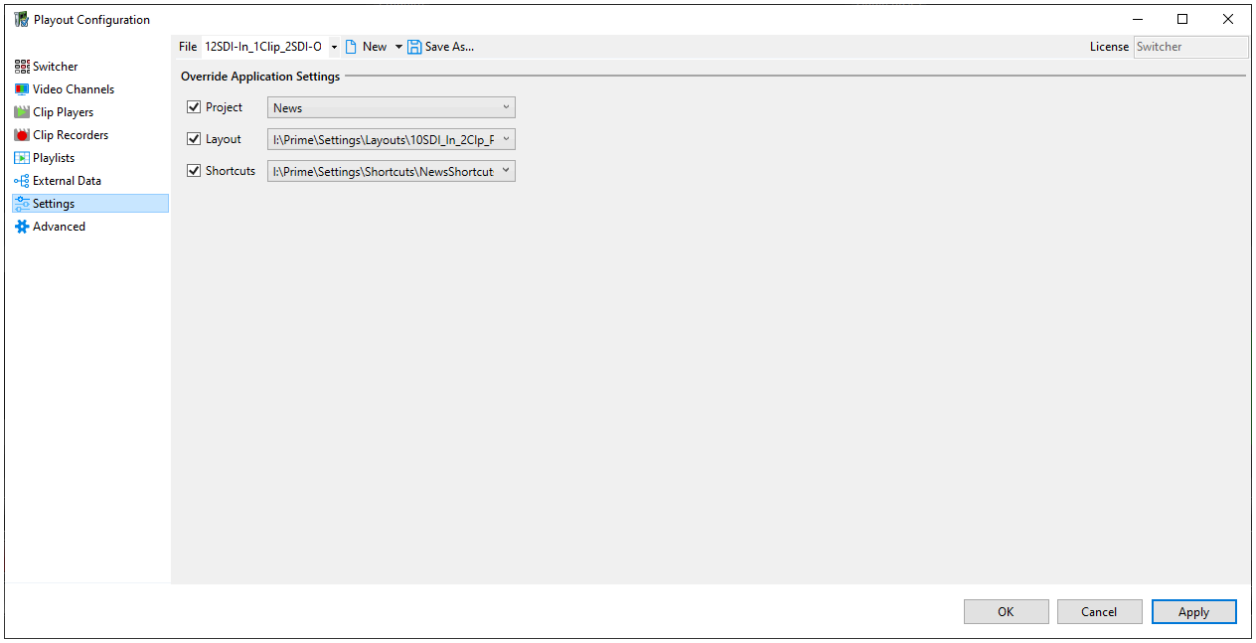
2. The **Playout Configuration Video Channels Panel** displays. In the left navigation, click **Switcher**. The **Switcher Sources Configuration** panel appears.



Configure Switcher Opening Project, Layout and Shortcuts

PRIME Switcher can load a specific project, layout, and keyboard shortcuts upon opening. To access settings:

Go to **Config Menu > Playout Configuration > Settings**. The **Override Application Settings** dialog appears:



Enable/disable the following settings, and if desired, select the source for each:

- **Project:** Select the project file that is loaded upon opening PRIME Switcher.
- **Layout:** Select the layout file that is loaded upon opening PRIME Switcher.
- **Shortcuts:** Select the keyboard shortcuts file that is loaded upon opening PRIME Switcher.

You can create a new, save, or recall a PRIME Switcher configuration. The processes are the same as found in the Switcher Configuration panel. *See Create New Configuration, Save Configuration, and Recall Configuration.* As in the Switcher Configuration Panel, the License displays the name of the PRIME application currently in use.

Apply and Activate Configurations in PRIME Switcher

You can configure and edit the **Source**, **Transition**, and **Audio** settings, and then save the configurations as follows:

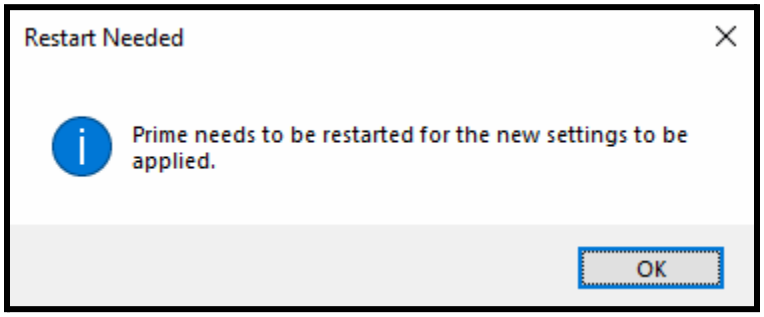
- To save the configuration settings and leave the **Playout Configuration** panel open, click **Apply**.
- To save the configuration settings and close the **Playout Configuration** panel, click **OK**.

Please note that configuration changes DO NOT take effect within the same PRIME Switcher session.

To apply any updates to PRIME Switcher configuration, you must close and restart the PRIME Switcher application.

Some changes, such as any change in frame rate, may require a system shutdown and restart.

1. After completing edits in the **Sources** panel, click **OK**. A PRIME restart message appears:



   If the restart message does not appear, then PRIME may be configured not to display the message.

2. Click **OK**. This action does not restart PRIME Switcher.
3. Close, and then restart PRIME Switcher. The configuration updates are now active. *See Close and Restart PRIME for additional information.*

Switcher Output Configuration

The **Program Channel**, **Preview Channel**, and **Atlas Channel** output should be set to **Program**, **Preview** and **Atlas**, respectively.

To select an output for a channel:

- Select from the channel's dropdown.

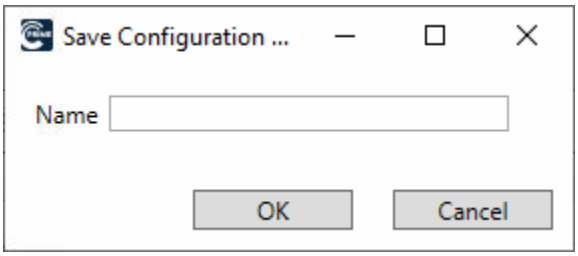
Once you close and restart PRIME Switcher, then the settings are applied.

Save PRIME Switcher Configuration

After configuring PRIME Switcher, you can save and recall the configuration**.**

To access the **Save Configuration** dialog:

- Click **Save As**. The **Save Configuration** dialog displays. If you are editing an existing configuration, then the **Name** field displays the configuration name. Otherwise, the Name field is blank.



To save updates to an existing configuration:

- Click **OK**. The update overwrites the existing configuration.

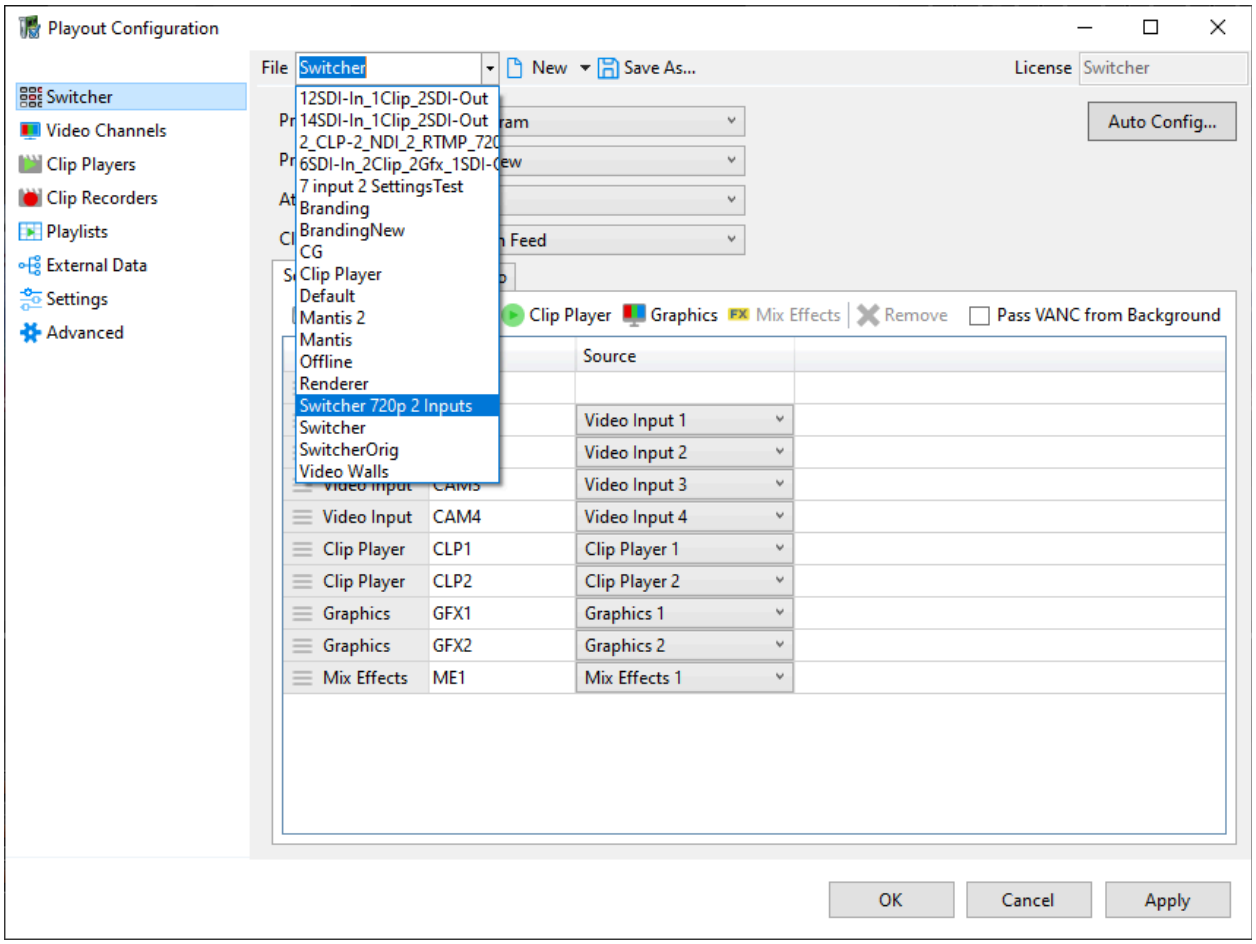
To save the configuration to a new name:

- Enter the new name, and then click **OK**. When you next start PRIME, the switcher name appears in the **Startup Configuration** panel.

Recall Configuration

To recall an existing configuration:

1. Click the **File** dropdown. The list of available configurations displays.



2. Click the configuration that you would like to load. The selected configuration loads.

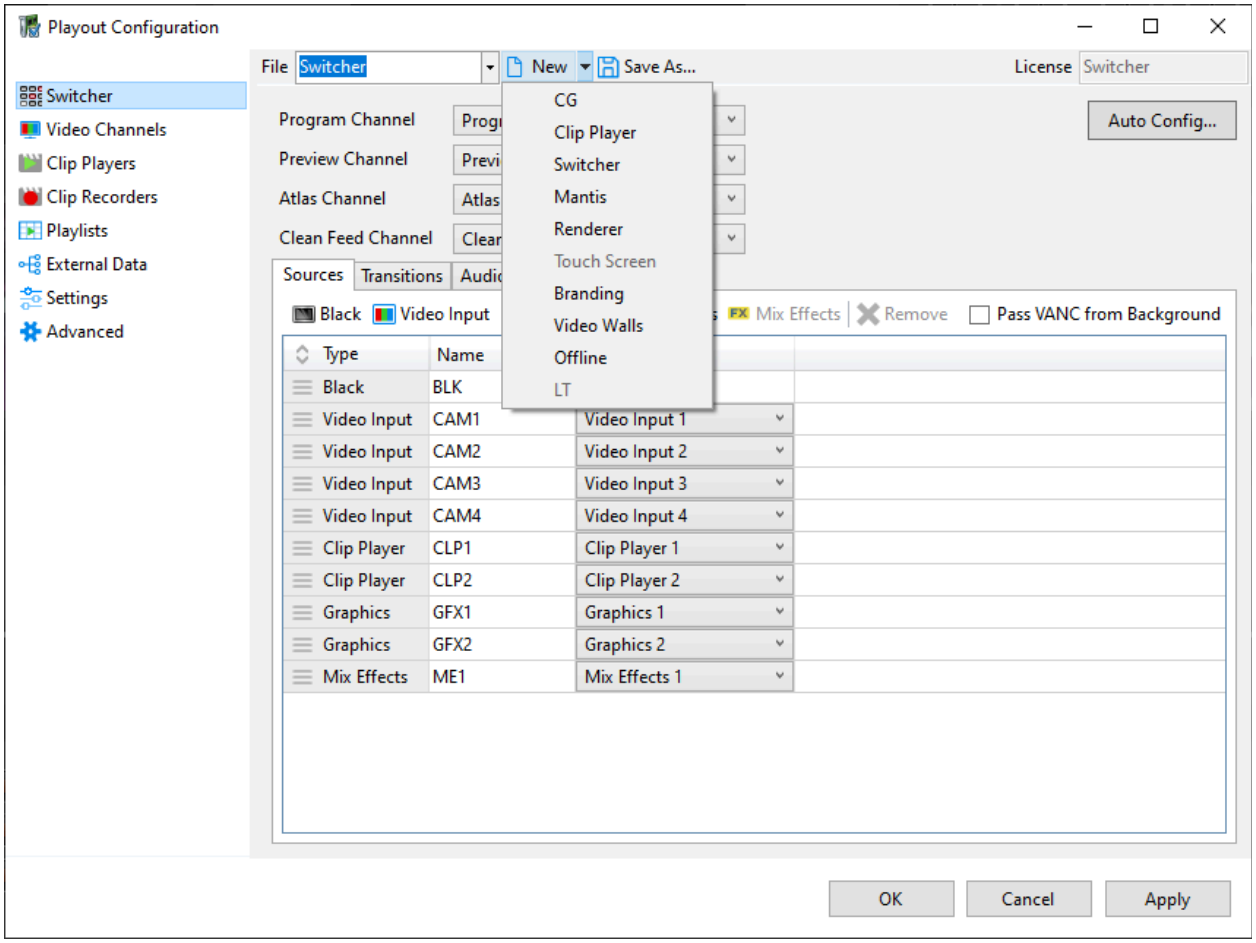
Once you close and restart PRIME Switcher, then the selected configuration is applied.

Create New Configuration

You can create configurations that you can customize for specific purposes, e.g., PRIME Switcher, PRIME CG, PRIME Mantis, etc.

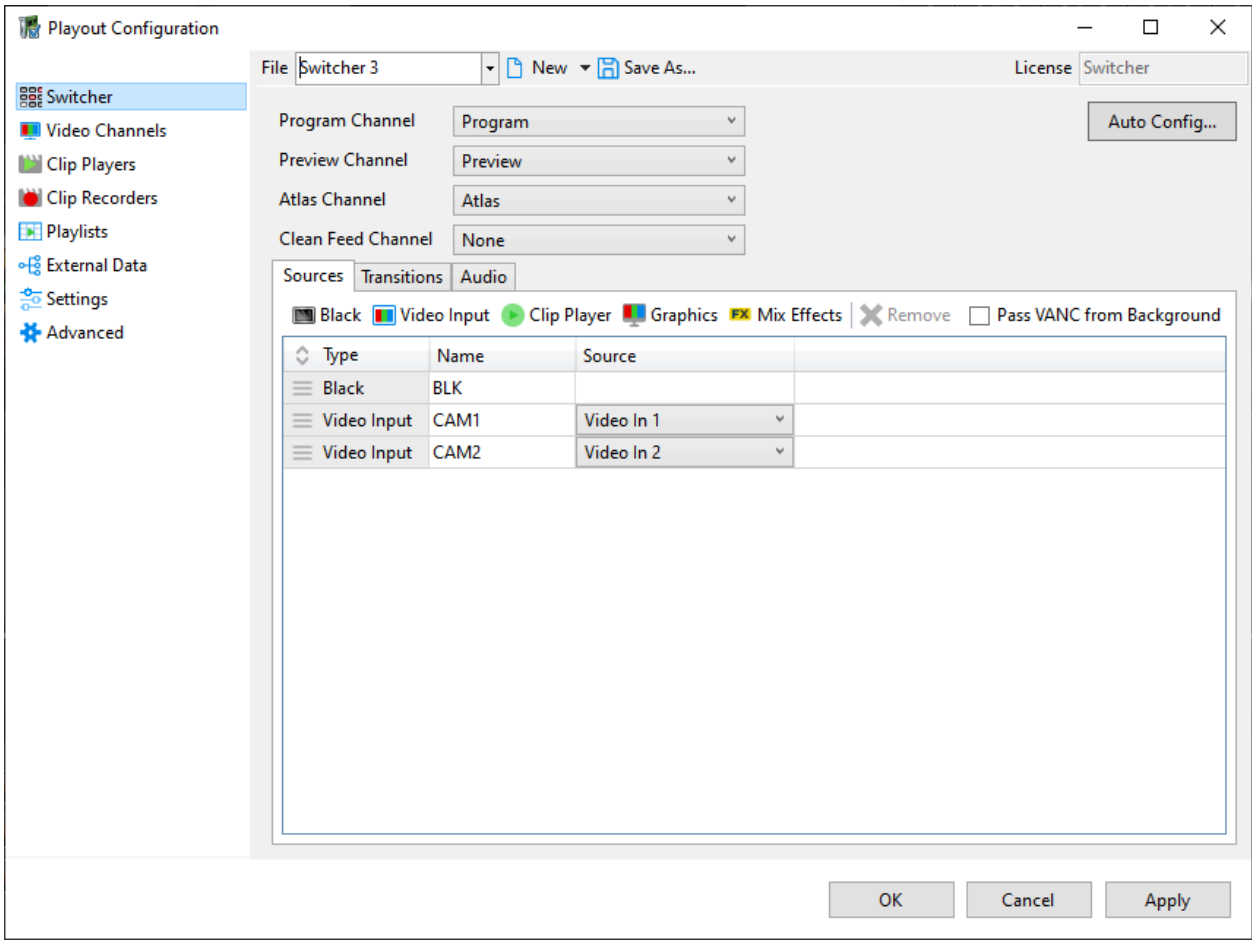
To create a new configuration.

1. Click **New**. The **New Configuration** dropdown displays.



- Items displayed in **bold** text specify PRIME applications that are licensed to run on the system, and for which you can create new configurations.
- Items displayed in regular (not bolded) text specify PRIME applications that are not licensed to run on the system, and for which you cannot create new configurations.

2. Select **Switcher**. The default switcher configuration, which includes available **Video Inputs** and **Black** displays.



3. Configure as desired.

Once you close and restart PRIME Switcher, then the configuration is applied.

License

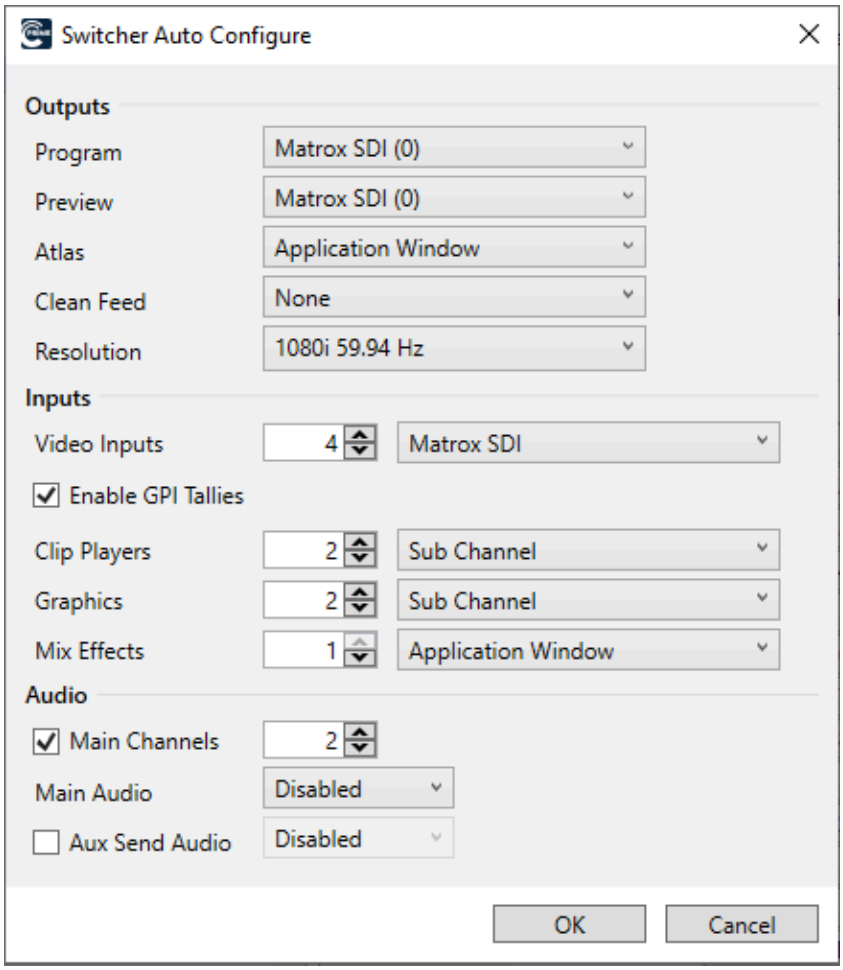
The **License** field displays the name of the PRIME application currently in use.

Auto Config

PRIME Switcher can be auto-configured, based on the inputs and outputs configured in PRIME. You can modify auto-configured settings.

To view and edit the **Auto Configure** settings:

1. Click **Auto Config**. The **Switcher Auto Configure** panel appears:



2. The **Auto Config** panel displays default settings for PRIME. It is therefore possible to select a higher number of **Clip Players** and **Graphics** than is allowed for use by PRIME Switcher. Maximum settings for PRIME Switcher are as follows:

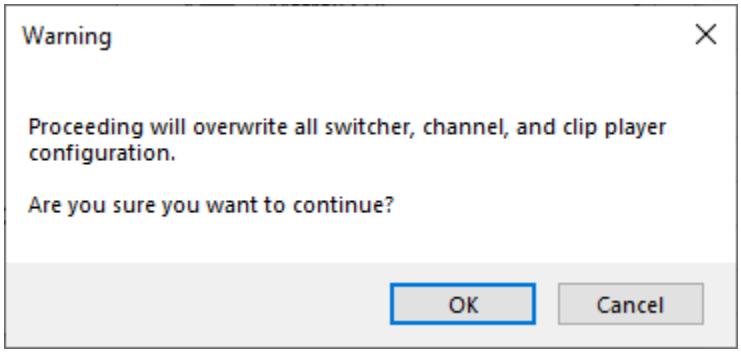
    - **Clip Players:** 2
    - **Graphics:** 2

You can edit the following settings:

- **Outputs:**
    - **Program:** Can be set to any valid PRIME Switcher output.
    - **Preview: Output** is typically set as **SDI** in PRIME. Typically set as **Sub Channel** in PRIME Switcher.
    - **Atlas: Output** is set to **Application Window**, as **Atlas** provides the PRIME Switcher UI.
    - **Clean Feed:** Outputs only the video that is in **Main Bank Program**, with no key video. A typical **Clean Feed** setting in a studio outputting SDI would be **Matrox SDI**. Note that a **Clean Feed** displays only on the **Device** specified **Config > Playout Config > Video Channels**, e.g., **SDI**, **NDI**, etc. It does not display in the PRIME Switcher interface.
    - **Resolution:** Set to output resolution.
- **Inputs:**
    - **Video Input:**
        - **Quantity:** Set number of **Video Inputs**.
        - **Source:** Set source of **Video Inputs**.
        - **Enable GPI Tallies:** Enable/disable the assignment of **GPI Tallies**.
    - **Clip Players:**
        - **Quantity:** Set number of **Clip Players**. Maximum 2 in PRIME Switcher.
        - **Source:** Typically set as **Sub Channel** in PRIME Switcher.
    - **Graphics:**
        - **Quantity:** Set number of **Graphics Channels**. Maximum 2 in PRIME Switcher.
        - **Source:** Typically set as **Sub Channel** in PRIME Switcher.
    - **Mix Effects:**
        - **Quantity:** Set to **1**. Maximum 1 in PRIME Switcher.
        - **Source: Mix Effect Input** is typically set as **GPU** in PRIME. Typically set as **Sub Channel** in PRIME Switcher.

- **Audio:**
    - **Main Channels:**
        - **Enable/Disable:** Enable or disable **Main Audio Channels**.
        - **Quantity:** Set number of **Main Audio Channels**.
    - **Aux Send Audio**
        - **Enable/Disable:** Enable or disable **Aux Send Audio**.
        - **Aux Send Audio Mode:** Select **Aux Send Audio Mode**.

3. Edit settings as desired, and then click **OK**. The following message appears:



4. Click **OK**.

Once you close and restart PRIME Switcher, then the settings are applied.

NOTE: When performing an Auto Config, make sure that you apply the intended settings. For example, if PRIME Switcher Program and Preview are set to Matrox SDI (1), and in Auto Config, and they are set to Matrox SDI (0), then the switcher interface might display blank screens, and the switcher might display an error message requesting firmware update.

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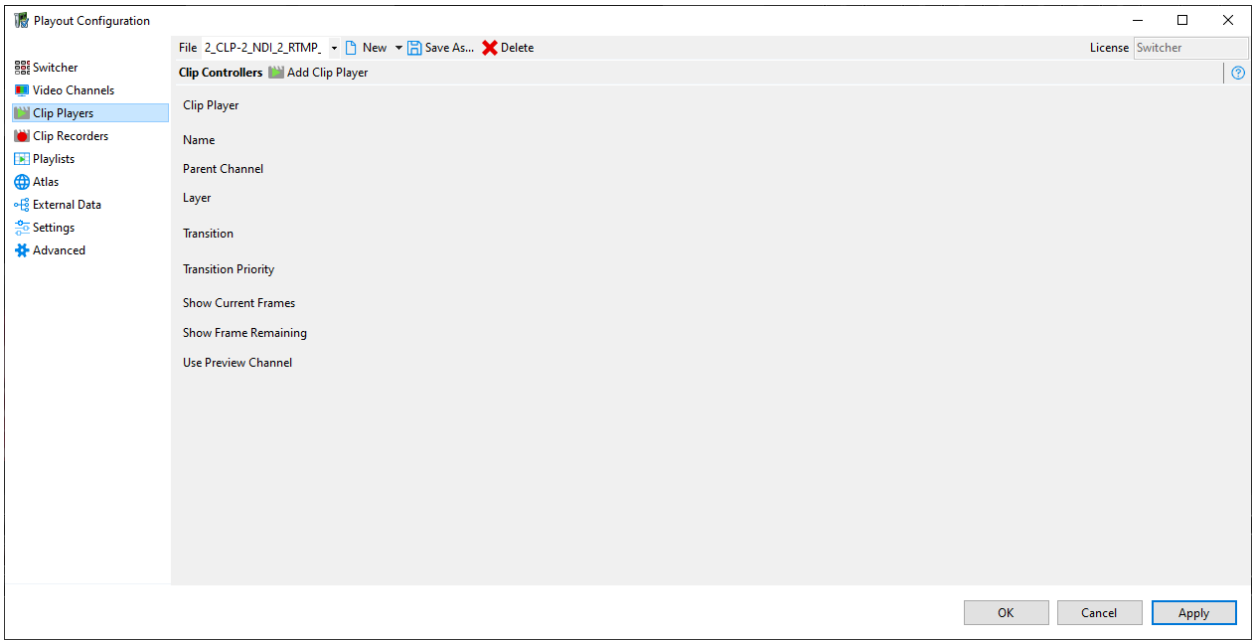
Chapter 6: Configure Clip Players

Overview

After you have configured one or more **Clip Players** in **Config Menu > Playout Configuration > Video Channels**, then you must add them to PRIME Switcher. To access **Clip Player** configuration:

1. Go to **Config Menu > Playout Configuration**, and then in the left navigation, click **Clip Players**. The **Clip Controllers Panel** displays.

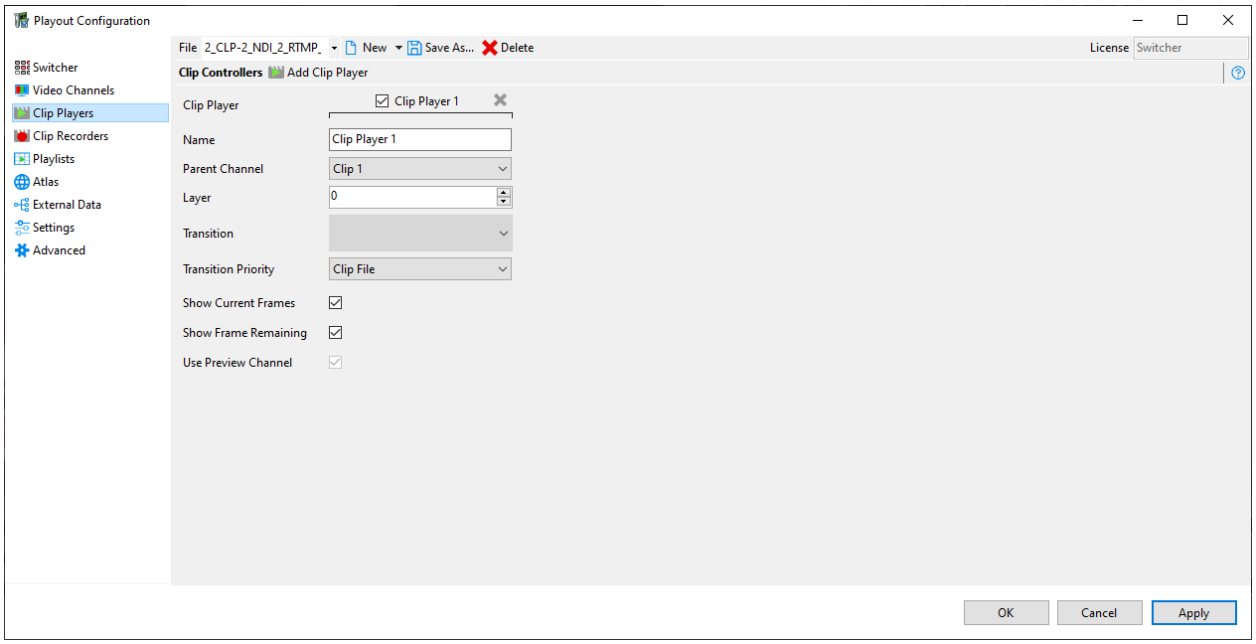


Add Clip Player

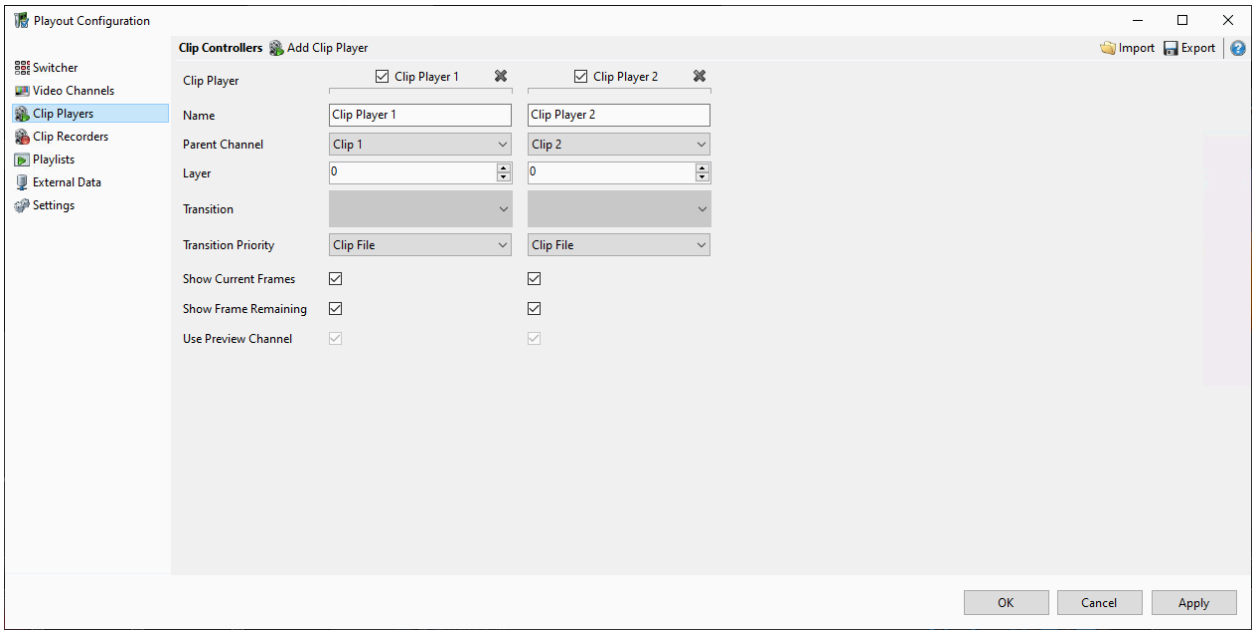
To add a **Clip Player** to the PRIME Switcher:

- Click the **Add Clip Player** icon 

. A new **Clip Player** displays.



You can add a second **Clip Player**, and configure it independently of **Clip Player 1**.



NOTE: If the Clip Player(s) is not visible in the PRIME Switcher interface, ensure that:

- **You have enabled the Clip Player checkbox.**
- **You have added the Clip Player(s) as a Channel(s) to Atlas.**
- **You have added the Clip Player(s) as a Video Source(s) in Config Menu > Playout Configuration > Switcher > Sources.**
- **In the View menu, you have enabled the Clip Player(s) for display. Enable/Disable component display.**

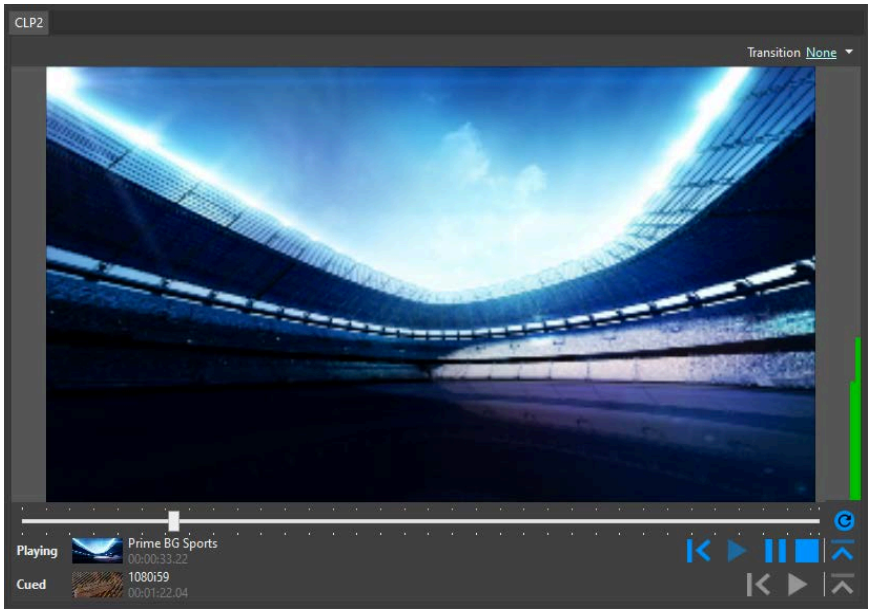
Configure Clip Player

Settings are as follows:

- **Clip Player Enable/Disable:** Enable to make available to PRIME Switcher.
- **Name:** If desired, enter a new name of the **Clip Player**.
- **Parent Channel:** A **Clip Output** as set in **Config Menu > Playout Configuration > Video Channels**. Select either **Clip 1** or **Clip 2** (if there are two **Clip Outputs**).
- **Layer:** The priority layer, i.e., how the clip is layered in relation to other graphic layers. It is typically set to **0**, so as to display as a background behind graphics.
- **Transition:** If desired, select from available transitions to automatically apply a transition whenever a clip is played.
- **Transition Priority:** Check choices.
- **Show Current Frame:** Enable/disable display of a frame counter to the left of the **Clip Scrub Control** that displays the current frame of the clip as it plays.
- **Show Frames Remaining:** Enable/disable displays of a frame counter to the right of the **Clip Scrub Control** that displays the frames remaining in the clip as it plays.

Current Frame and **Frames Remaining** displayed.

Current Frame and **Frames Remaining** display disabled.



- **Use Preview Channel:** If a **Preview Channel** has been added for the **Clip Player** in **Config Menu > Playout Configuration > Video Channels**, then this setting is active. It is otherwise grayed out.

Remove Clip Player

To remove a **Clip Player**:

- Click the **Remove** icon at the upper right corner of the **Clip Player's** settings.

NOTE: Deleting a **Clip Player** does not remove it from PRIME Channel configuration (**Config Menu > Playout Configuration > Video Channels**). It removes the **Clip Player** from use as a PRIME Switcher **Source**.

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Chapter 7: Configure Sources

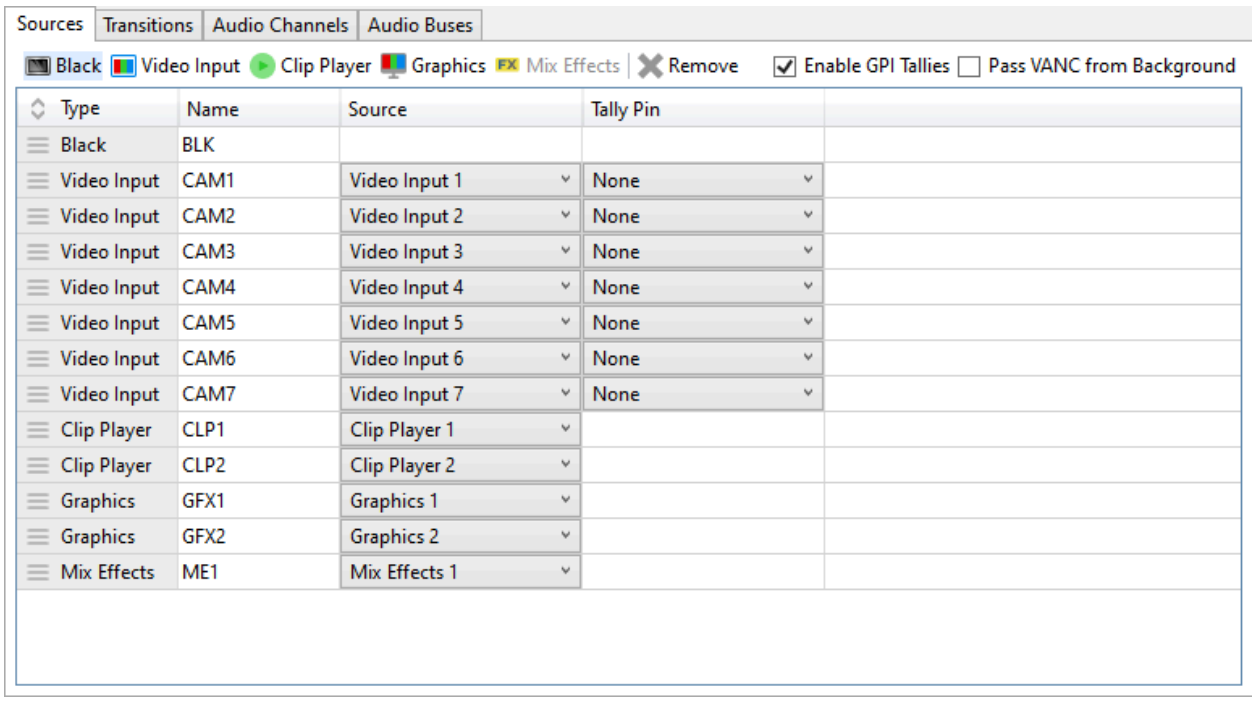
Overview

The **Sources** panel provides the ability to configure, add, edit, and delete PRIME Switcher video sources, and enable/disable **GPI Tallies**, set **Tally Pins**, and **Pass VANC from Background**. The number and types of available video sources depends upon PRIME configuration. You can configure each of the video inputs, which are displayed on the PRIME Switcher **Program**, **Preset** and **Key Buses** from left to right, in the order in which they are listed in the **Sources Configuration Panel**. *See Configure Switcher Program, Preset, Key Bus Display Order for information on how to set the **Video Source** order.*

Access the Sources Configuration Panel

To access the **Sources Configuration Panel**:

1. In the PRIME Switcher menu bar, go to **Config Menu > Playout Configuration**. The **Video Channels** panel appears.
2. In the left navigation, click **Switcher**. The **Switcher Sources** panel appears.



The **Sources** panel comprises the following columns:

- **List Position Up/Down Icon** : The column header for the **List Reposition** icons .
- **Type:** The type of **Source**. This field is not editable. The source types are as follows:
    - **Black**
    - **Video Input**
    - **Clip Player**
    - **Graphics**
    - **Mix Effects**
- **Name:** The name of the **Source**, which can be set by the user.
- **Source:** The video **Source**, selected by the user. Note that **Source** selection cannot be set for the **Black Source Type**, as **Black** uses a dedicated source on the PRIME system.
- **Tally Pins:** The **GPI Board** and **Pin** specified for a **Video Input Source**. **This column appears only if GPI Tallies is enabled.**

NOTE: Once you have completed Source and any other configurations, remember to close, and then restart PRIME Switcher to apply the configuration settings.

Enable GPI Tallies, Configure Tally Pins

Enable GPI Tallies

PRIME Switcher can output a GPI pulse to trigger a camera tally, alerting the camera operator and the talent that the camera is in **Program**. To enable or disable **GPI Tallies**:

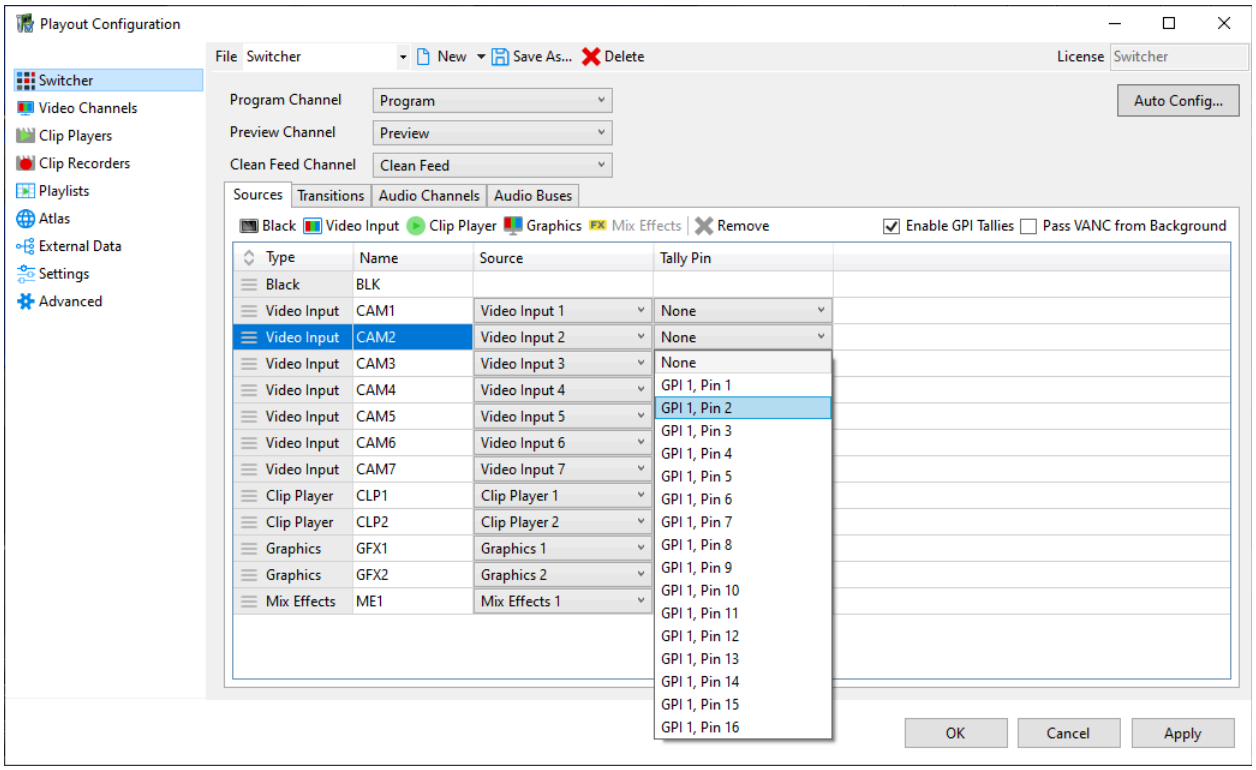
- Click **Enable GPI Tallies** to enable/disable.
    - If enabled, then a **Tally Pins** column appears in the **Source** list, and you can set a **Tally Pin** for any of the **Video Inputs**.
    - If disabled, then a **Tally Pins** column does not appear in the **Source** list.

*See the PRIME User Guide for information on **GPI** configuration.*

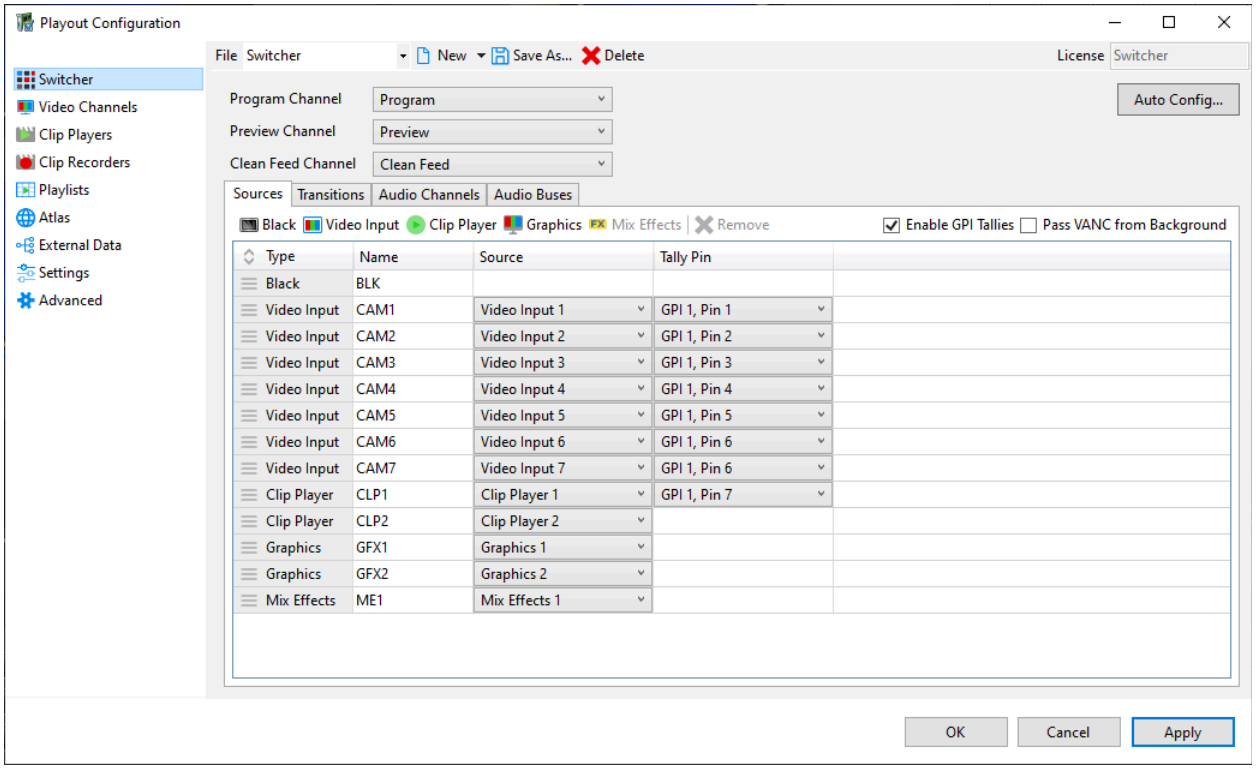
Configure Tally Pins

You can assign a **Tally Pin** to each **Video Input Source**. Note that you cannot assign a **Tally Pin** to other types of Sources (i.e., **Black**, **Clips**, **Graphics**, **Mix Effects**). To assign a **Tally Pin** to a **Source**:

1. From the **Tally Pin** dropdown for the **Source**, select a **Tally Pin**.



2. If desired, then continue assigning **Tally Pins**. A typical configuration is as follows:



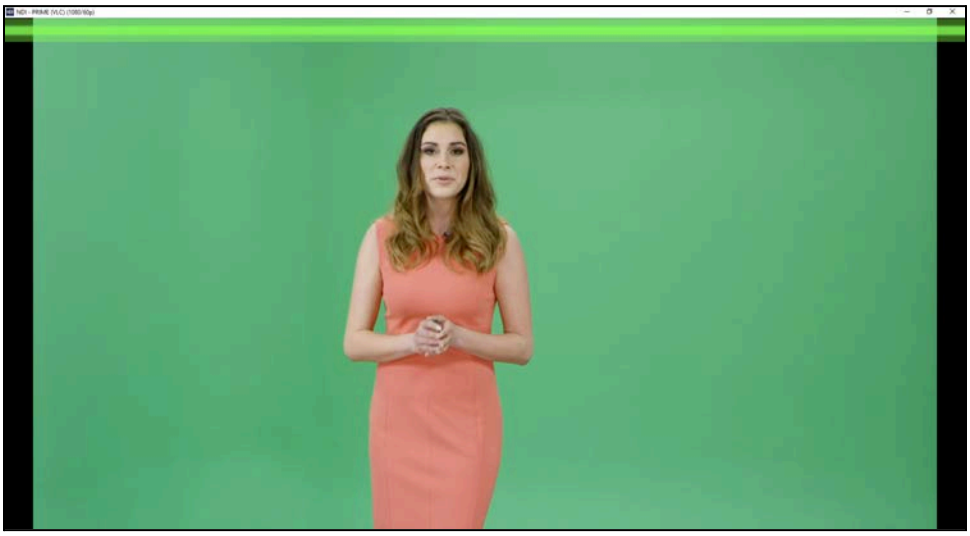
A **GPI Tally Pin** can trigger an anchor's camera tally light and, for example, an On Air light at a studio entrance. *See your GPI documentation and the PRIME User Guide for additional information.*

GPI Tally for NDI Source

If a GPI tally is set for an NDI source, then in addition triggering the tally on the NDI camera, you can view the on-air status via the NewTek NDI application. Note that this application is completely separate from the PRIME Switcher UI, and would typically be viewed on one or more separate monitors.

- If the NDI source is on air, then a red stripe displays across the top of the NDI input monitor.

- If the NDI source is in a preview state, then a green stripe displays across the top of the NDI input monitor.



Once you close and restart PRIME Switcher, then the **GPI Tally** settings become active.

Pass VANC from Background

PRIME Switcher can pass through **Vertical Ancillary Data (VANC)** from the **Background**. To set:

- Click **Pass VANC from Background** to enable/disable.

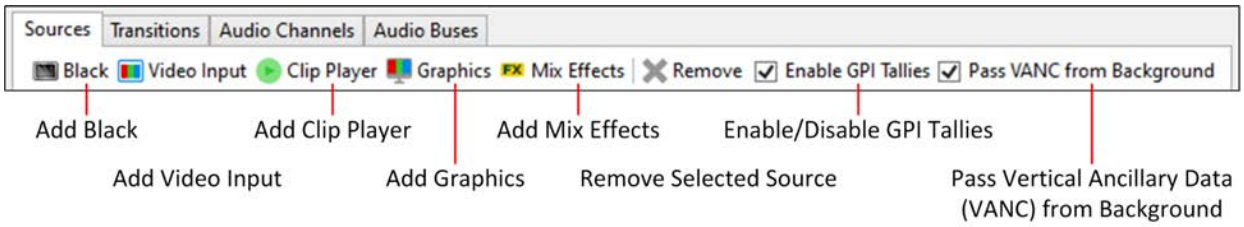
Once you close and restart PRIME Switcher, then the new **VANC** setting is applied.

Add a Video Source

You can add one or more new sources to the PRIME Switcher as follows:

- **Black**
- **Video Input**
- **Clip Player**
- **Graphics**
- **Mix Effects (ME1) Bank** *(See Add the ME1 Bank for details specific to the ME1 Bank.)*

The **Add Source** icons, a **Remove Selected Source** icon, and an option to enable/disable **Pass Vertical Ancillary (VANC) Data from Background** display at the top of the **Sources** panel.

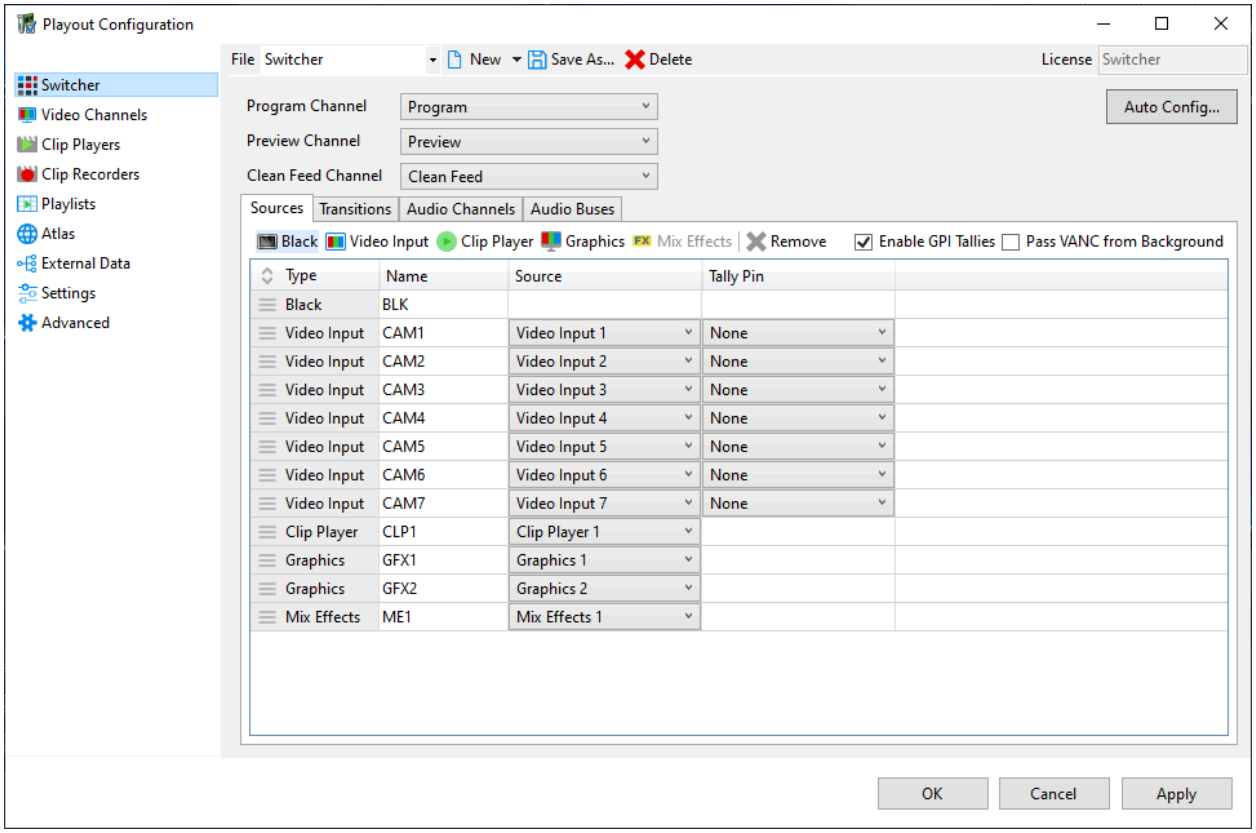


NOTE: Source limits are as follows:

- **Video Inputs: Depends upon resolution and other factors.**
- **Clip Player: 2**
- **Graphics: 2**
- **Mix Effects (ME) Bank: 1. This is in addition to the Main Bank.**

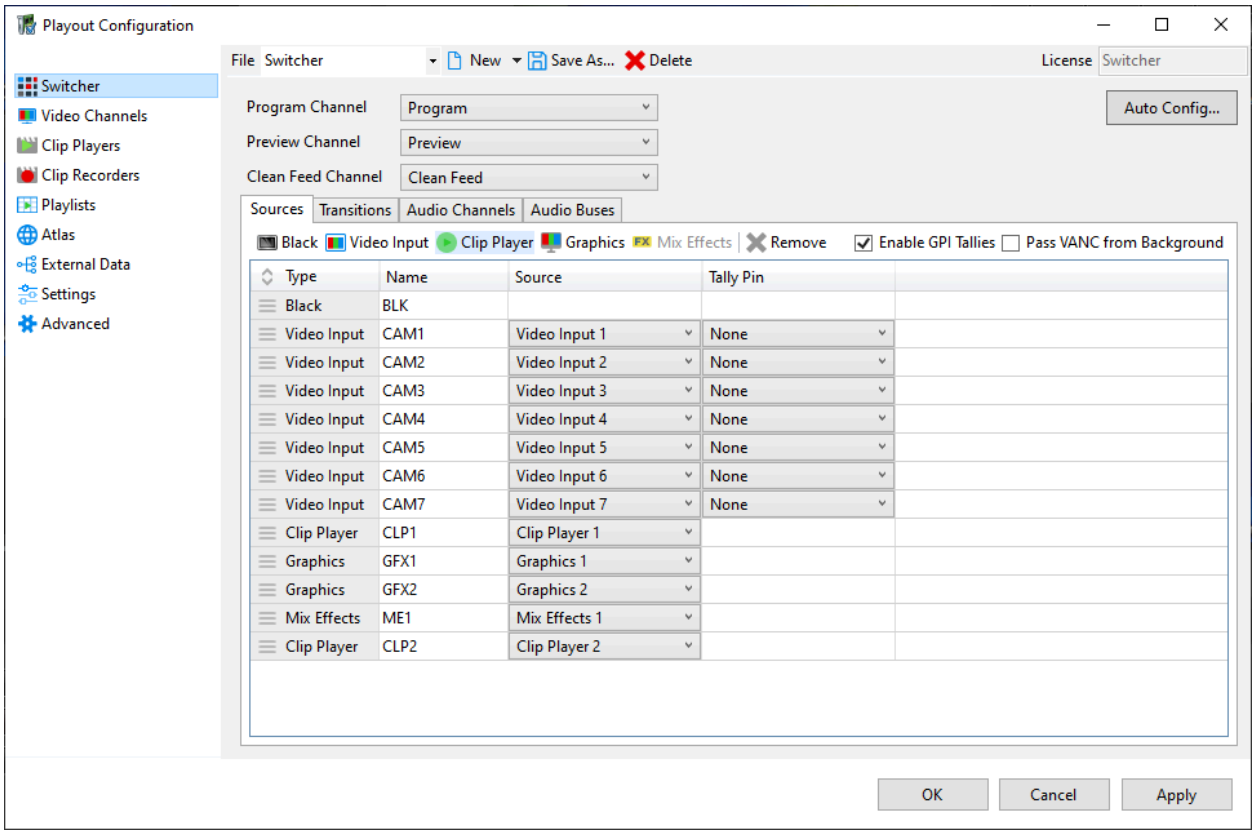
PRIME Switcher configuration does not prohibit the addition of a component that exceeds the specified limit; however, any component that exceeds the specified limit, e.g., a third Clip Player, is not supported.

In the following example, the switcher lists only one **Clip Source**.

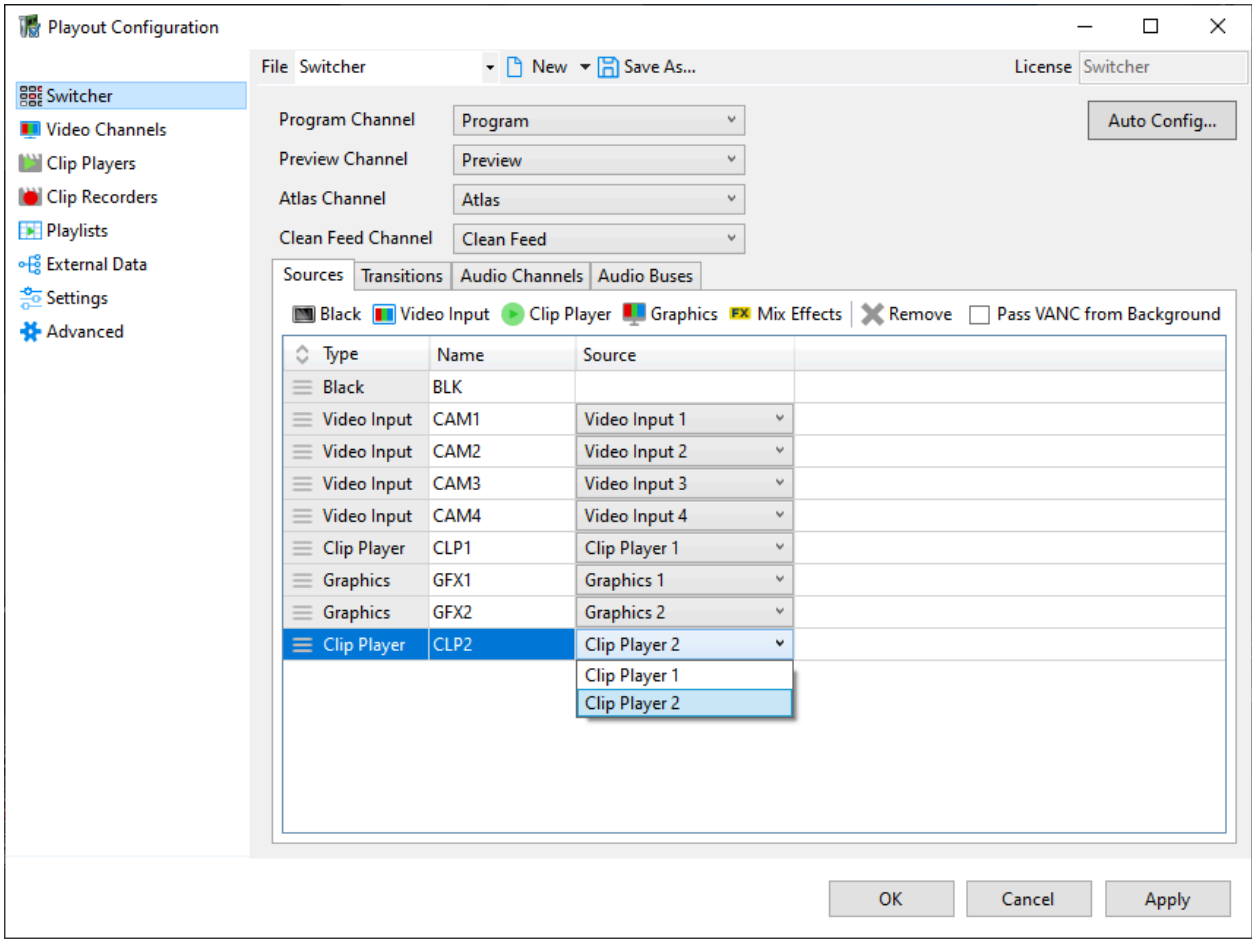


To add a second **Clip** source:

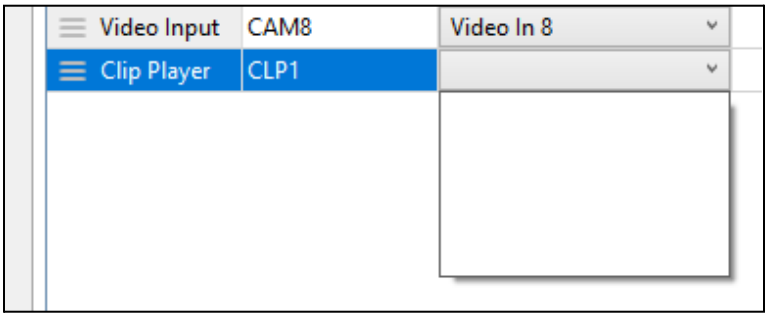
1. In the **Sources** panel, click the **Add Clip Player** icon. A new **Clip Source** appears at the bottom of the **Sources** list.



2. The **Source** automatically populates with the next available source (video channel) for that **Source** type. To select a different **Source**, then from the **Source** dropdown for the new **Clip** source, select a **Source**. In this example, it is left at **Clip Player 2.**



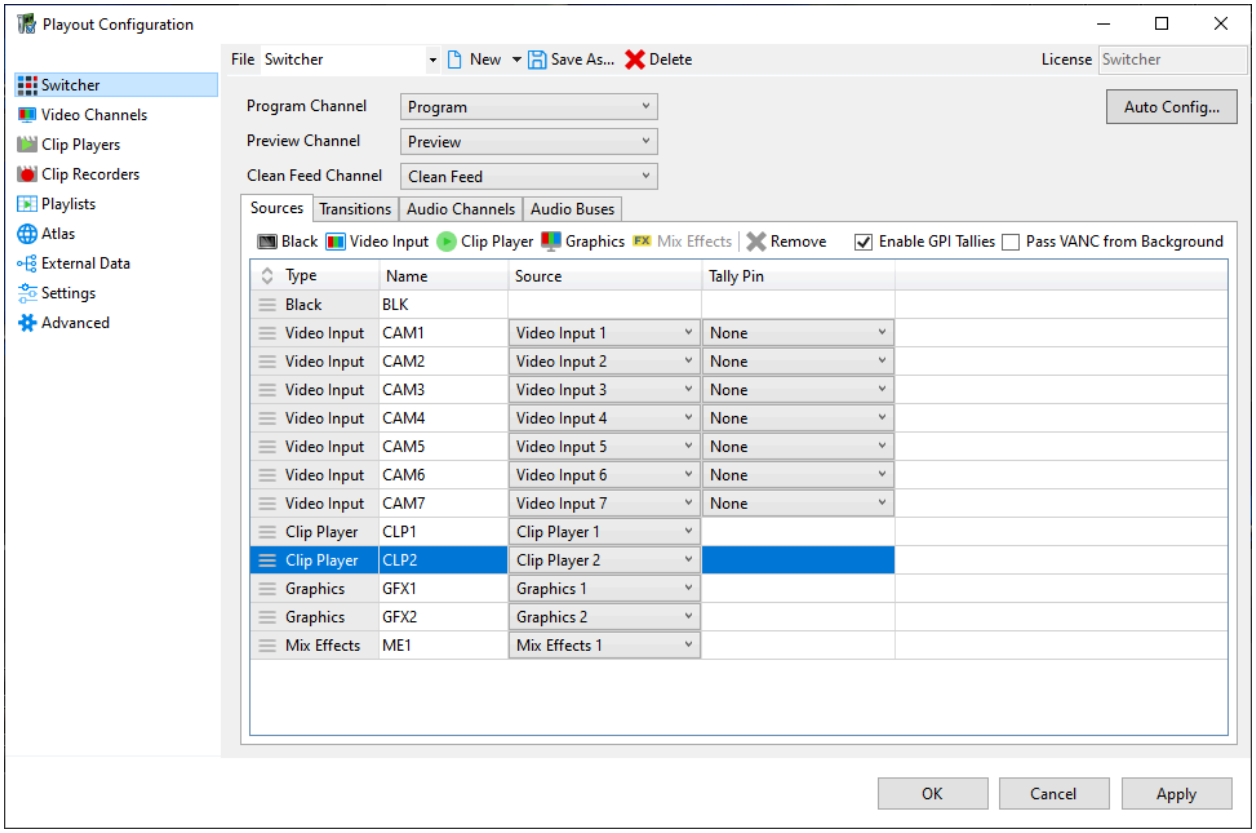
NOTE: When adding a **Clip Player** in **Config Menu > Playout Configuration > Switcher > Sources**, if the **Source** dropdown is blank or is missing a **Clip Player**, as shown below, then ensure that you have configured the **Clip Player** in **Config Menu > Playout Configuration > Clip Players**.



NOTE: Do not assign the same Video Channel to more than one Source, as it may result in unexpected PRIME Switcher appearance and/or behavior.

Example: Do not assign Video Input 2 to CAM2 and to CAM3.

3. If desired, then enter a new name in the **Name** field of the source. The name should be short enough to fit within the width of a bus button on the PRIME Switcher. The PRIME interface truncates excess characters.
4. If desired, reposition the bus in the list so that it is adjacent to the **CLP1** bus.



Once you close and restart PRIME Switcher, then the **Sources** configuration is applied.

Rename a Video Source

To change the name of a source as it appears on the PRIME interface.

1. Click the row of the source to be renamed.
2. Enter a new name. The name should be short enough to fit within the width of a bus button on the PRIME Switcher. The PRIME interface truncates excess characters.

Once you close and restart PRIME Switcher, then the new name appears in the switcher bus label(s)s.

Reconfigure an Existing PRIME Switcher Video Source

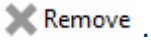
To reconfigure an existing PRIME Switcher source.

1. Click the row of the source to be reconfigured.
2. From the **Source** dropdown, select a new source.

Once you close and restart PRIME Switcher, then the reconfigured **Video Source** is applied.

Delete a Video Source

To delete a **Video Source**:

1. Click the row of the source to be deleted.
2. Do one of the following:
    - Press **Delete**.
    - Click the **Remove** icon 

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Once you close and restart PRIME Switcher, then the deleted **Video Source** no longer appears on the PRIME Switcher interface.

Configure Switcher Program, Preset, Key Bus Display Order

It may be desirable to reposition one or more sources in the **Source List**. The new position is reflected in the left-to-right order of the switcher buttons in the buses. To reposition a source:

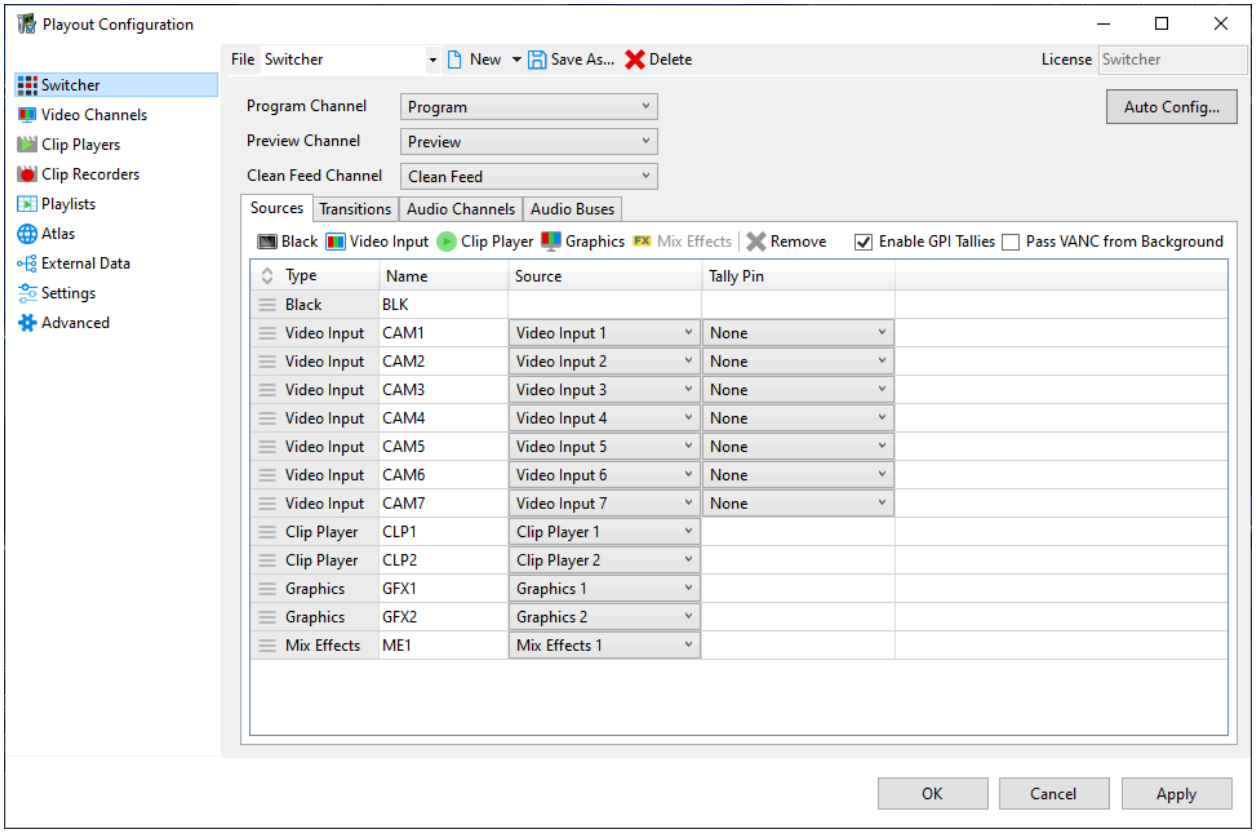
1. Click the row of the source to be moved.
2. Click the **Reposition** icon  at the left of the **Source Type**.
3. Drag the **Source** to the desired location.

Once you close and restart PRIME Switcher, then the **Sources** display in their new positions on the PRIME interface.

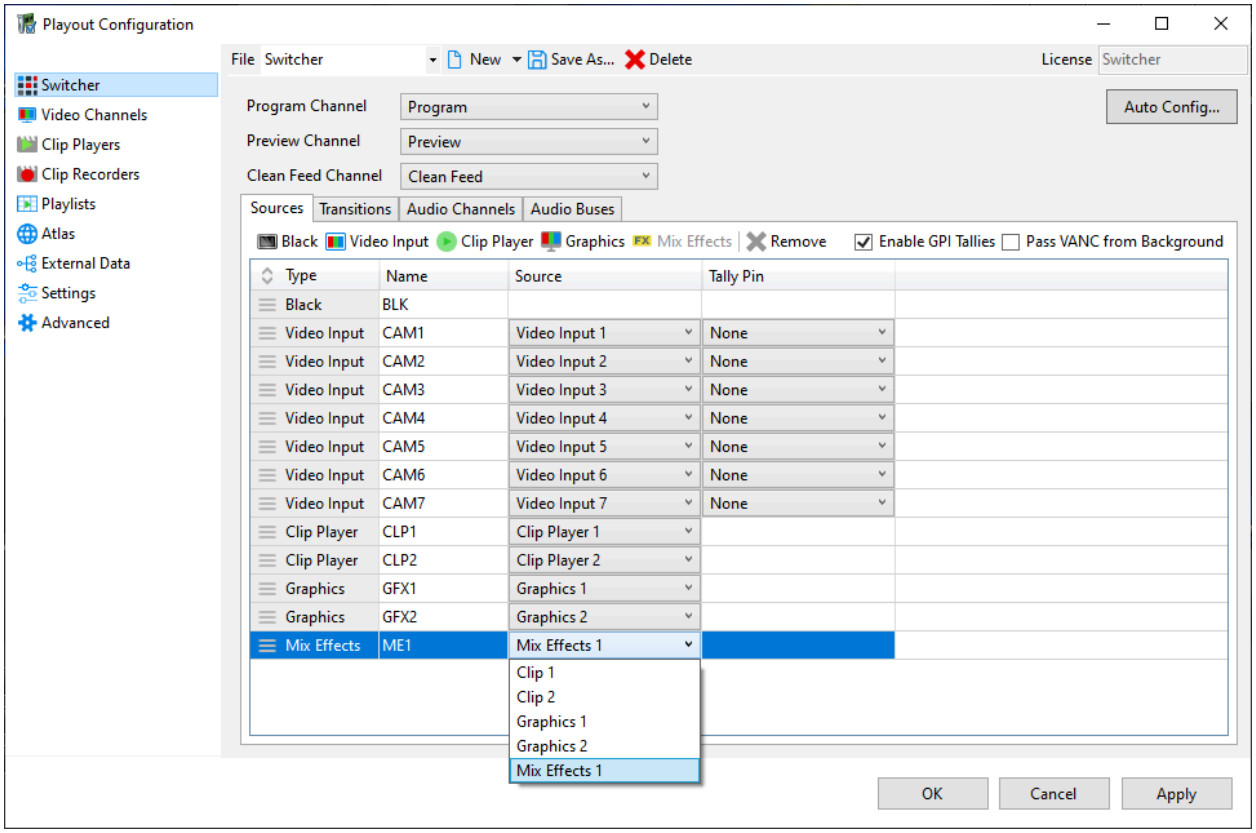
Add the ME1 Bank

If the PRIME Switcher displays only the **Main Bank**, then you can add the **ME1 Bank**:

1. From the PRIME Switcher menu, go to **Config Menu > Playout Configuration**. The **Playout Configuration Sources** tab appears.
2. Click the **Add Mix Effects** icon. **Mix Effect (ME1)** appears at the bottom of the **Source List**.



3. The default **Mix Effects** source is **Mix Effects 1**.



Once you close and restart PRIME Switcher, then the **ME1 Bank** appears on the PRIME Switcher interface.

NOTE: Once you have completed Source and any other configurations, remember to close, and then restart PRIME Switcher to apply the configurations.

Chapter 8: Configure Atlas

Overview

The **Atlas** stream provides the ability to display proxy monitors and other PRIME Switcher interface components, such as the **Program**, **Preview** and **Mix Effects** monitors, and the **Clips** and **Graphics Player** monitors.

If a channel has been configured in **Playout Configuration**, and a component has been enabled (e.g., a **Clip Player**), then it can be displayed in the PRIME Switcher interface.

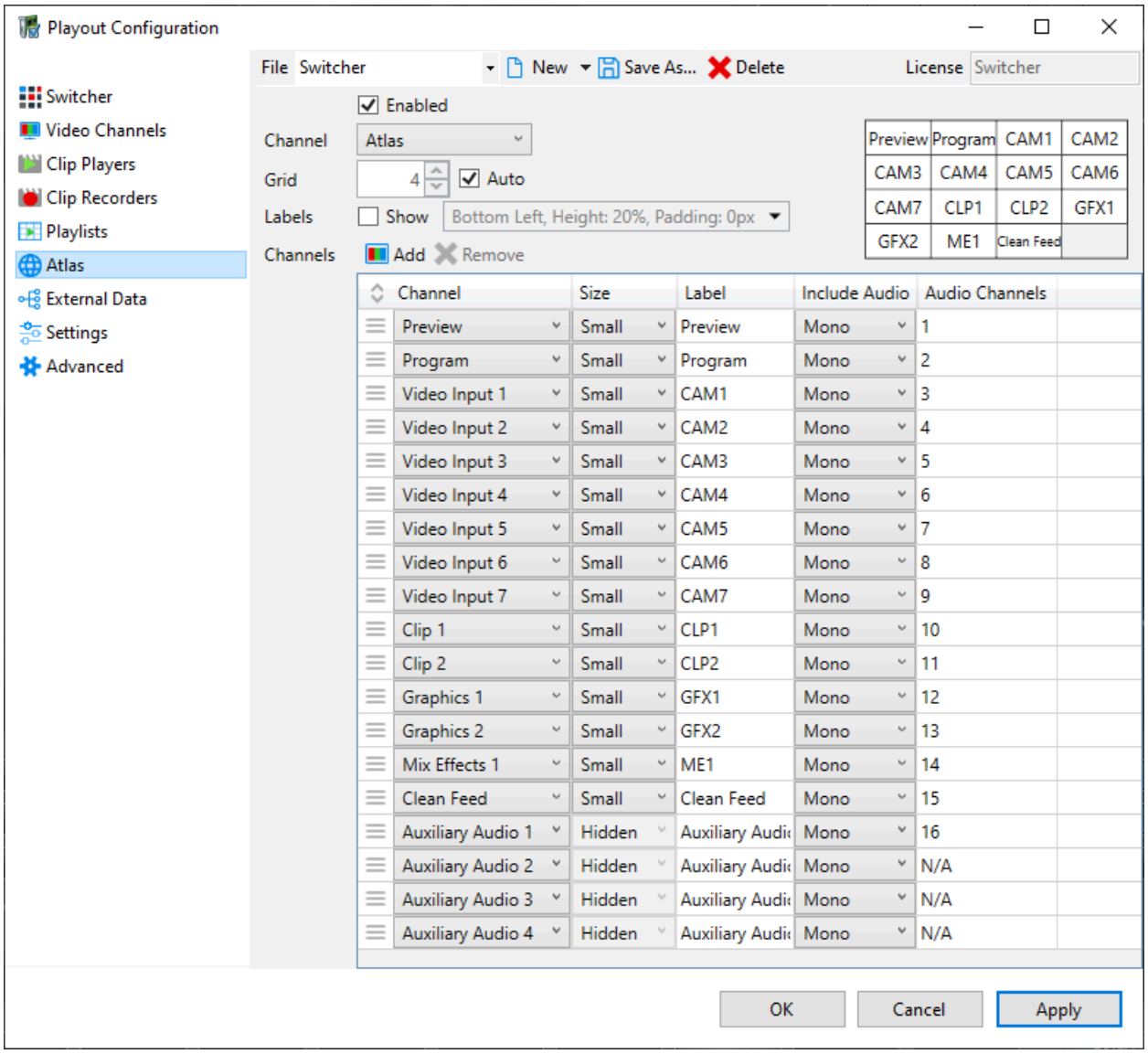
It may also be desirable to display only specific components e.g., **CAM1**, **CAM2**, **CAM3**, **CAM4** in the interface, even though eight CAMS may be configured. You can disable display of CAMs 5-8 in the **View** menu. To remove them from the **View** menu, so that they cannot be displayed, you can remove them from Atlas configuration.

NOTE: Even if sources are not configured in Atlas, the switcher buttons for those sources are still active, and they can be switched to Preview or Program. To disable operation of the channel, while still retaining its configuration:

- **Go to Config Menu > Playout Configuration > Video Channels, and click (uncheck) the enable/disable checkbox at the top of the channel's configuration settings. The channels still appear on the Status Indicator, but display red. The following shows Video Inputs 7 and 8 disabled.**

To access Atlas configuration:

- Go to **Config Menu > Playout Configuration**, and then in the left navigation, click **Atlas**. The **Atlas Panel** displays. For easier and more detailed viewing in this document, the following shows the panel narrowed and lengthened to see all components, and the **Auxiliary Audio Labels** relabeled.



Settings are as follows:

Enable/Disable: Enables/disables the display of the monitors in the PRIME Switcher interface.

- If enabled, then the monitors of the **Channels** listed in the **Atlas Panel** display in the PRIME Switcher interface. They also appear in the **View** menu.
- If disabled, then none of the monitors of the **Channels** listed in the **Atlas Panel** display in the PRIME Switcher interface. They also do not appear in the **View** menu.

NOTE: If Atlas is enabled, and monitors do not display in the PRIME Switcher interface, then ensure that:

- **You have added the Channels as Video Sources in Config Menu > Playout Configuration > Switcher > Sources.**
- **In the View menu, you have enabled the Channels for display. Enable/Disable component display.**
- **The Grid dimensions and/or component Size accommodate the display of the components.**

Grid: The grid displayed at the right of the **Atlas Panel** displays the names of all items that display in the interface. *To configure the **Grid**, see Configure Grid.*

Labels: Show/Do Not Show. Each monitor can display a label for easier identification. The label does not appear on output. The label obscures the underlying video, so configure ahead of time for optimal viewing. The following shows a monitor with no label, with a label with fully stretched background, and a label with a background only behind the text.


To enable/disable and configure label appearance, see Configure Label Display - Show Label.

The **Atlas** panel comprises the following columns:

- **List Position Up/Down Icon** : The column header for the **List Reposition** icons .
- **Channel:** The source of **Channel** that is to display in the PRIME Switcher interface. You can select from the dropdown, but not edit the items. There are five source types:
    - **Black**
    - **Video Input**
    - **Clip Player**
    - **Graphics**
    - **Mix Effects**
- **Size:** The size of the monitor with respect to the other monitors.
    - **Small**
    - **Medium**
    - **Large**
    - **Hidden**

    We advise setting **Size** to **Small** for all **Channels**. Setting a component to a larger size can set the **Grid** in a manner that may not accommodate the display of all components.

    Auxiliary Audio channels are always set to **Hidden**.
- **Label:** The text to display that identifies the monitor, e.g., **Program**, **CAM1**, **CLP1**, **GFX2**. Depending upon configuration, the Label text appears on a component tab, and/or on the monitor itself. *See Configure Label Display - Show Label*.
- **Include Audio:** Include audio in the **Atlas** stream. If the **Audio Channel Audio Mode** is set to **Disabled** in **Config Menu > Playout Configuration > Video Channels**, then:
    - The **Include Audio** field for that **Atlas** channel specifies **Disabled** and is grayed out; and,
    - **Audio Channels** automatically specifies **N/A**.
- **Audio Channels:** Assigns one channel (if **Mono**) or two channels (if **Stereo**) to the **Atlas** stream audio.

Configure Grid

The **Grid** displays the names of the components that, with the exception of the **Clean Feed**, display in the PRIME Switcher interface.

Preview	Program	CAM1	CAM2
CAM3	CAM4	CAM5	CAM6
CAM7	CLP1	CLP2	GFX1
GFX2	ME1	Clean Feed	

The **Grid** dimensions determine the maximum number of monitors (**Preview**, **Program**, **ME1**, **Video Inputs**, **Clip Players**, **Graphics Players**) that the PRIME Switcher displays. The order in which the monitors display in the **Grid** does not determine the order of display in the PRIME Switcher interface.

Also note the following:

- The **Clean Feed** displays only on the **Device** specified **Config > Playout Config > Video Channels**, e.g., **Matrox SDI**, **NDI**, etc. Even if added to the **Atlas** stream, it does not display in the PRIME Switcher interface.
- While you can add **Auxiliary Audio Channels** to the **Atlas** stream, they do not appear in the **Grid**, and it is not necessary to add them to the **Atlas** stream for them to display as **Audio Buses**. The visual representation of the **Audio Buses** in the PRIME Switcher interface, is set in **Config > Playout Config > Switcher > Audio Buses**.

You can set the grid display as follows:

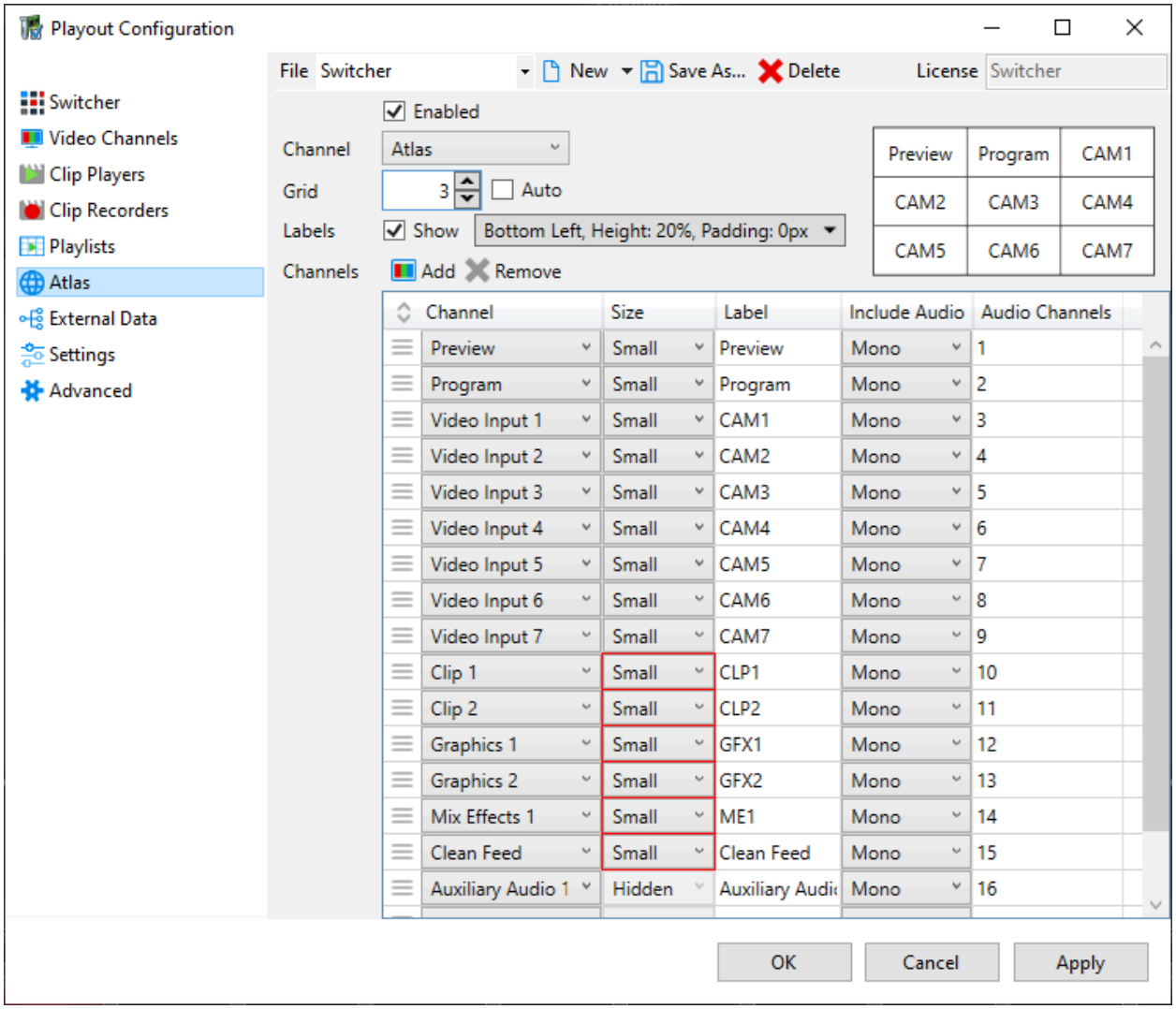
- **Auto Enabled:** If enabled, then automatically and evenly distributes the monitors in the PRIME Switcher interface. We advise that you enable **Auto**.
- **Auto Disabled**: If disabled, then allows selection of **Grid** dimension from **2 x 2** to **8 x 8**.

If you set a **Grid** dimension that does not accommodate all of the components, then the Atlas list displays a red outline around the components that it cannot accommodate. As such, the outlined components:

- Do not display in the PRIME Switcher interface; and,
- Do not display in the **View** menu.

Caution:

- The outlined components remain in **Config > Playout Config > Sources**. **As such, these sources are still live in PRIME Switcher, and can be taken to Preview or Program, even if the monitors are not displayed.**
- If **Clip Players** or **Graphics Players** are among the outlined components, then the players display, but not the content of the players. They still operate.



Configure Label Display - Show Label

You can enable or disable the display of a label on each monitor, and configure the appearance of the label.

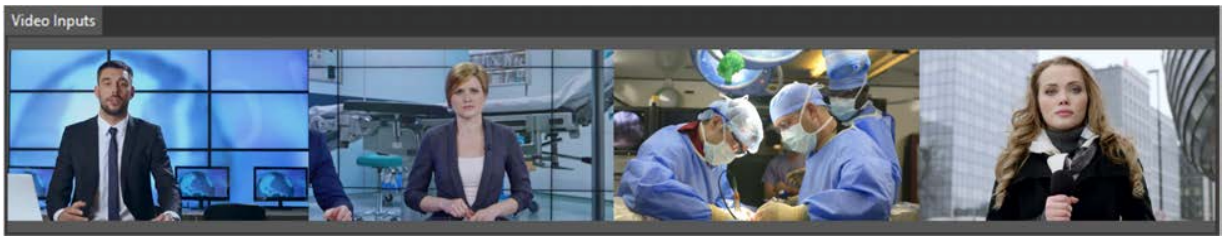
To display labels:

- Enable (check) the **Show** checkbox.

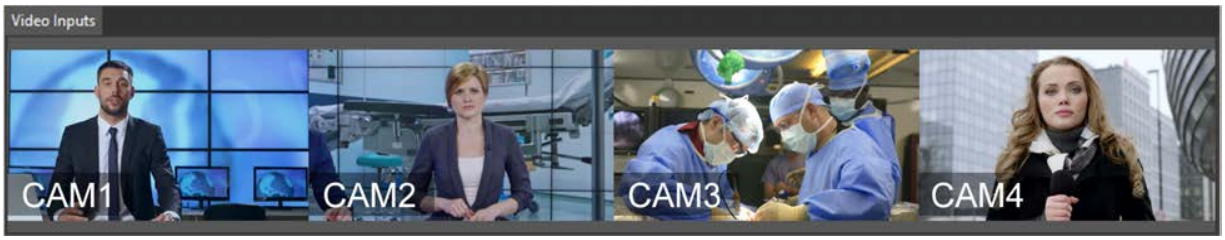
NOTE: If displaying monitors in a single grid window, as opposed to each in its own individual window, then it is advisable to show labels, in order to quickly identify the inputs.

Video Sources Displayed in Individual Windows

Video Sources in Single Grid Window with No Labels



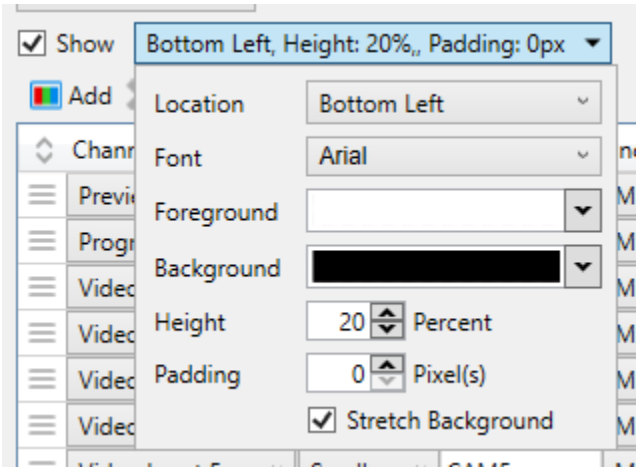
Video Sources Displayed in Single Grid Window with Labels



See Set Video Input Display for details.

To display the label settings:

- Click the dropdown directly to the right of the **Show** checkbox. The label parameters display.



- **Location:** Select the location of the label on the monitor.
    - **Top Left**
    - **Top Center**
    - **Top Right**
    - **Bottom Left**
    - **Bottom Center**
    - **Bottom Right**
- **Font:** Select the font for the label.
- **Foreground:** Use the **Color Picker** to select the foreground, i.e., the font color. Click the **Advanced** tab to set a custom color and transparency.
- **Background:** Use the **Color Picker** to select the background color. Click the **Advanced** tab to set a custom color and transparency. Transparency is advised, so that the underlying video is visible.
- **Height:** % of the total monitor height to which the label is set. Use the spin box to set.

- **Stretch Background:** Enable/disable.
    - When enabled, the label background extends across the entire monitor.

    - When disabled, the label background extends across the length of the label text, plus the padding.

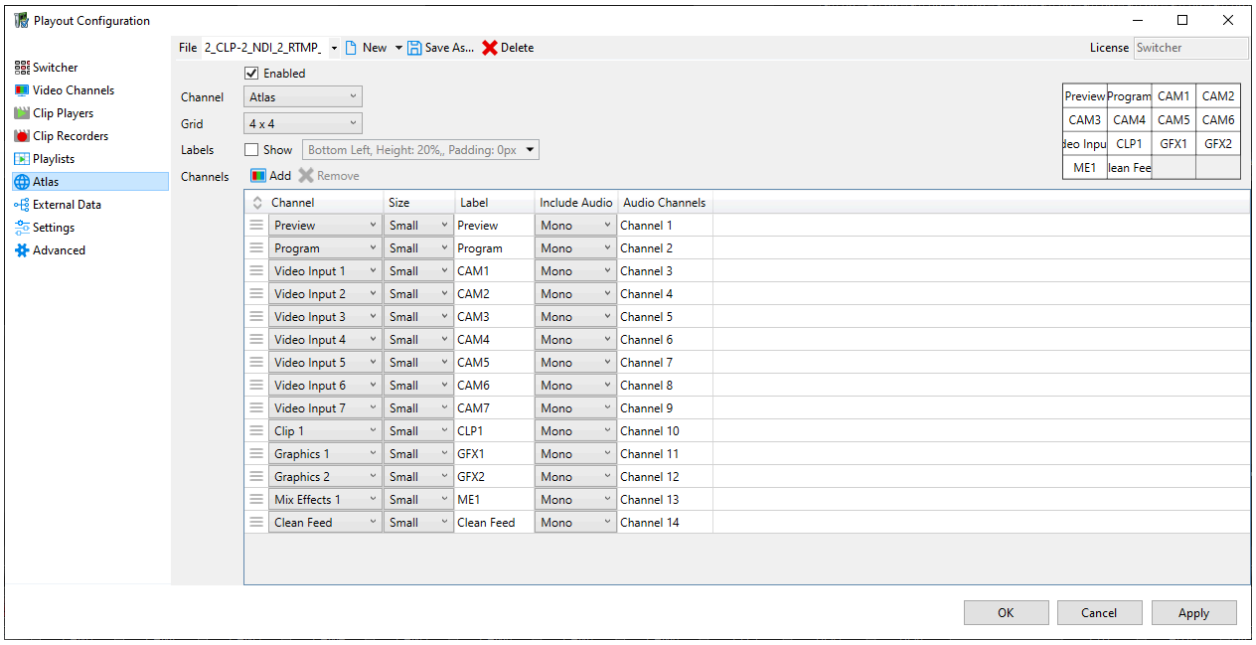
- **Padding:** The size of the padding, in pixels, surrounding the label text. Use the spin box to set.

Add Channel Display

To add the display of a component to the PRIME Switcher interface:

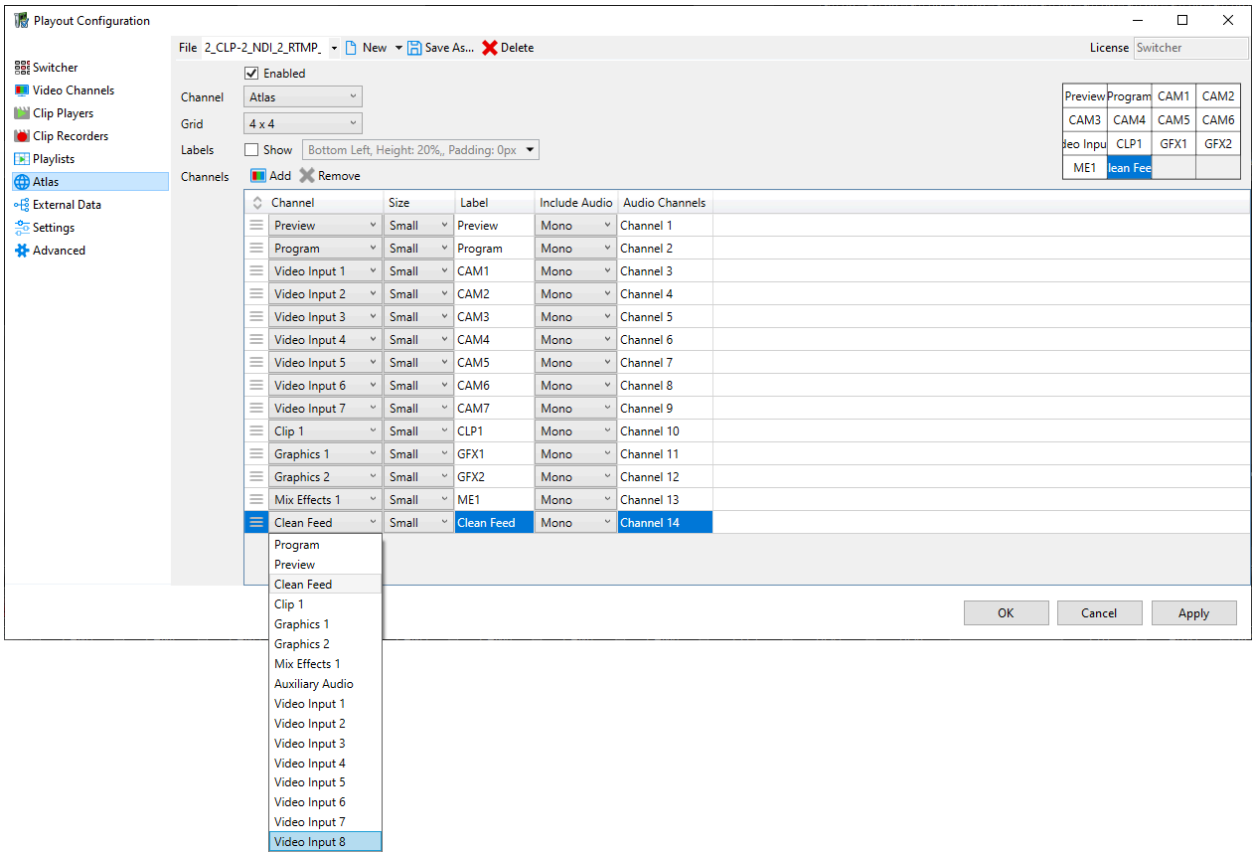
1. Click the **Add** icon 

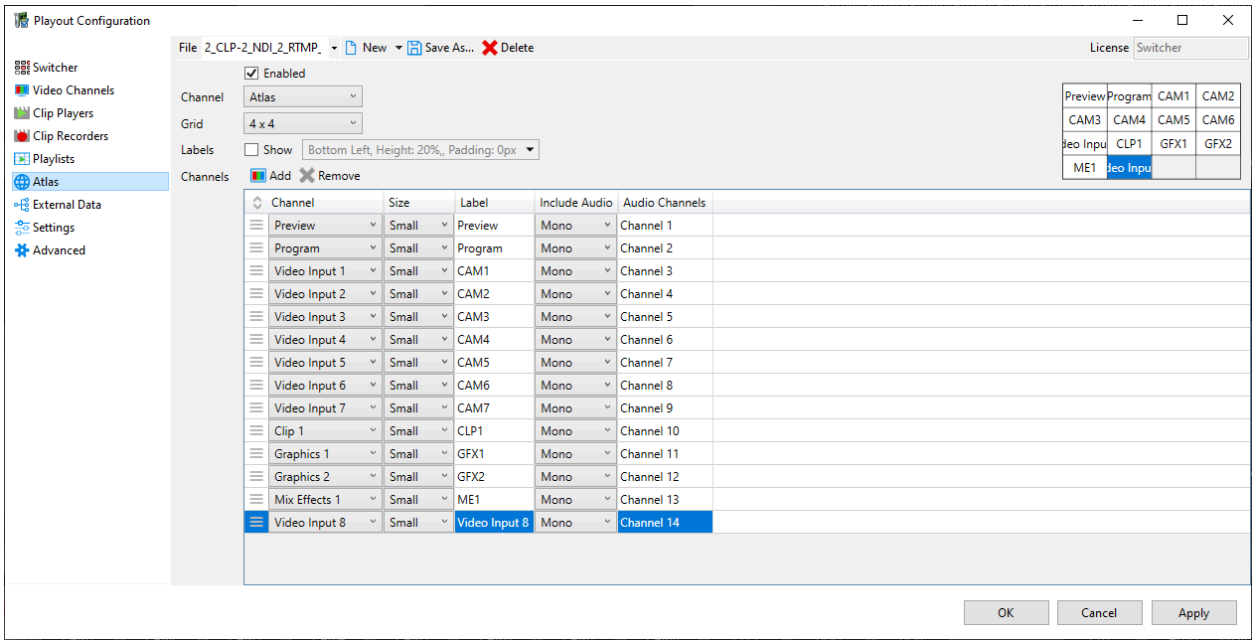
. A new item appears at the bottom of the **Channel** list. In this example a **Clean Feed** has automatically been added. The type of **Channel** added is based on available channels based on the system configuration.



NOTE: If, upon adding a Channel, the Channel field is blank, then ensure that you have added the Channel in Config Menu > Playout Configuration > Video Channels.

2. For this example, you will change **Clean Feed** to **Video Input 8**. From the **Channel** dropdown, select **Video Input 8**.





Relabel a Channel

If the **Label Show** checkbox is enabled, then the label, as specified in **Channel's Label** field, displays on the monitor in the PRIME Switcher interface.

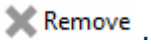
To relabel a **Channel**:

- Click the **Channel's Label** field, and then enter a new **Label** name.

Delete a Channel Display

To delete the display of a **Channel**, so that it no longer displays in the PRIME Switcher Interface, and it no longer appears in the **View** menu:

Select the **Channel** that you would like to delete, then do one of the following:

- Press **Delete**.
- Click the **Remove** icon 

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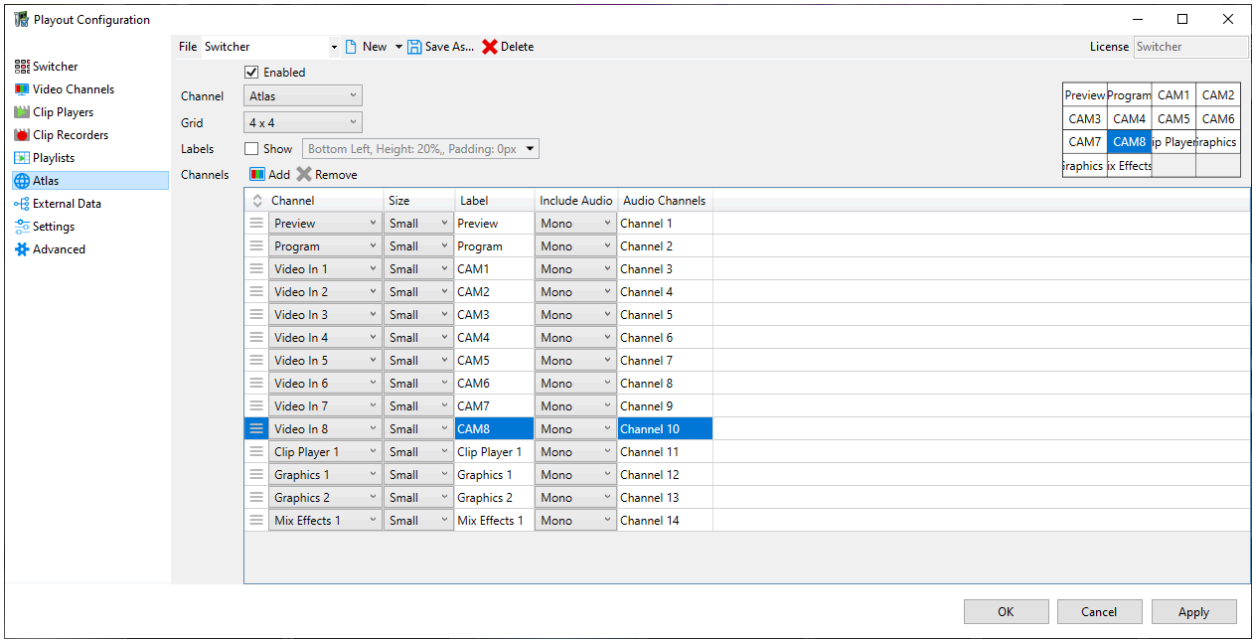
The **Channel** no longer appears in the **Channel** list.

Reorder Channel Display

The order of the **Channels** in the list is reflected in the PRIME Switcher interface. It may be desirable to reposition one or more **Channels** in the **Atlas** list. To reposition a **Channel**:

1. Click the row of the **Channel** to be moved.
2. Click the **Reposition** icon ☰ at the left of the **Channel** name.
3. Drag the **Channel** to the desired location.

In this example, **Video Input 8** is moved directly following **Video Input 7**.



Once you close and restart PRIME Switcher, then the components display in their new positions on the PRIME interface.

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Chapter 9: Configure Transitions

Overview

A **Transition Effect** controls how video and graphics transition to or from **Program**. A **Transition Effect** can be a simple **Cut**, **Wipe**, or **Dissolve**, or a more complex, custom-built effect created in PRIME. **Transition Effects** are configured based on **Transition Types** within the **Transitions Configuration Panel**, and can be added, configured, deleted, and edited. You can create multiple **Transition Effects** based on the same **Transition Type**.

You can configure up to five **Transition Effects**, which are displayed as buttons on the PRIME Switcher **Transitions Area** from left to right, in the order in which they are listed in the **Transitions Configuration Panel**. *See Configure Transition Effect Button Display Order for information on how to set the **Transition Effect** button order.*

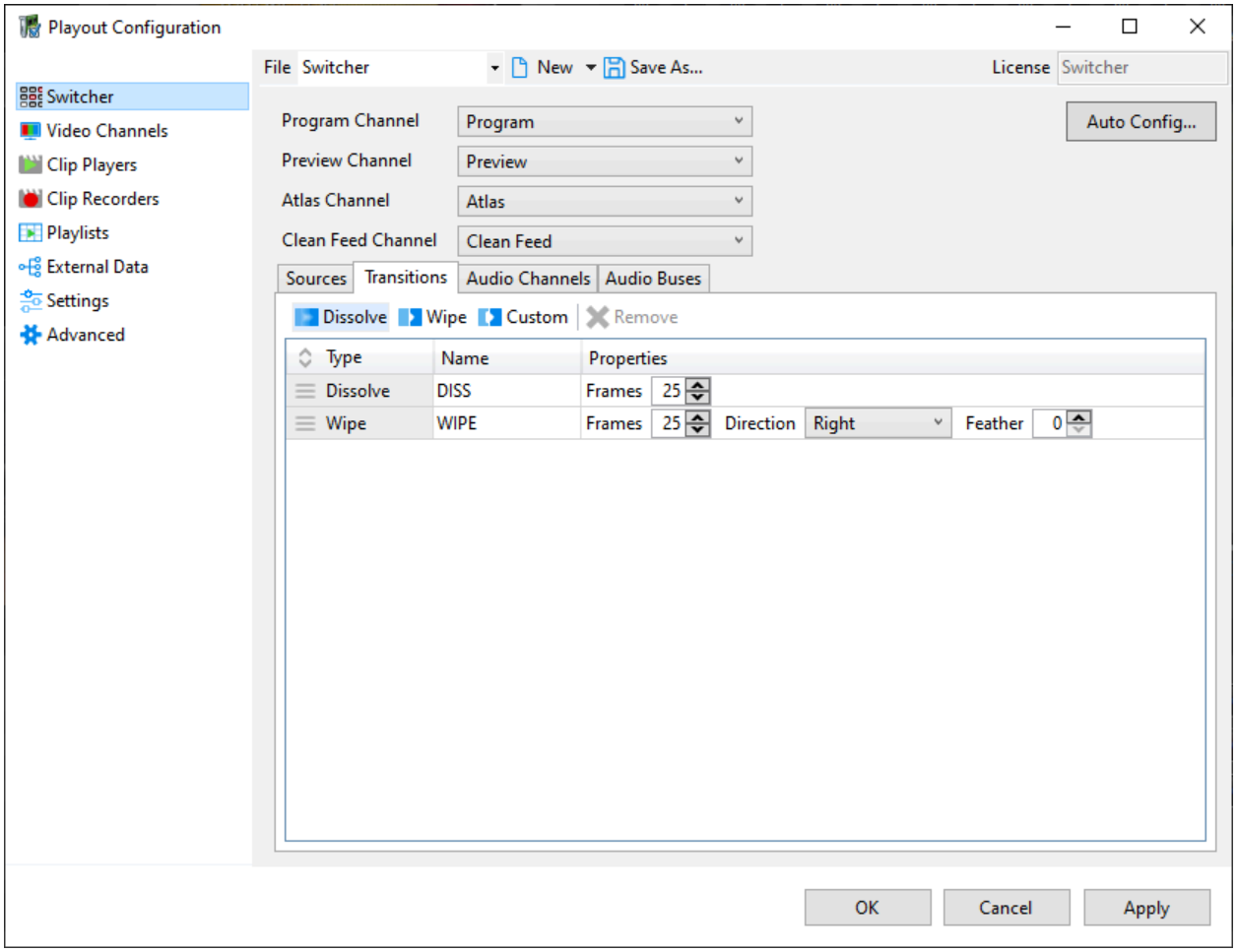
See Work with Main and Mix Effect (ME) Banks and Transitions for information on how to set and perform transitions in the switcher.

Access the Transitions Configuration Panel

To access the **Transitions Configuration Panel**:

1. In the PRIME Switcher menu bar, go to **Config Menu > Playout Configuration**. The **Video Channels** panel appears.
2. In the left navigation, click **Switcher**. The **Switcher Sources** panel appears.

3. Click the **Transitions** tab. The **Transitions** panel appears.



The **Transitions Panel** comprises the following columns:

- **List Position Up/Down Icon** : The column header for the **List Reposition** icons .
- **Type:** the type of transition. This field is not editable. Three transition types are available:
  - **Dissolve**
  - **Wipe**
  - **Custom**
- **Name:** The name of the transition, which can be set by the user.
- **Properties:** Transition-specific properties, which can be set by the user.

You can add, configure, and delete transitions from this panel.

Switcher Transition files are in ***.pst*** format. PRIME Switcher can also apply a **Clip Transition** file (***.pct*** format) to a transition. Note that a ***.pst*** file cannot be used as a **Clip Transition**.

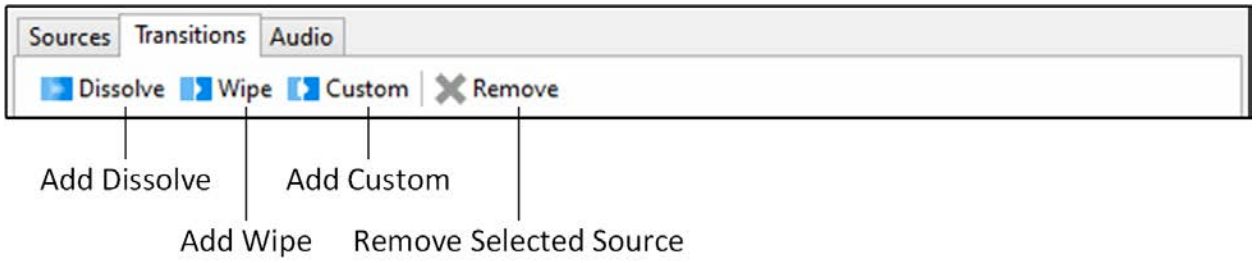
NOTE: Once you have completed Transition and any other configurations, remember to close, and then restart PRIME Switcher to apply the configurations.

Add Transition

You can add a **Dissolve**, **Wipe** or **Custom Transition Effect** to the PRIME Switcher interface.

To add a transition:

1. Click the **Dissolve**, **Wipe** or **Custom** icon at the top of the **Transitions Panel**.



2. Each type of transition has transition-specific parameters as described in **Transition Types**. Configure as desired.

Once you close and restart PRIME Switcher, then the new **Transition Effect** appears on the PRIME Switcher interface.

Transition Types

Overview

PRIME Switcher provides three built-in **Transition Types**: **Cut**, **Wipe** and **Dissolve**. Custom transition files can be created within PRIME and imported and applied as PRIME transitions.

Cut

A **Cut** switches instantaneously from one video source to another. Sources are not mixed. **Cut** is the only transition that cannot be edited.

Dissolve

A **Dissolve** simultaneously fades the **Program** video out as the **Preview** video fades in. Both sources are at full screen throughout the transition.

The following **Dissolve** parameters can be configured:

- **Name:** Default **Name** is **DISS**. To edit:

    1. Select the transition row, and then click the **Name** field.
    2. Enter the new name, then press **Enter**.

- **Properties:** The duration of the **Dissolve**, in frames. To set:

    1. Enter a value or use the spinner to set a value.
    2. Press **Enter**.

More than one **Dissolve** transition can be configured. To add a **Dissolve** transition:

1. At the top of the **Transitions** tab, click **Dissolve**. The new **Dissolve** transition appears in the **Transitions** list.
2. Configure as described above.

Once you close and restart PRIME Switcher, then the **Transition Effect** settings are applied.

Wipe

Preview channel video wipes over the Program channel video in the configured direction. For example, if a **Wipe** is set to **Left**, then the **Preview** video enters the **Program** screen from the right, and moves left, covering the **Program** video.

The following **Wipe** parameters can be configured:

- **Name: Default Name** is **WIPE**. To edit:

    1. Select the transition row, and then click the **Name** field.
    2. Enter the new name, and then press **Enter**.

- **Properties:** The duration of the **Wipe**, in frames. Default is **25** frames. To set:

    1. Enter a value or use the spinner to set a value.
    2. Press **Enter**.

- **Direction:** The direction in which the **Wipe** moves. Default is **Left**. To set:

    - From the dropdown, select **Left**, **Right**, **Up** or **Down**.

- **Feather:** Applies a soft edge to the wipe edge. Default is **0** frames (hard edge). To set:

    1. Enter a value or use the spinner to set a value. The higher the value, the softer the edge. **Range: 0 - ∞**
    2. Press **Enter**.

More than one **Wipe** transition can be configured. To add a **Wipe** transition:

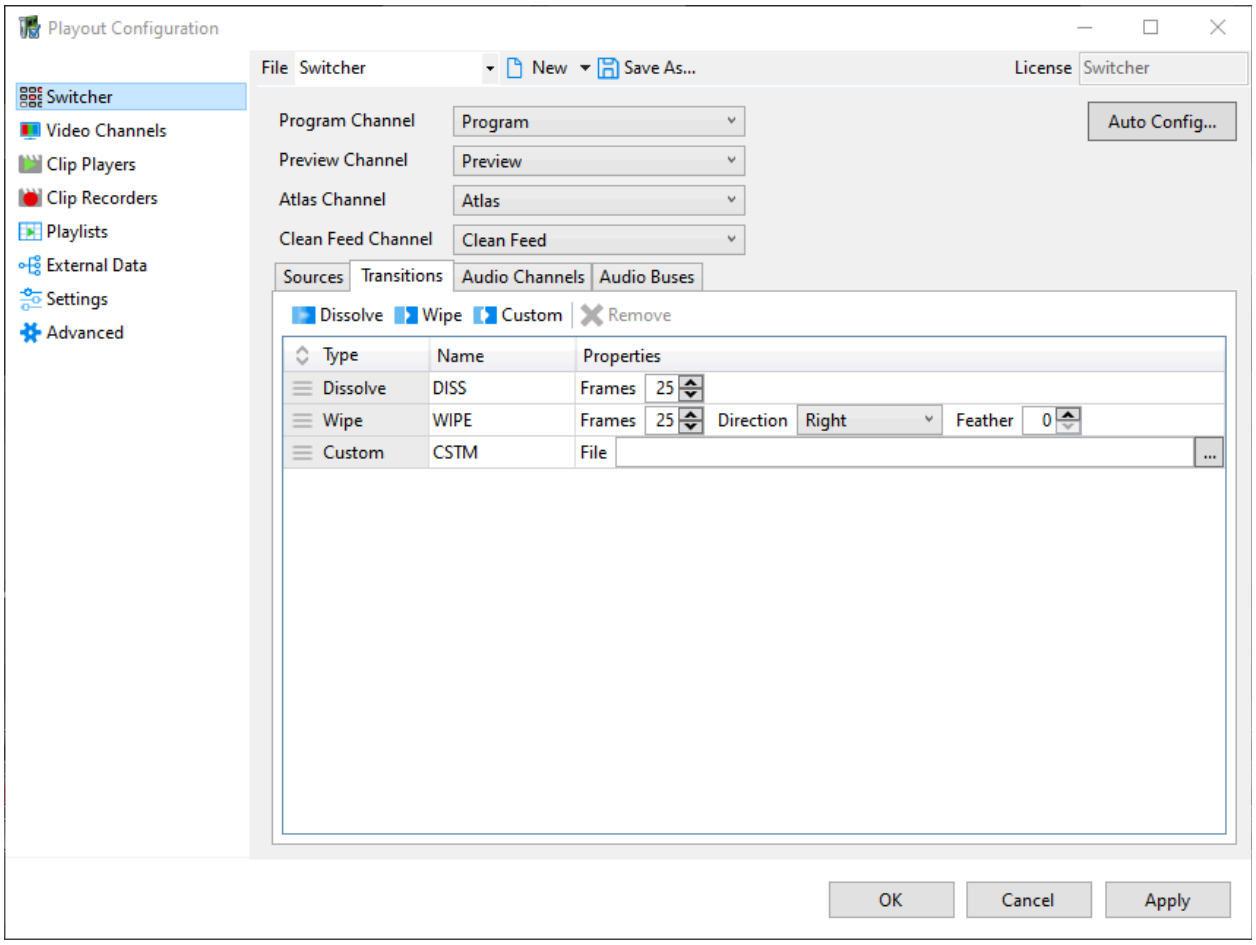
1. At the top of the **Transitions** tab, click **Wipe**. The new **Wipe** transition appears in the **Transitions** list.
2. Configure as described above.

Once you close and restart PRIME Switcher, then the **Transition Effect** settings are applied.

Custom

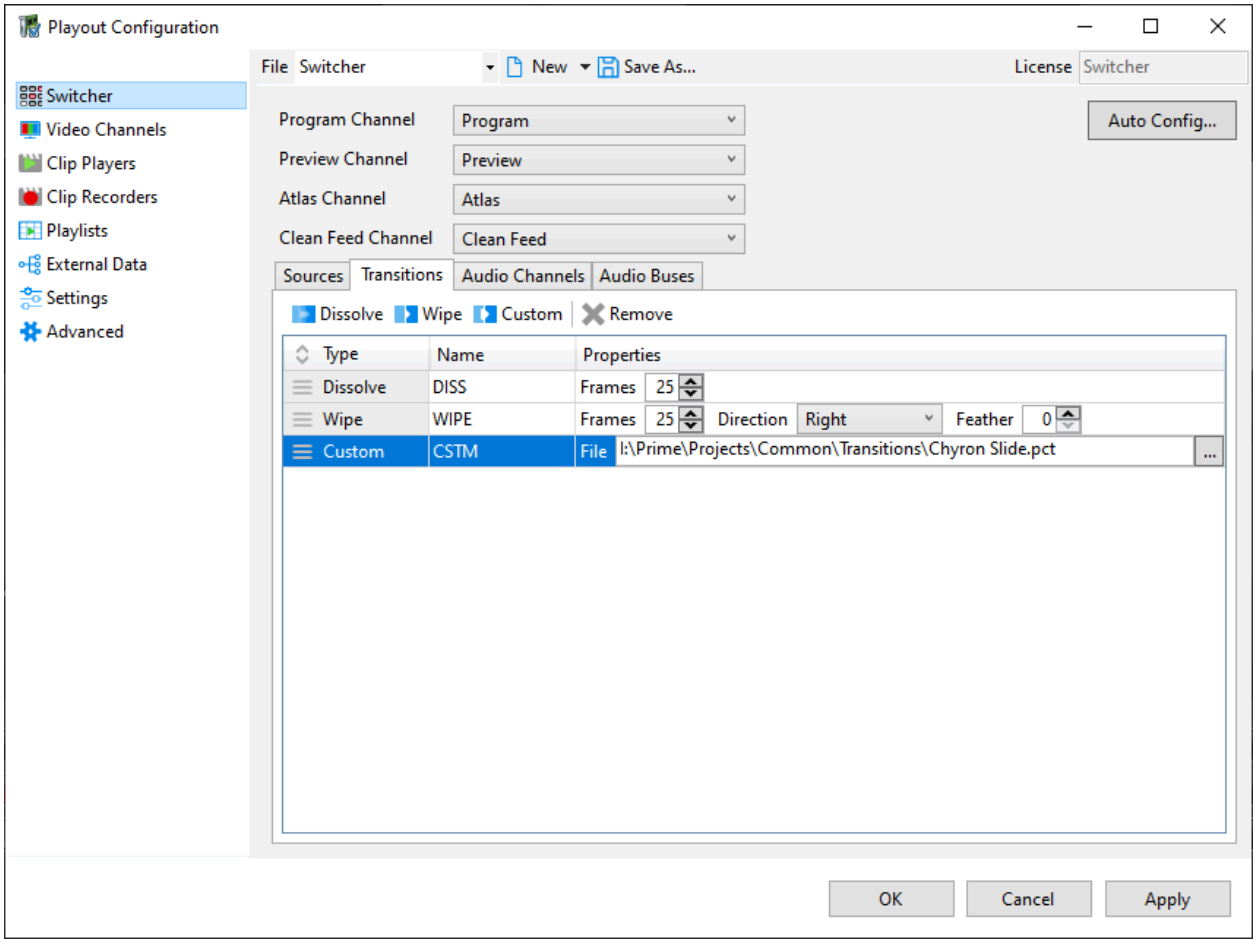
You can add a **Custom** transition to the PRIME Switcher. **Custom** transitions must be created in PRIME, and must be of file format ***.pst** or ***.pct**. To add a **Custom** transition:

1. At the top of the **Transitions** tab, click **Custom**. The new **Custom** appears in the **Transitions List**.



2. If desired, edit the **Name**.

3. Click the **Browse** button [...] to the right of the **File** field. From the **Browse** dialog, select the desired ***.pst** or ***.pct** **Transition** file, and then click **Open**. The **Browse** dialog closes. The file name appears in the **File** field.



Once you close and restart PRIME Switcher, then the **Transition Effect** settings are applied.

Rename Transition Effect

You can edit **Transition Names**. It is good practice for a **Transition Name** to be short enough to display in its entirety on a Prime Switcher **Transition Effect** button; otherwise, part of the label name does not display. To edit a **Transition Name**:

- In the **Name** field, type a new name.

Once you close and restart PRIME Switcher, then the new name appears on the **Transition Effect** button on the PRIME Switcher interface.

Reconfigure an Existing PRIME Switcher Transition Effect

To reconfigure an existing **Transition Effect:**

1. Click the row of the **Transition** to be reconfigured.
2. Reconfigure the settings as desired.

Once you close and restart PRIME Switcher, then the reconfigured **Transition Effect** is applied.

Delete a Transition

To delete a transition:

1. Highlight the row that contains the transition.
2. Press **Delete**, or, at the top of the **Transitions** tab, click **Remove**.

Once you close and restart PRIME Switcher, then the deleted **Transition Effect** no longer appears on the PRIME Switcher interface.

Sort the Transition List

The **Transition List** can be sorted by **Name**, in either ascending or descending order. To sort the list:

- Click the **Name** heading to toggle the **Transition** list in ascending or descending alphabetical order.

Once you close and restart PRIME Switcher, then the **Sort** settings are applied to the PRIME Switcher interface.

Configure Transition Effect Button Display Order

It may be desirable to reposition one or more **Transition Effects** in the **Transition List**. The new position is reflected in the left-to-right order of the **Transition Effects** buttons in the switcher **Transition Area**. To reposition a **Transition Effect**:

1. Click the **List Reposition** icon  at the left of the row that contains the transition that is to be moved.
2. Drag the transition to the desired location.

Once you close and restart PRIME Switcher, then the **Transition Effect** buttons display in their new positions on the PRIME Switcher interface.

NOTE: Once you have completed Transition and any other configurations, remember to close, and then restart PRIME Switcher to apply the configurations.

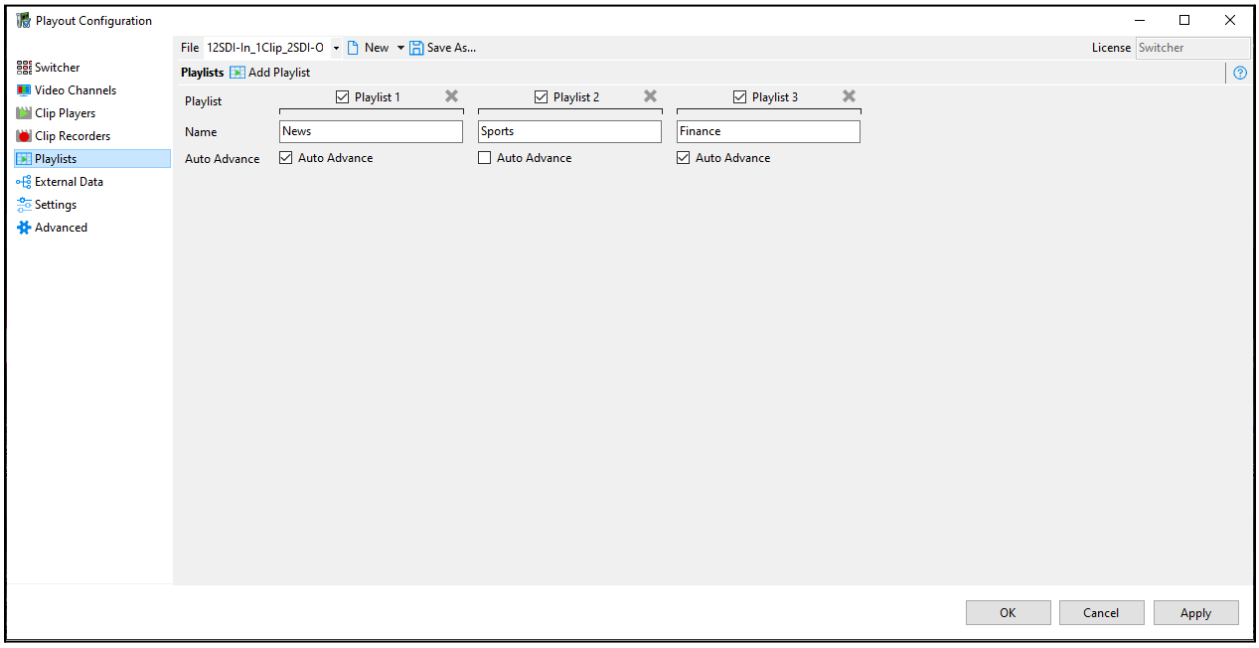
Chapter 10: Configure Playlist Players

Overview and Access the Playlist Configuration Panel

You can configure PRIME **Playlist Players** for playlist playout in PRIME Switcher.

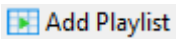
To access the **Playlist Configuration Panel**:

1. In the PRIME Switcher menu bar, go to **Config Menu > Playout Configuration**. The **Video Channels** panel appears.
2. In the left navigation, click **Playlists**. The **Playlists** panel appears.

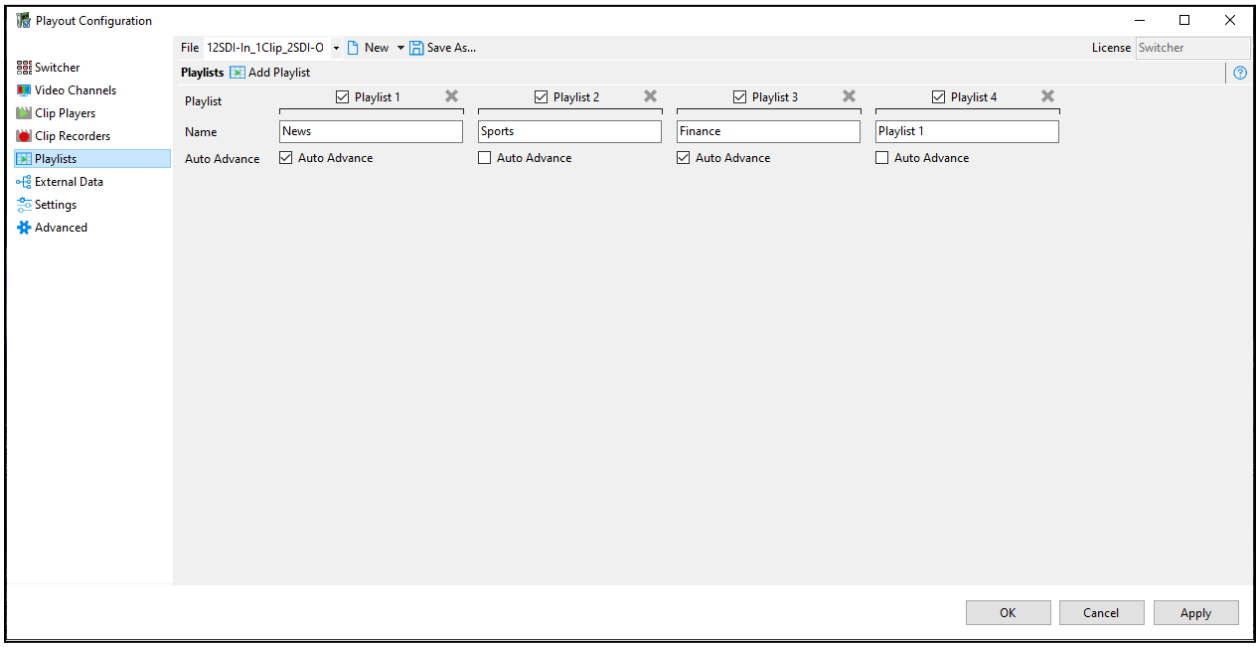


Add Playlist Player

To add a **Playlist Player**:

1. Click **Add Playlist** 

.
2. A new **Playlist Player** appears.



3. In the **Name** field, enter the name of the new **Playlist Player**.
4. Do one of the following:
    - To set the **Playlist Player** not to automatically advance to the next item in a playlist after the current clip/graphic/scene/message has played, leave the **Auto Advance** checkbox blank.
    - To set the **Playlist Player** to automatically advance to the next item in a playlist after the current clip/graphic/scene/message has played, check the **Auto Advance** checkbox to enable.

Once you close and restart PRIME Switcher, then the new **Playlist Player** becomes available in the **View** menu, from which visibility can be enabled.

See Play Back Graphics/Messages/Images/Clips from the PRIME Playlist.

Enable a Playlist

You can enable or disable availability of a **Playlist Player** without removing it.

To enable or disable **Playlist Player** availability:

- Check the checkbox to the left of the **Playlist Player** number:
    - To disable, leave the checkbox blank.
    - To enable, check the checkbox.

Once you close and restart PRIME Switcher, then the specified playlist availability is applied. You can then enable/disable **Playlist Player** visibility from the **View** menu.

Delete a Playlist

To delete a **Playlist Player**:

- Click the **Close** icon (**x**) to the right of the **Playlist Player** number.

Once you close and restart PRIME Switcher, then the playlist no longer appears.

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Chapter 11: Configure Audio Channels

Overview

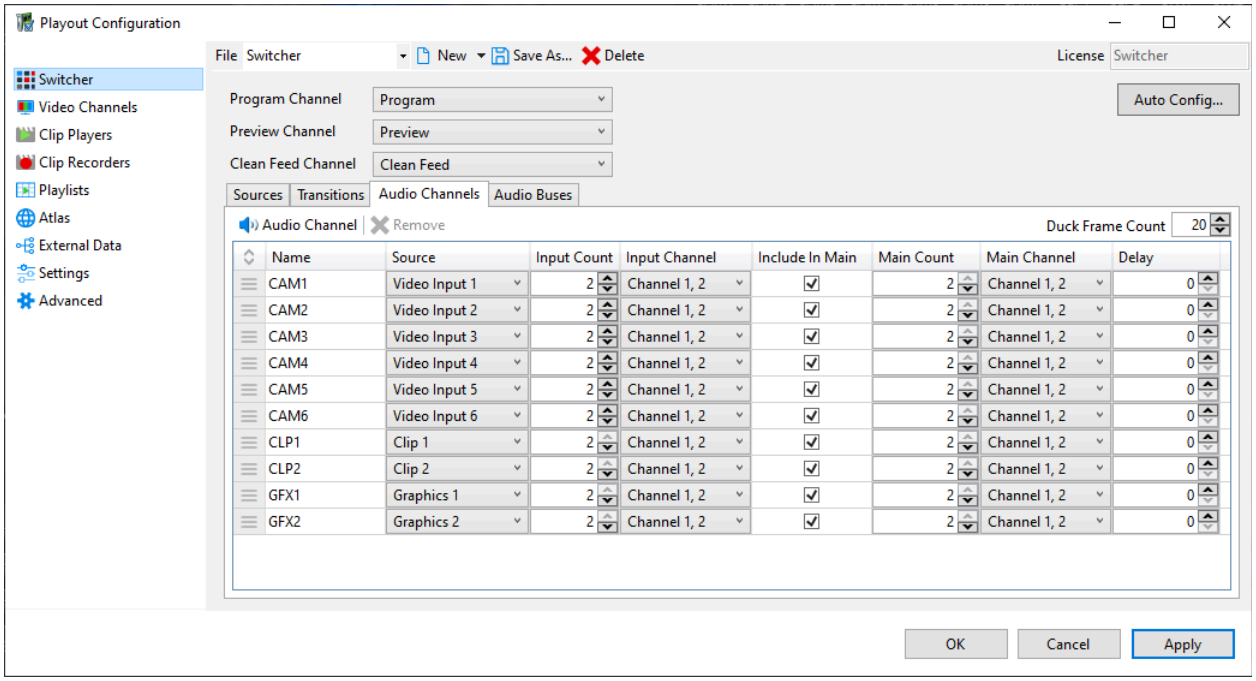
The **Audio** panel provides the ability to configure, add, edit, and delete PRIME Switcher audio sources. The number and types of available audio sources depends upon PRIME configuration.

You can configure each of the audio inputs, which are displayed in the **Audio Mixer** as **Audio Faders**, from left to right, in the order in which they are listed in the **Audio Configuration Panel**. *See Configure Audio Fader Display Order for information on how to set **Audio Fader** order.*

Access the Audio Channels Configuration Panel

To access the **Audio Channels Configuration Panel**:

1. In the PRIME Switcher menu bar, go to **Config Menu > Playout Configuration**. The **Video Channels** panel appears.
2. In the left navigation, click **Switcher**. The **Switcher Sources** panel appears.
3. Click the **Audio Channels** tab. The **Audio Channels** panel appears.



The **Audio Channels** panel comprises the following columns:

- **List Position Up/Down Icon :** The column header for the **List Reposition** icons .
- **Name:** The name of the audio source, which can be set by the user.
- **Source:** The audio source, selected by the user.
- **Input Count:** User-set input index number. Maximum number is determined by number of **Audio Channels** set for the specified **Input** in:
  Config Playout Config > Video Channels
- **Input Channel:** Audio input channels from the source. The number and choice of channels depends upon the number set in the **Input Count**.
- **Include in Main:** Include in PRIME Switcher **Main Audio Bus** and **Main** output.
- **Main Count:** Number of **Audio Channels** in the **Main Count**, number, the maximum determined by number of **Audio Channels** set for the specified **Input** in:
  Config Playout Config > Switcher > Audio Buses > Type: Main.
  This maximum applies to all **Main Count** settings in the **Audio Channels Panel**.
- **Main Channel:** Number of audio input channels from the source. The number and choice of channels depends upon the number set in the **Main Count**.
- **Delay:** Delay in relation to the selected source for that channel. Used for audio-video synchronization. **Range: 0 - 192 milliseconds**.

Set Duck Frame Count

Duck Frame Count specifies the duration, in frames, of the transition to and from duck under. The **Duck Frame Count** applies to all audio sources and is triggered via API only. **Range: 0 - ∞.**

To set **Duck Frame Count**, do one of the following:

- Enter the **Duck Frame Count** value in the **Duck Frame Count** field.
- Use the spin box to set the **Duck Frame Count** value.

NOTE: Once you have completed **Audio** and any other configurations, remember to close, and then restart PRIME Switcher to apply the configurations.

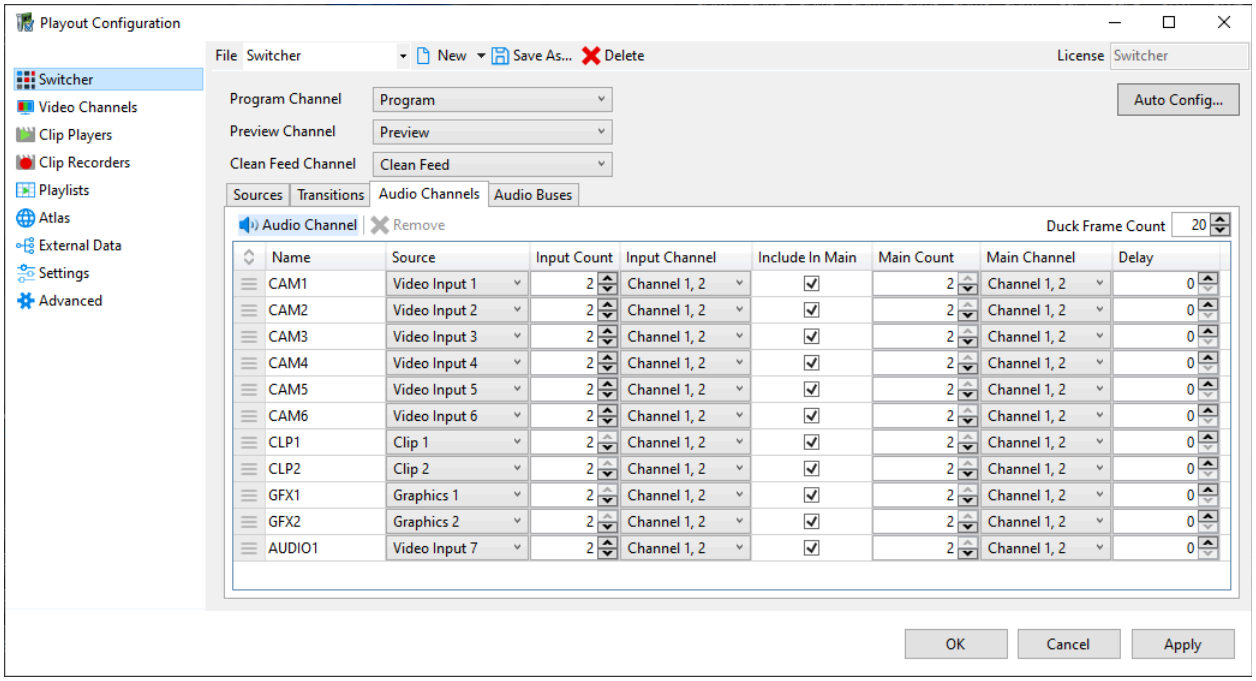
Add an Audio Channel

You can add a new **Audio Channel** to the PRIME Switcher.

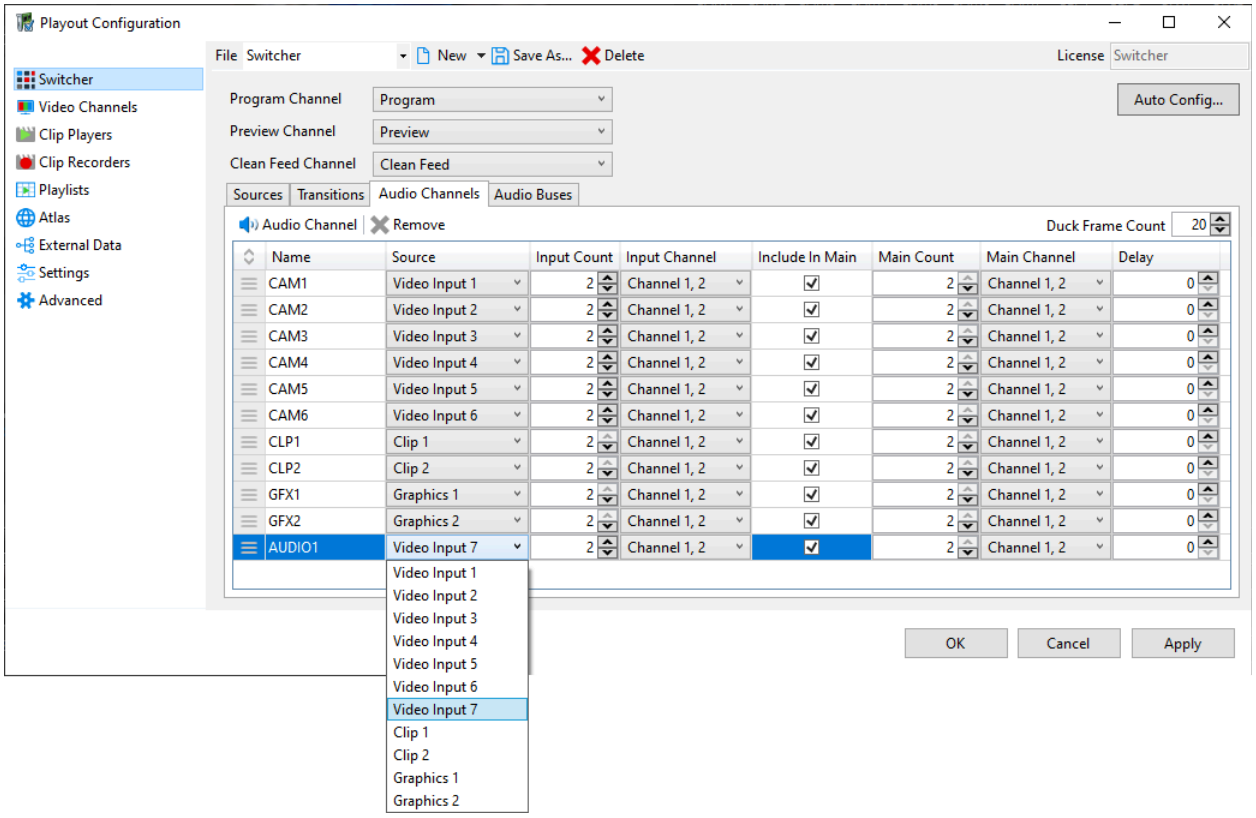
The **Add Audio Channel** icon Audio Channel, as well as a **Remove Selected Audio Channel** icon Remove, are displayed at the top of the **Audio Channels Panel**.

In the following example, an **Audio Channel** for the **Video Input 7** is added.

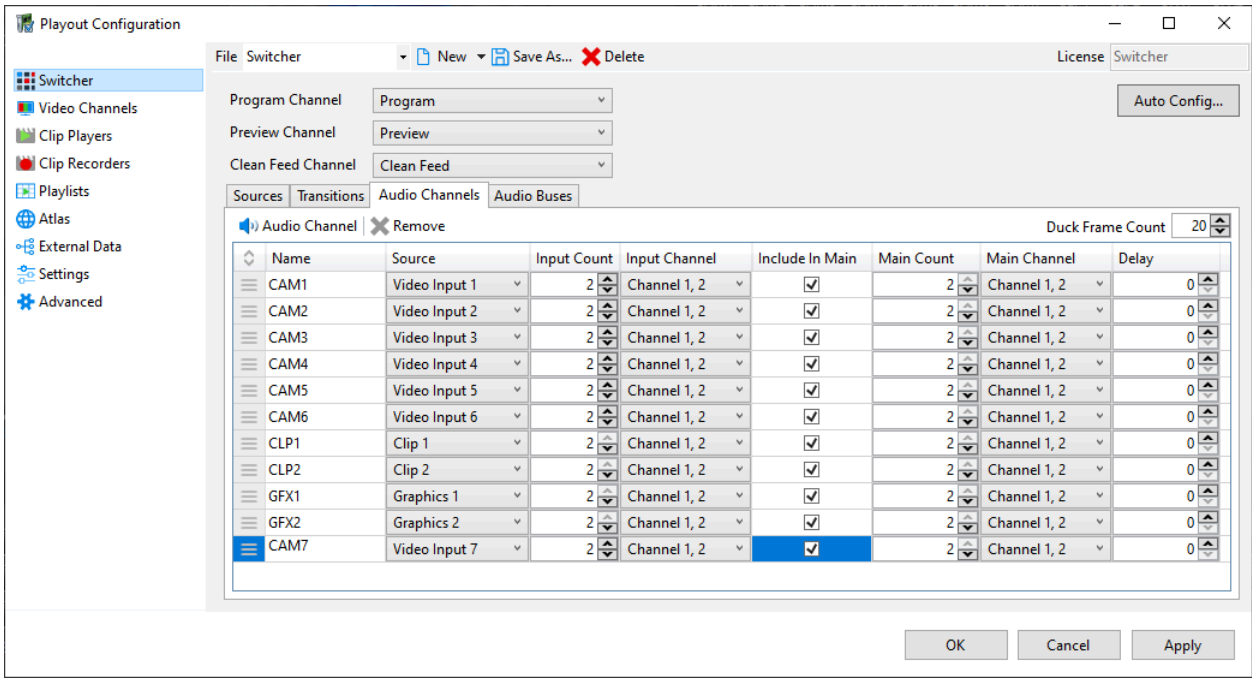
1. In the **Audio** panel, click the **Add Audio Channel** icon Audio Channel. A new audio **Source** is added to the audio sources list. By default, the **Audio Channel Name** is **AUDIO<x>**, where **x** is the next available number with the prefix **AUDIO**. In this example, the name is **AUDIO1**.



2. Click the **Source** dropdown for the new audio source, and then select a source. PRIME Switcher selects the most logical source, which you can change. For this example, a **Video Input 7** is selected as the **AUDIO1** source. If another source is available, however, then you can select a different source.



3. If desired, then enter a new name in the **Name** field of the audio source. The name should be short enough to be readable on the PRIME Switcher **Audio Mixer**. Excess characters are truncated on the PRIME Switcher interface.



4. If desired:

    a. Using direct entry or the spinners, set **Input Count**, **Main Count**, and **Delay**.

    b. From the dropdowns, select **Input Channel** and **Main Channel**.

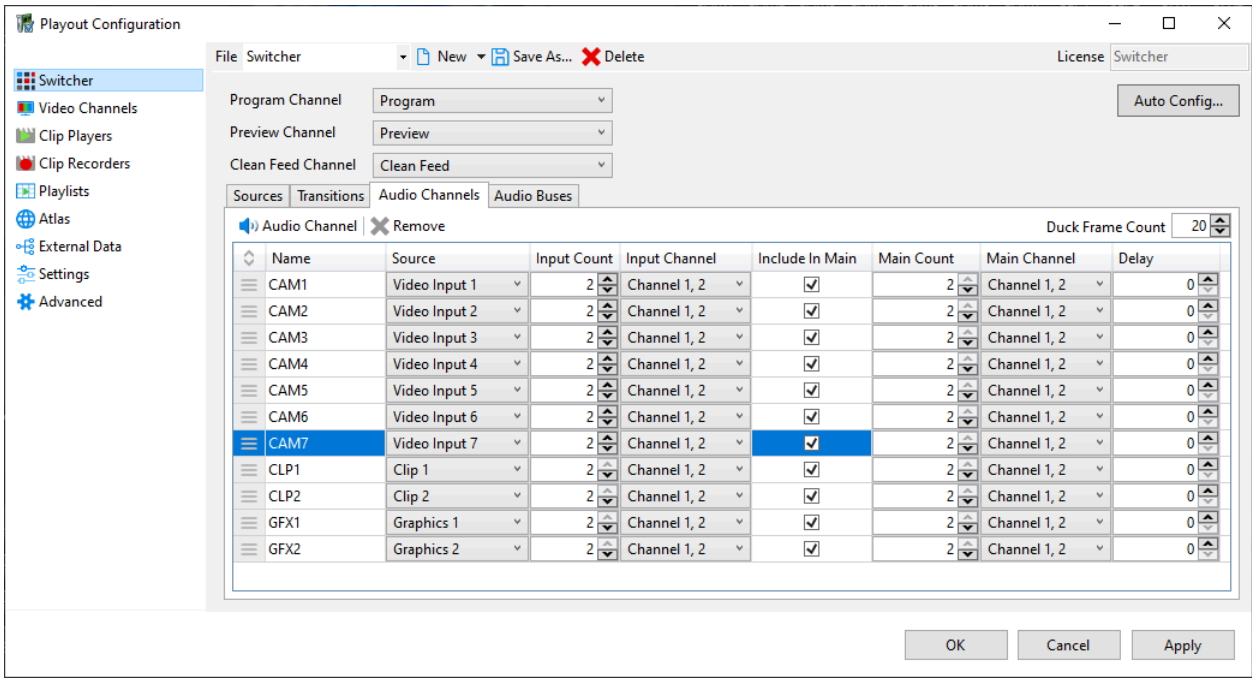
    c. Enable/disable **Include in Main**.

        - If **Include in Main** is enabled, then the **Audio Channel** appears in the **Main Audio Bus** and outputs to the **Main Audio Bus** audio output.

        - If **Include in Main** is disabled, then the **Audio Channel** does not appear in the **Main Audio Bus** and does not output to the **Main Audio Bus** audio output.

    All **Audio Channels** configured in this panel appear in the **Auxiliary Buses**, regardless of whether or not **Include in Main** is enabled or disabled.

5. If desired, reposition the **Audio Fader** in the list so that it follows the **Video Input 6 Audio Fader**.



Once you close and restart PRIME Switcher, then the **Audio Channels** configuration is applied.

Rename an Audio Source

You can edit **Audio Source Names**. It is good practice for an **Audio Source Name** to be short enough to display in its entirety on a Prime Switcher **Audio Fader** label; otherwise, part of the label name does not display. To edit an **Audio Source Name**:

1. Click the row of the **Source** to be renamed.
2. Enter a new name. The name should be short enough to be readable on the **Audio Mixer**. Excess characters are truncated on the **Audio Mixer** interface.

Once you close and restart PRIME Switcher, then the new name appears on the **Audio Fader** label on the PRIME Switcher interface.

Reconfigure an Existing PRIME Switcher Audio Source

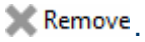
To reconfigure an existing PRIME Switcher **Audio Source**.

1. Click the row of the **Source** to be reconfigured.
2. Reconfigure the settings as desired.

Once you close and restart PRIME Switcher, then the reconfigured **Audio Source** is applied.

Delete an Audio Source

To delete an **Audio Source**:

1. Click the row of the **Source** to be deleted.
2. Do one of the following:
    - Press **Delete**.
    - Click the **Remove** icon 

.

Once you close and restart PRIME Switcher, then the deleted **Audio Fader** no longer appears on the PRIME Switcher interface.

Configure Audio Fader Display Order

It may be desirable to reposition one or more sources in the **Audio Source List**. The reposition is reflected in the left-to-right order of the **Audio Faders** in the **Audio Mixer**. To reposition a source:

1. Click the row of the source to be moved.
2. Click the **Reposition** icon  at the left of the **Source Type**.
3. Drag the **Source** to the desired location.

Once you close and restart PRIME Switcher, then the **Audio Faders** display in their new positions on the PRIME Switcher interface.

NOTE: Once you have completed Audio and any other configurations, remember to close, and then restart PRIME Switcher to apply the configurations.

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Chapter 12: Configure Audio Buses - Mix Minus, Pre Fade Listen

Overview

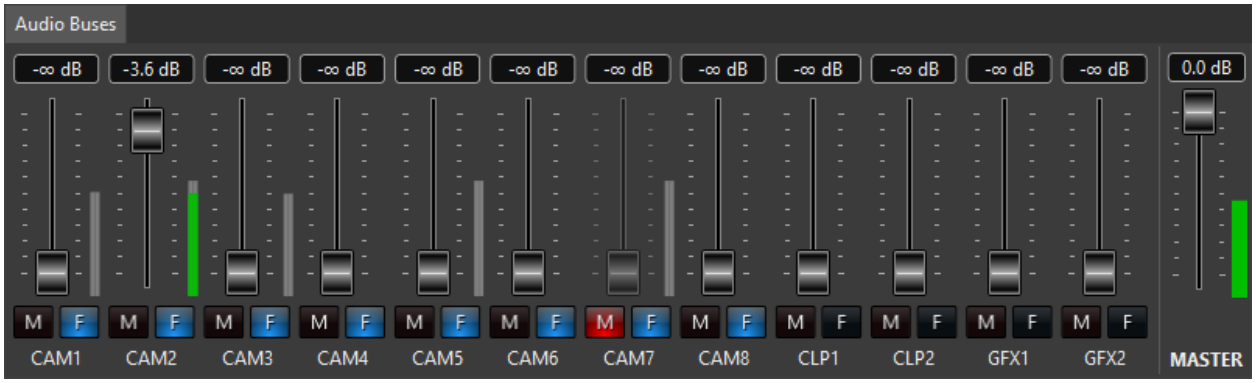
An **Auxiliary Audio Bus** is a signal path that is auxiliary to the main audio path of the **Audio Mixer**. You can configure one or more **Auxiliary Audio Buses** to create a variety of **Mix Minus** outputs. Common uses of an **Auxiliary Audio Bus** include the following:

- **Provide an isolated iFB feed of an anchor to a reporter, so that the reporter does not hear their own voice echoed in the iFB:** To do so, create an **Auxiliary Audio Bus**, and then raise the level of the channel(s) that the reporter should hear, excluding the reporter's own channel.
- **Monitor a specific audio channel, i.e., Pre Fade Listen:** To do so, create an **Auxiliary Audio Bus**, and then raise the audio level of the audio channel that you would like to monitor.

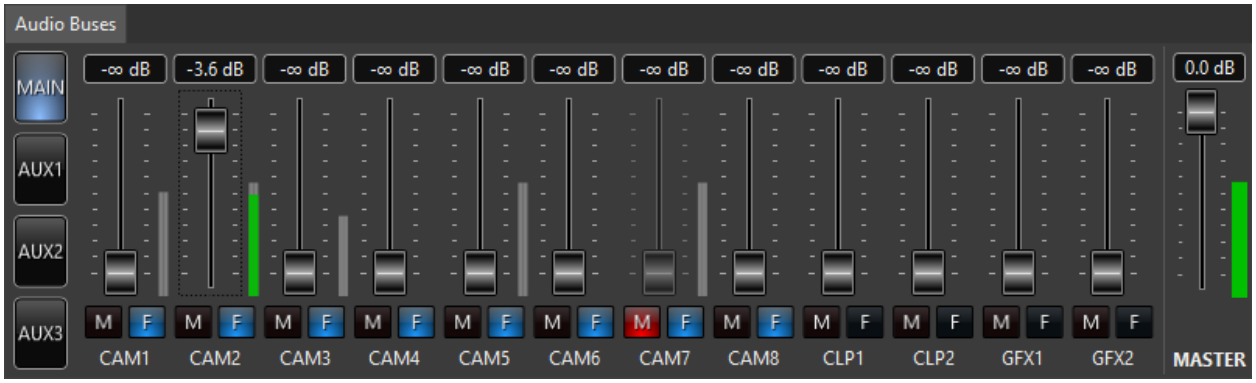
The **MAIN Audio Bus** is always present in the **Audio Mixer**. Follow Video and Mute are available to the **Audio Buses** as follows:

- **Follow Video: MAIN Audio Bus** only.
- **Mute: MAIN** and **Auxiliary Audio Buses**.
- **MASTER Audio Fader:** Controls output of the **MAIN Audio Bus**.

If no **Auxiliary Audio Bus(es)** are configured, then the **Audio Mixer** displays the **Main Bus** and **Master Audio Faders** only.

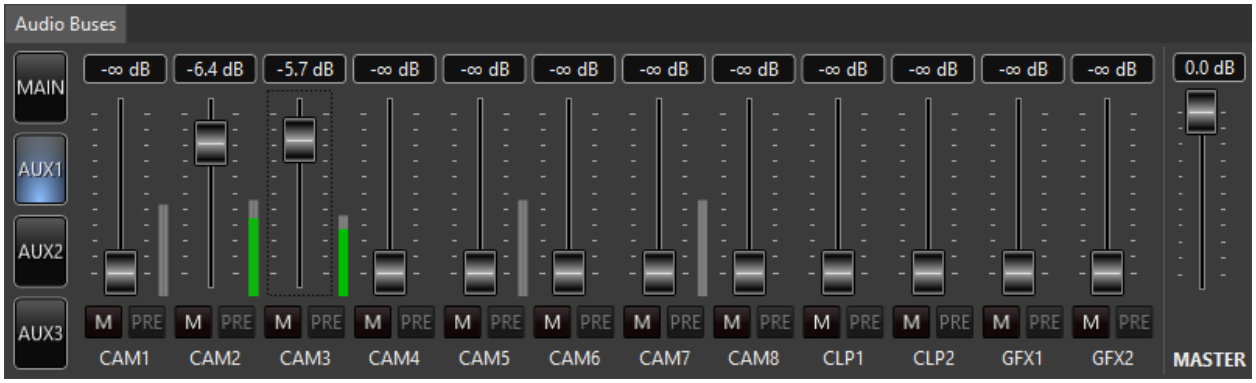


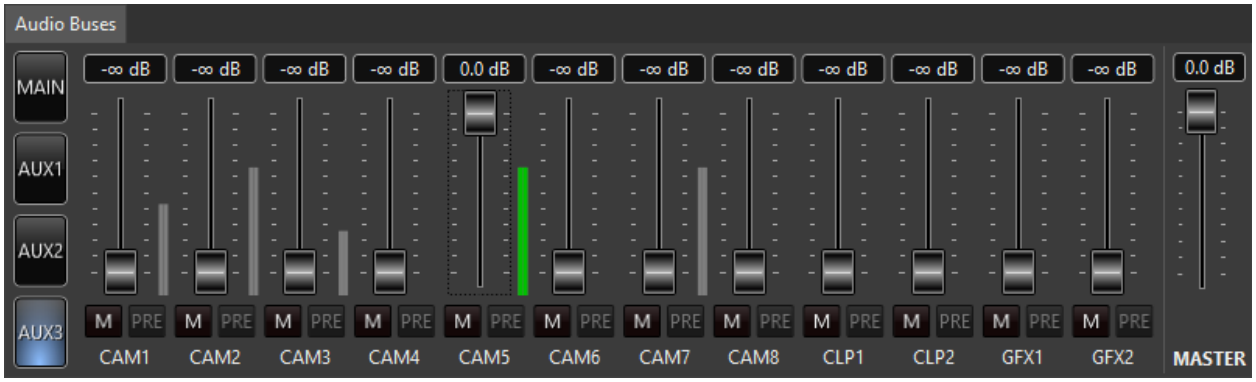
If **Auxiliary Audio Buses** are configured, then the **Audio Mixer** displays **Main** and **Auxiliary Audio Bus** buttons, in addition to the audio faders. The following shows buttons for the **Main** and three **Auxiliary Audio Buses**.



In the **Auxiliary Audio Buses**, the **Follow Video** button is replaced by a **PRE** button PRE. The **PRE** button is not yet operational.

Each **Auxiliary Bus** button provides its own set of faders that you can set independently of the **MAIN** and other **Auxiliary Buses**, and that enable you to create your own **Mix Minus** outputs. You can change **Auxiliary Bus** audio levels at any time, and can create mixes involving one or multiple audio sources. For example, you can set the **AUX1 Audio Bus** to output **CAM2** and **CAM3** audio, and **AUX 5** to output only **CAM5** audio.





Depending upon the audio hardware and setup, **Auxiliary Audio Buses** can output on unallocated PRIME Switcher **Program** channels, or can output on channels, from, e.g., an audio card. The configuration is highly customizable.

You can allocate Auxiliary Audio Bus outputs to unused **Program** channels or to other channels. PRIME Switcher provides 16 channels of **Program** audio output. By default, two are allocated for **Program** output, although you can change the number of **Program** audio channels. The audio channels not allocated to **Program** can be allocated to **Auxiliary Audio Buses** in one of two ways:

- Via the creation of **Auxiliary Audio** Channels, which are used as outputs for the **Auxiliary Audio Buses**.
- Direct allocation of outputs in the **Audio Bus** configuration.

Audio Channels not included in the **Program** output can also be allocated via the creation of **Auxiliary Audio Channels** or directly via **Auxiliary Audio Bus** configuration.

To create an **Auxiliary Channel** to use as an output for an **Auxiliary Audio Bus**:

1. Configure the **Auxiliary Channels** within **Config Menu > Playout Configuration > Video Channels**. This is an optional step.
2. Configure the **Audio Buses** within **Config Menu > Playout Configuration > Switcher > Audio Buses**.

To configure an Auxiliary Audio Bus without the creation of an Auxiliary Audio Channel:

- Configure the **Audio Buses** within **Config Menu > Playout Configuration > Switcher > Audio Buses**.

Configure Auxiliary Audio Channels

For this exercise, you will set the **Main** and **Auxiliary Audio Buses** to output to the **Program Audio Channels**.

- **Program Channels 1** and **2** to **Program**.
- **Program Channels 3** and **4** to **Auxiliary Audio Channel 1**.
- **Program Channels 5** and **6** to **Auxiliary Audio Channel 2**.
- **Program Channels 7** to **10** to **Auxiliary Audio Channel 3**.
- **Program Channels 11** to **14** to **Auxiliary Audio Channel 4**.
- **Program Channels 15** and **16** to **Auxiliary Audio Channel 5**.

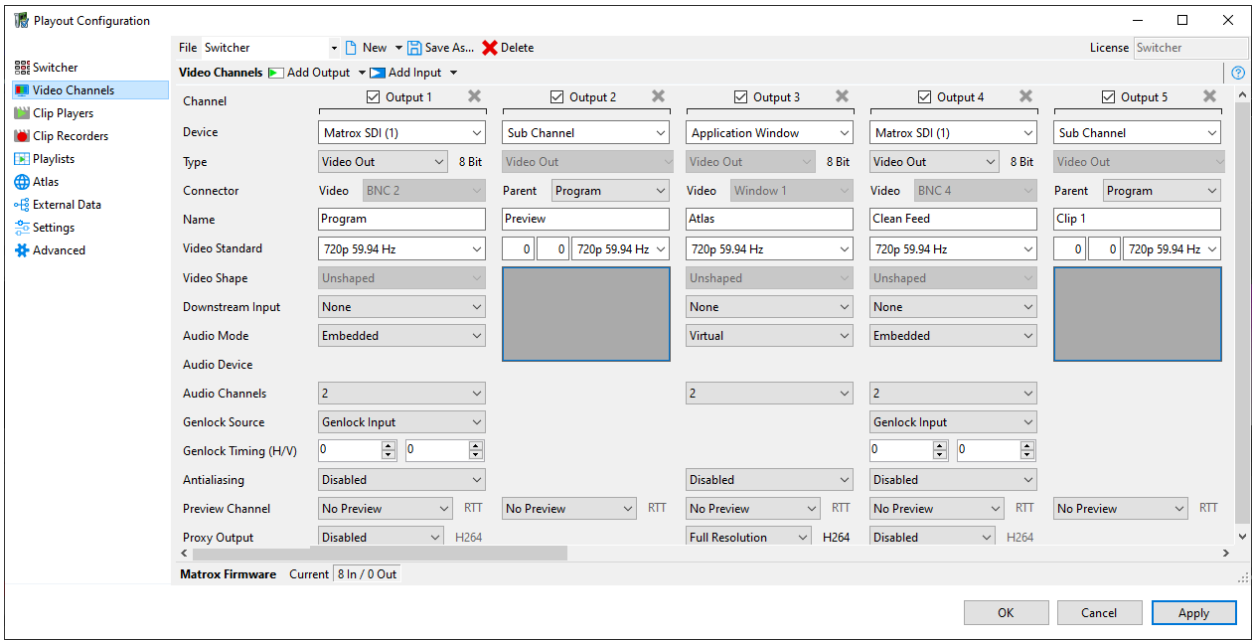
In PRIME Switcher, the term “channel” has multiple meanings, so it is important to understand how the term is used.

- In **Config > Playout Configuration > Video Channels**, you can configure video output channels, video input channels, audio output channels, and audio input channels. In the **Video Channels** configuration panel, each channel is represented by a vertical column of settings.
- Depending upon the **Device** that you specify, you can allocate a number of individual audio channels to a video or audio channel that you configure. These settings are represented by the **Audio Channels** setting for each of the channels described in the previous bullet.

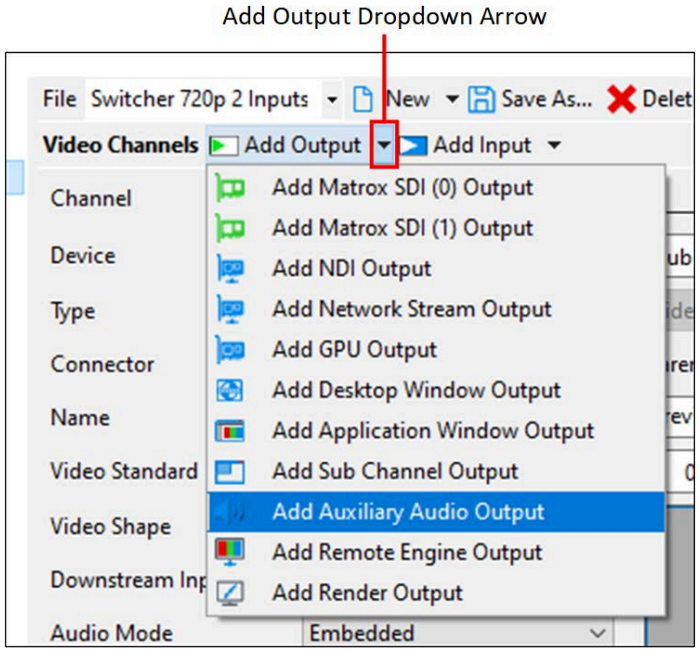
  For example, when the **Device** is a **Matrox SDI Video Output**, its embedded audio provides 16 individual **Audio Channels**.

To configure the **Auxiliary Audio Channels**:

1. Go to **Config Menu > Playout Configuration**, and if **Video Channels** is not already displayed, then in the left navigation, select **Video Channels**.



2. At the top of the panel, in the second row of icons, click **Add Output** dropdown arrow, and then select **Add Auxiliary Audio Output**.

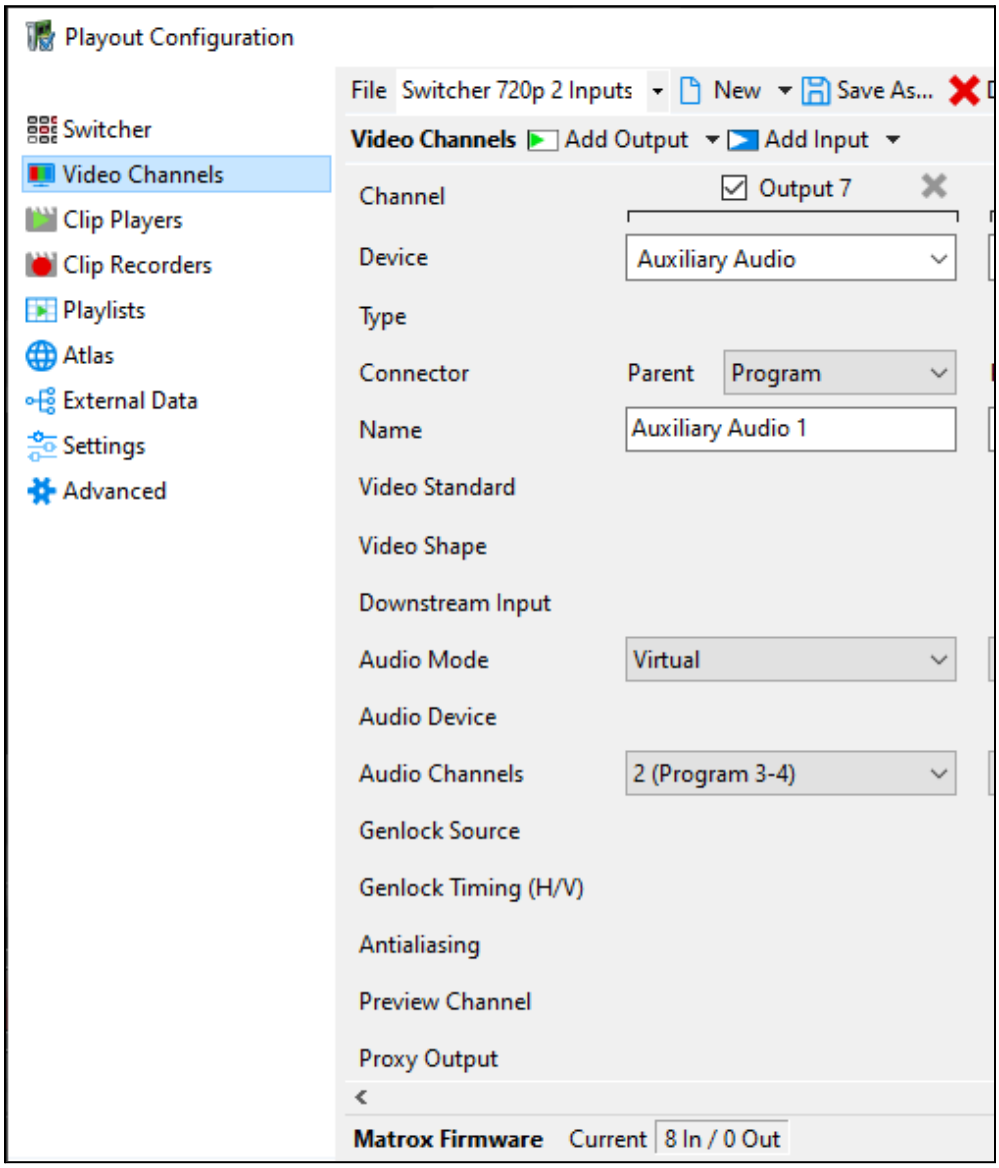


NOTE: Do not click the **Add Output** icon to add the **Auxiliary Audio Output**. You must click the dropdown arrow. If you instead click the **Add Output** icon, then by default, a video channel is added to the configuration. This may also result in the display of an alert stating that you must update the firmware, as the allowable number of video channels, per the license, has been exceeded.

If you accidentally add a video channel, then remove it as follows:

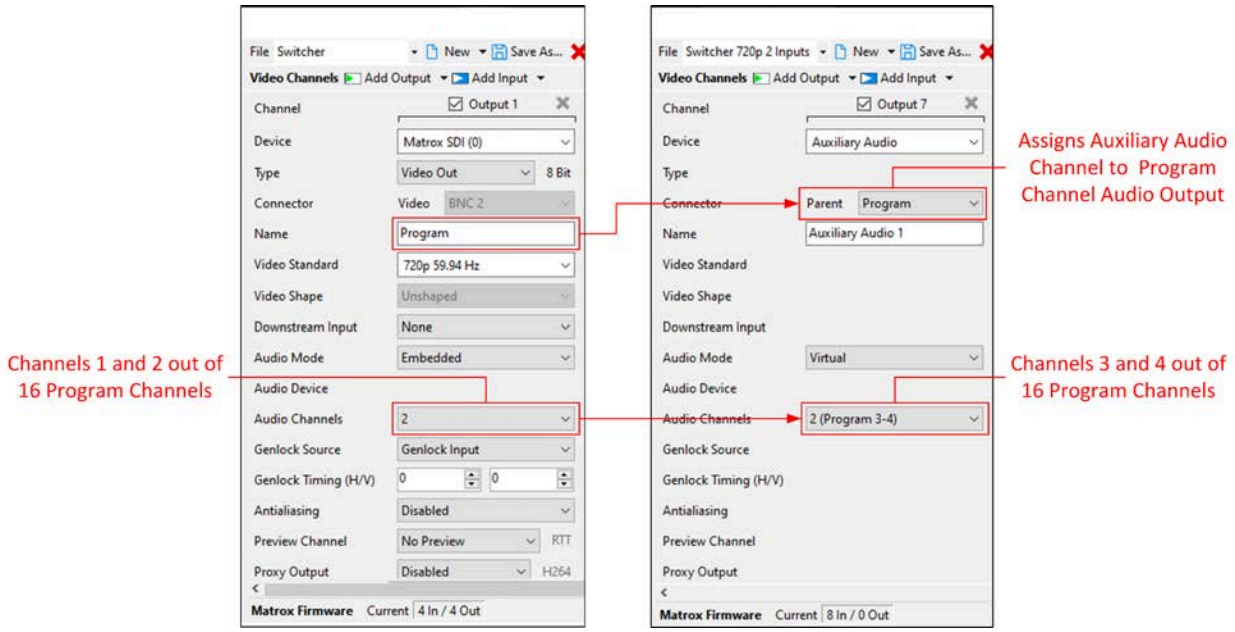
- Scroll the **Video Channels Panel** to the right, until you see the settings for the newly added channel, and then click the **Close** icon at the upper right of the settings for the channel. The channel is removed.

3. To add each additional **Auxiliary Audio Output**, repeat step 2.
4. Scroll the **Video Channels Panel** to the right, until you see the settings for the newly added **Auxiliary Audio Output**.



Settings are as follows:

- **Channel:** Disables/enables the channel.
- **Device:** Displays **Auxiliary Audio**.
- **Connector: Parent:** The **Channel** to which the **Auxiliary Audio** outputs. The **Auxiliary Audio** outputs on the specified **Audio Channels** of the **Parent**. In the following figure, the **Auxiliary Audio** outputs on **Program Audio Channels 3** and **4**. For this exercise, the **Parent** for each **Auxiliary Output** is set to **Program**.



- **Name:** Default name is **Auxiliary Audio <number>**. Numbering starts at **1**. To change the **Name**, enter a new name.
- **Audio Mode:** The following modes are available:
    - **Disabled.** The **Auxiliary Audio** is not output. The **Output Channels** are not available in **Config Menu > Playout Configuration > Switcher > Audio Buses**. **Audio** is not output from this **Auxiliary Audio Channel**.

      Channels that are assigned to a disabled channel become available to the next **Output**. For example, if **Output 10 Audio Mode** is **Disabled**, then the **Program Channels 13-14** that are assigned to **Output 10**, become available to **Output 11**.
    - **Virtual:** The **Auxiliary Audio** is output on one or more virtual channels. The channels are further configured in the **Config Menu > Playout Configuration > Switcher > Audio Buses - Output Channel** setting.
    - **System:** The **Auxiliary Audio** is output on one or more system channels. When **System** is selected, the **Audio Device** setting displays. The channels are further configured in the **Config Menu > Playout Configuration > Switcher > Audio Buses - Output Channel** setting.

  It is not necessary to select the same **Audio Mode** for each **Auxiliary Audio Output**.
- **Audio Device:** Displays only when **Audio Mode: System** is selected. Available choices are or are similar to the following, but may differ depending on the specific hardware:
    - **Primary Sound Driver**
    - **Digital Audio (S/PDIF) (High Definition)**
    - **U28E590 (NVIDIA High Definition)**
    - **Speakers (USB Audio Device)**
    - **Any other Audio Devices available to the system**

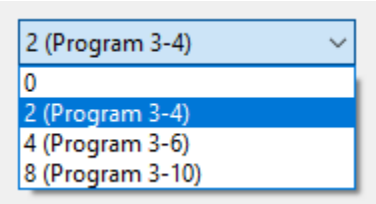
  It is not necessary to select the same **Audio Device** for each **Auxiliary Audio Output**.

- **Audio Channels:** You can allocate the available channels, in pairs, quads, or sets of eight as you wish. The total number of **Audio Channels** available to **Program** plus the **Auxiliary Channels** is **16**. For example, you can allocate:
    - 2 channels to **Program**, and 2 channels to each of 7 additional **Auxiliary Audio Outputs**; or,
    - 4 channels to **Program**, 4 channels to one **Auxiliary Audio Output**, and 2 channels each to 4 additional **Auxiliary Audio Outputs**.

  As you allocate channels to an **Auxiliary Audio Output**, each additional **Auxiliary Audio Output** displays the remaining available channels, in sets of 2, 4 and 8. As such, you cannot allocate the same pair of channels to more than one **Audio Output**, including **MAIN**.

  For the following example, five **Auxiliary Audio Outputs** have been added, and renamed **Auxiliary Audio Output 1**, **Auxiliary Audio Output 2**, **Auxiliary Audio Output 3**, **Auxiliary Audio Output 4**, and **Auxiliary Audio Output 5**, respectively. **Audio Mode** is set to **Virtual** for all **Auxiliary Audio Outputs**.

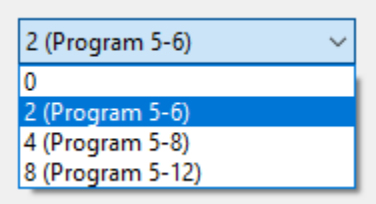
  If you allocate 2 channels **(Program 1-2)** to **Program** (also referred to as **MAIN**), then the channels available to **Auxiliary Audio Output 1** are as follows:



Auxiliary Audio Output 1

  You can allocate **0**, **2**, **4** or **8** channels to **Auxiliary Audio Output 1**.

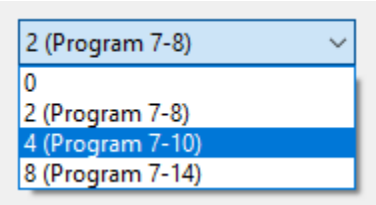
  If you allocate 2 channels to **Auxiliary Audio Output 1**, then the channels available to **Auxiliary Audio Output 2** are as follows:



Auxiliary Audio Output 2

  You can allocate **0**, **2**, **4** or **8** channels to **Auxiliary Audio Output 2**.

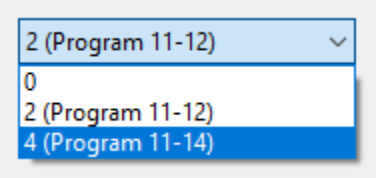
If you allocate 2 channels to **Auxiliary Audio Output 2**, then the channels available to **Auxiliary Audio Output 3** are as follows:



Auxiliary Audio Output 3

You can allocate **0**, **2**, **4** or **8** channels to **Auxiliary Audio Output 3**.

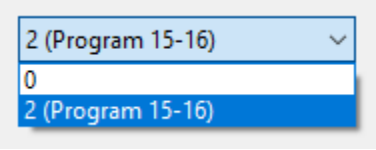
If you allocate 4 channels to **Auxiliary Audio Output 3**, then the channels available to **Auxiliary Audio Output 4** are as follows:



Auxiliary Audio Output 4

You can allocate **0**, **2** or **4** channels to **Auxiliary Audio Output 4**.

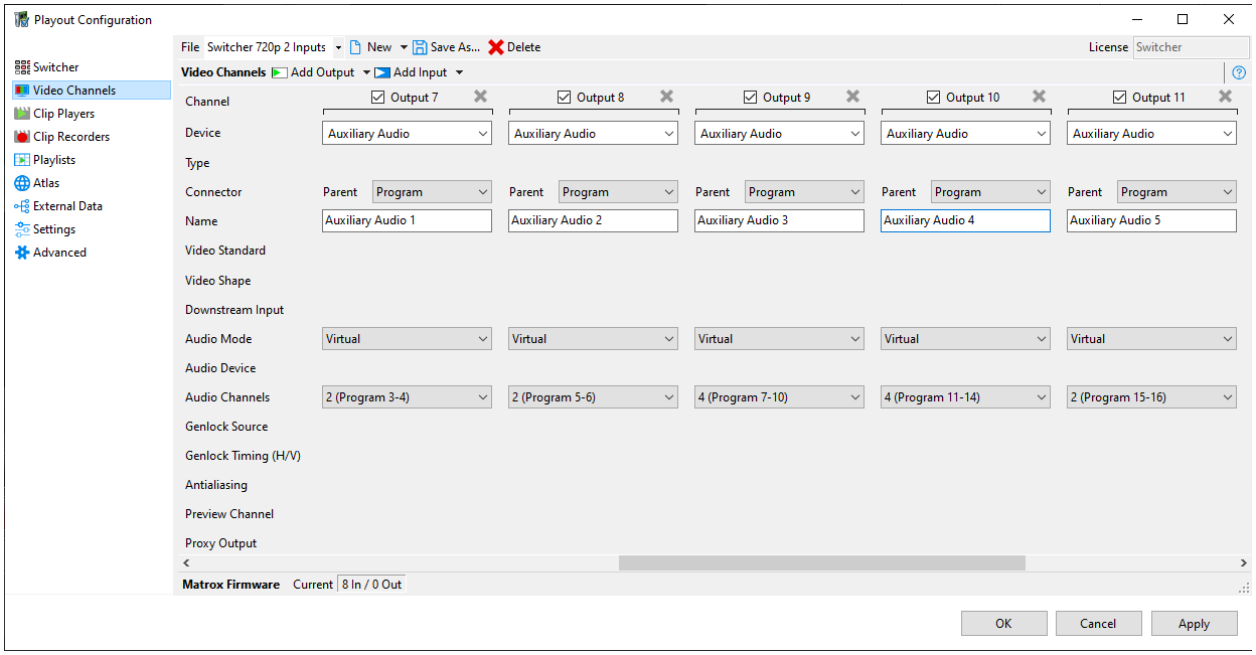
If you allocate 4 channels to **Auxiliary Audio Output 4**, then the channels available to **Auxiliary Audio Output 5** are as follows:



Auxiliary Audio Output 5

You can allocate **0** or the remaining **2** channels to **Auxiliary Audio Output 5**.

The final configuration is as follows:



This example represents only one of the many ways that you can configure the **Auxiliary Audio Outputs**. The previous figure shows the **Auxiliary Audio** channels renamed **Auxiliary Audio 1**, **Auxiliary Audio 2**, **Auxiliary Audio 3**, and **Auxiliary Audio 4**.

5. After you complete **Auxiliary Audio Output** configuration, click **Apply**. Doing so saves the settings, but does not close **Playout Configuration**. If you would like to close **Playout Configuration**, then click **OK** to save the configuration. Note that settings are not applied until you close and restart PRIME Switcher.

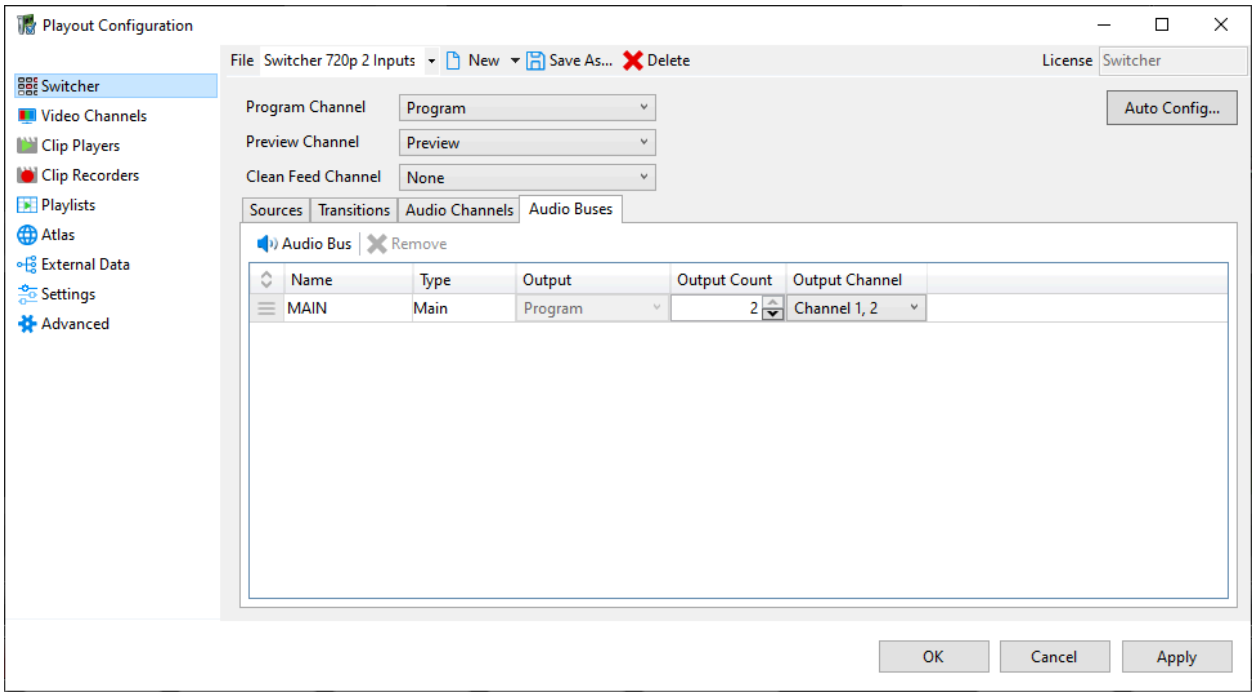
6. Click **Apply**, and then proceed to the next section.

Configure Audio Buses

You can configure **Auxiliary Audio Buses** using **Audio Channels** configured in **Config > Playout Configuration > Video Channels** as the outputs, or bypass the configuration of **Audio Channels** within the **Video Channel** configuration. In either instance, you must configure the **Audio Buses**.

To configure the **Audio Buses**:

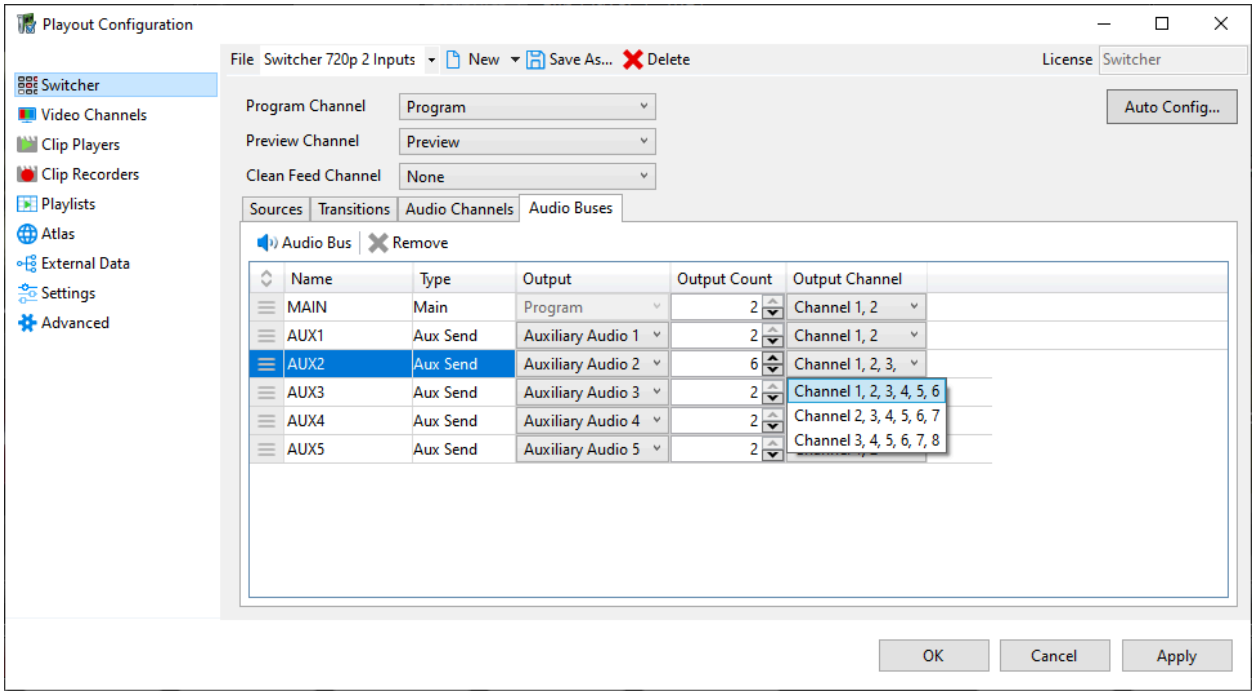
1. If **Playout Configuration** is already open, then in the left navigation, click **Switcher**. If **Playout Configuration** is not open, then go to **Config Menu > Playout Configuration**, and then click the **Audio Buses** tab. The **Audio Buses Panel** displays.



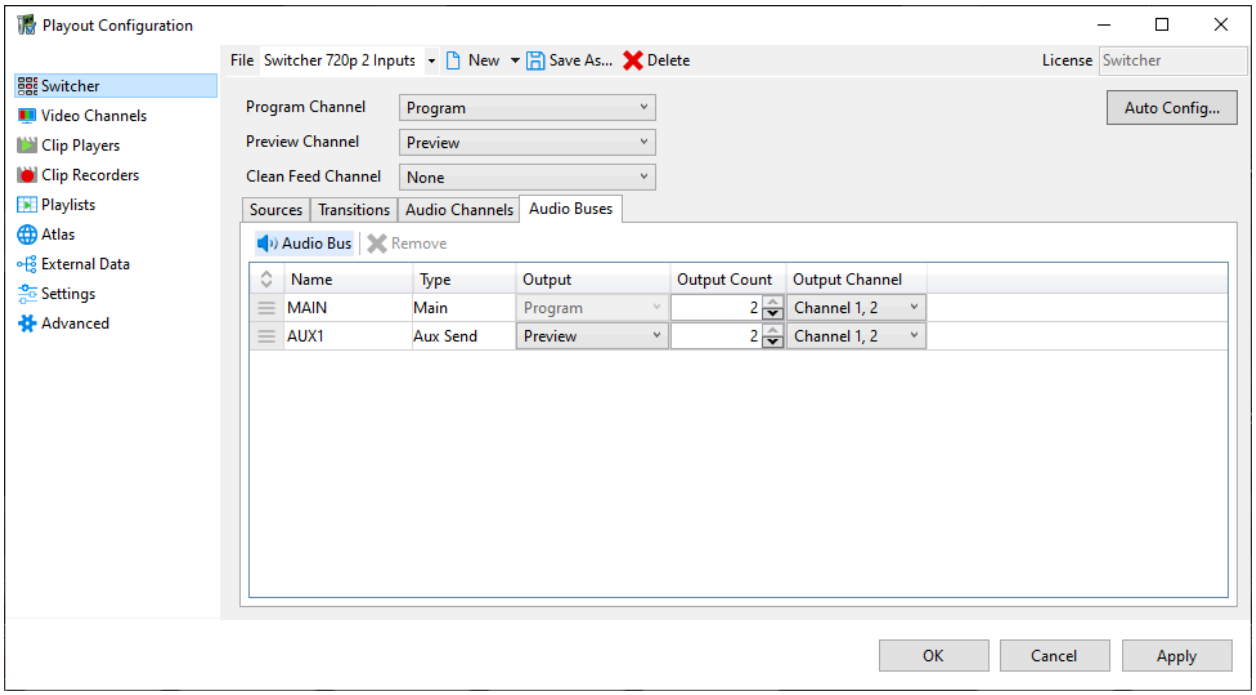
The **Audio Buses** panel comprises the following columns:

- **List Position Up/Down Icon** : The column header for the **List Reposition** icons .
- **Name:** The name of the audio source. To change the **Name**, enter a new name.
- **Type:** The type of the **Audio Bus**, as determined by its configuration in the **Video Channels Panel**. In the above figure, the **Type** is **Main**, corresponding to the **Main Program Output**. For an **Auxiliary Bus**, **Type** is automatically specified as **Aux Send**.

- **Output:** The source for the **Audio Bus**. In the above figure, the source is the **Main Program Output**.
- **Output Count:** The number of outputs. The maximum value is based on the number of channels set for **Auxiliary Audio 1** in the **Video Channels Panel**. The default value is **2**. If more than 2 channels are available, then the spin box up arrow becomes active, i.e., not grayed out.
    - **Output Count = 1: Mono**
    - **Output Count = 2: Stereo**
- **Output Channel:** The output channels. Maximum number of channels specified by the **Output Count**. The number of channels available reflects the number of channels set in the **Output Count**. For example, if **8** channels are set for an **Auxiliary Audio Channel** in the **Video Channel Panel**, then you can specify up to **8** channels in the **Output Count**. If you set **Output Count** to **6**, then the following 6-channel **Output Channel** settings are available:

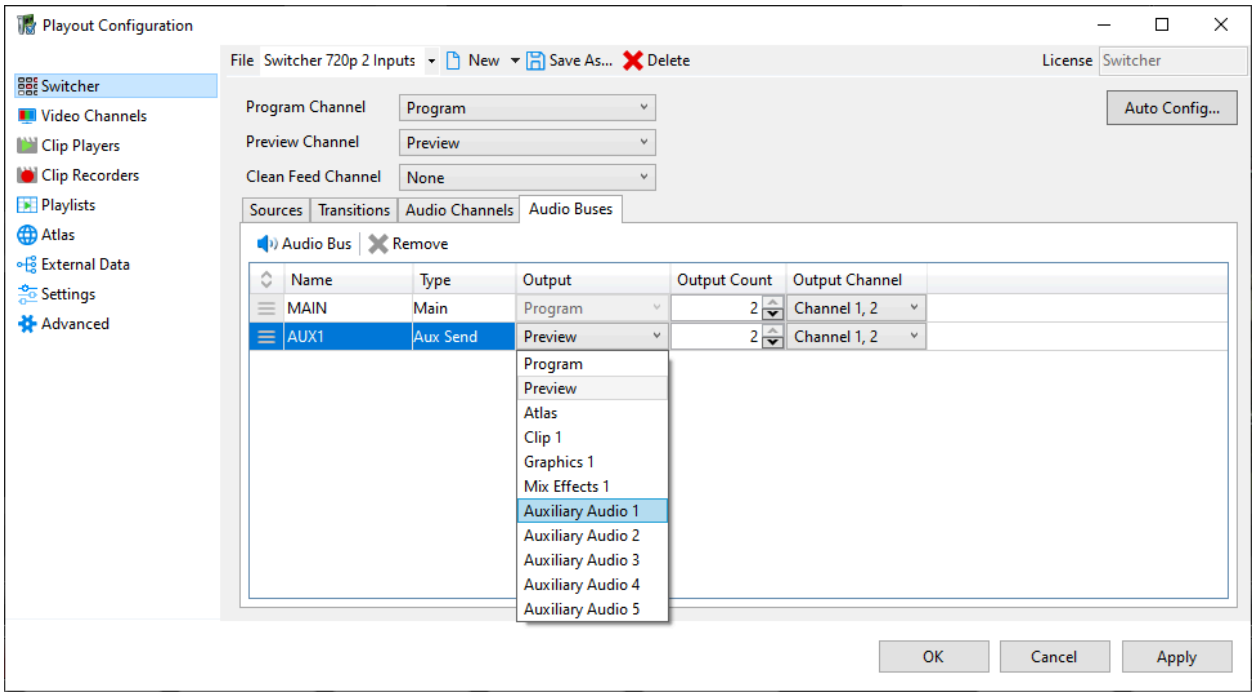


2. In this example, continue using the configuration set in the previous section. Click the

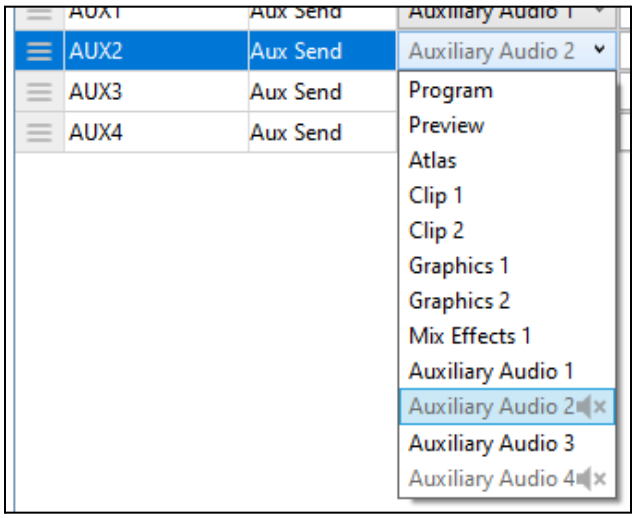


Audio Bus icon. A new **Audio Bus** appears in the **Audio Bus** list.

3. If desired, then enter a different name in the **Name** field.
4. Click the **Output** dropdown and specify **Auxiliary Audio 1**.

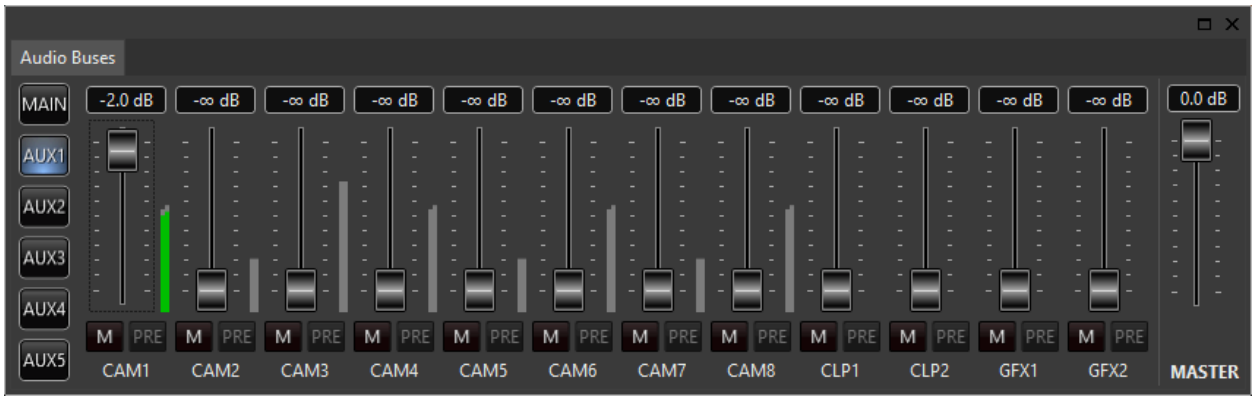


NOTE: If the Output item is grayed out, and Disabled Audio Mode icon appears to the right of the Output item in the dropdown, then it indicates that the Audio Mode for the channel has been set to Disabled in Config Menu > Playout Configuration > Video Channels. If you select that item, then the output for the Audio Bus is disabled.



5. Using the spin box, set the **Output Count** as desired.
6. From the **Output Channel** dropdown, select the desired **Output Channels**. For this example, leave the setting at **Channel 1,2**.
7. The number of available **Output Channels** is the same as the value set in the **Output Count**.
8. To configure additional **Auxiliary Buses**, repeat steps **2** through **7**.
9. When configuration is complete, then click **Apply** to continue other configuration, or **OK** to close the **Playout Configuration Panel**.
10. After closing the **Playout Configuration Panel**, close and restart PRIME Switcher. The newly configured **Audio Buses** display in the **Audio Mixer**.

The following shows an **Audio Mixer** with five **Auxiliary Buses**:



Display Audio Bus and Set Level(s)

To display an **Audio Bus**:

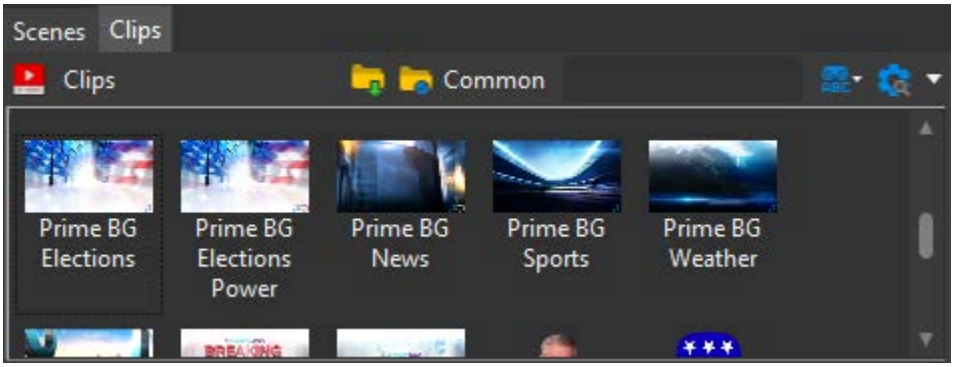
1. Click the button of the **Audio Bus** that you would like to display.
2. Adjust the audio fader(s) to the desired level(s). The audio mix from this bus outputs on the channels specified for this bus.

Chapter 13: Assets Browser

Overview

The **Assets Browser** provides access to assets, such as graphics and clips, that the PRIME Switcher may use. You can add, remove, and change the display mode of an **Assets Browser**, navigate to other folders from within the browser, and perform operations such as **Cut**, **Paste**, and **Delete**. You can also drag clips and graphics into their respective players to quickly load and play.

The following figure shows a **Scenes Browser** tab, and a **Clips Browser** tab. The **Clips Browser** displays thumbnails of the available clips. By default, PRIME Switcher displays the **Scenes Browser** and **Clips Browser**.



If desired, a tab can be isolated, resized, and repositioned. *See Tab Groups for details on tab operations.* You can save an **Assets Browser** display as part of a custom layout.

Assets Browser Types

Overview

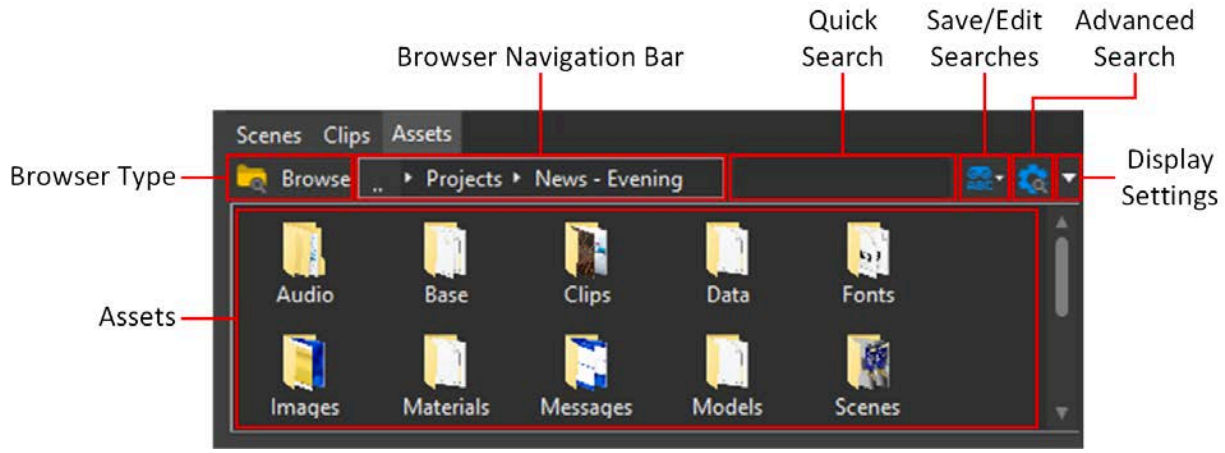
There are two types of **Assets Browsers**:

- **Non-Asset Type-Specific Browser:** This **Assets Browser** type displays all files in the open folder.
- **Asset Type-Specific Browser:** This **Assets Browser** type displays only the files that are of the type specified for the browser. For example, if the browser is a **Clips Browser**, then only clip files are displayed. *To set a browser type, see Change to a Different Assets Browser Type.*

There are functions common to both types of browsers and functions specific to each.

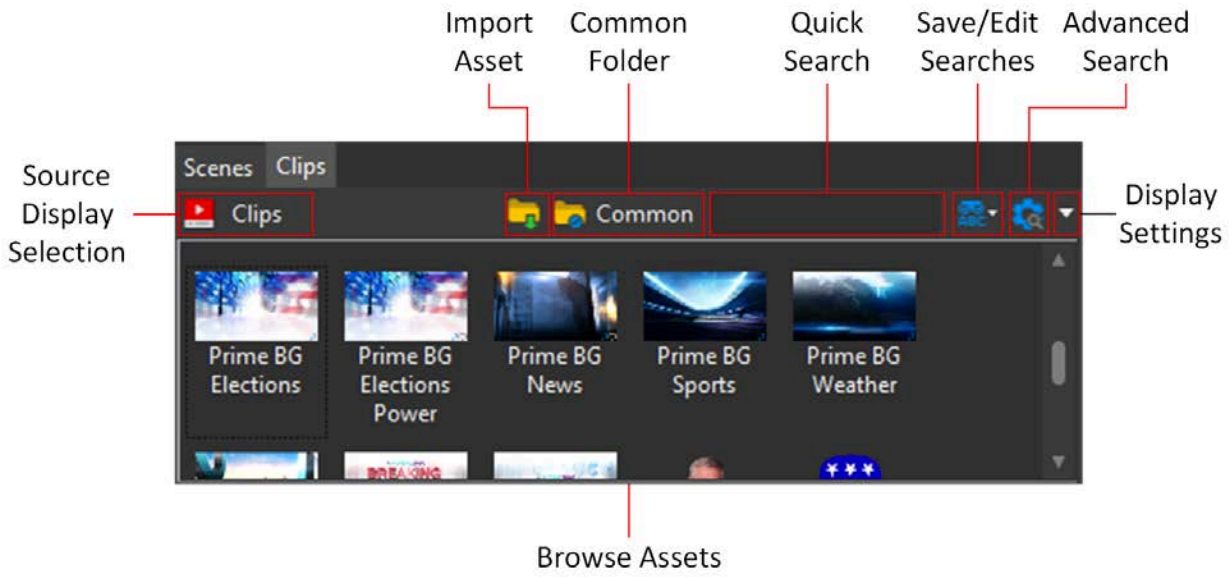
Non-Asset Type-Specific Browser

A non-asset type-specific browser displays all contents of the folder that is open in the browser. This type of browser is identified by the **Browse** icon and name at the upper left of the browser, and displays a navigation bar at the top of the browser. The following figure shows the contents of a **Project** folder.



Asset Type-Specific Browser

An **Asset Type-Specific Browser** displays only the files specific to that asset type. This type of browser is identified by the browser type icon and type name at the upper left of the browser. There is no navigation bar. The following figure shows a **Clips** browser. Note the **Clips** icon at the top left of the browser.



Similarities and Differences between the Assets Browser Types

The following table lists the functions and components available to each browser type.

Function/Component	Non-Asset Type-Specific Browser	Asset Type-Specific Browser
Type Icon and Name	Yes	Yes
Navigation Bar	Limited - *See Common Folder*	Yes, when **Common** folder is selected
Import Assets	No	Yes
Common Folder	Yes, via navigation	Yes
Perform a Quick Search	Yes	Yes
Save/Edit Searches	Yes	Yes
Advanced Search	Yes	Yes
Display Settings	Yes	Yes
Navigation within the Browser Window	Yes	Yes

Select a Browser in a Multi-tab Assets Browser

To select a browser in a multi-tab **Assets Browser**:

- Click the tab of the browser that you would like to view. The selected browser opens.

Add an Assets Browser

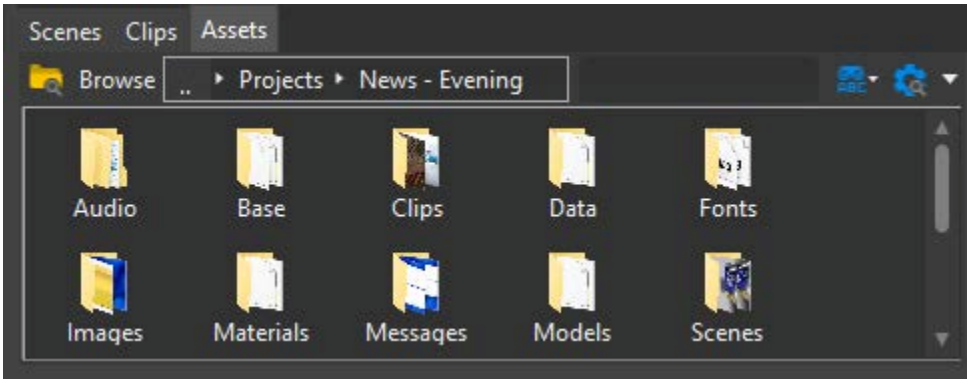
By default, the **View** menu displays the following **Assets Browsers**, which are available for display in the PRIME Switcher UI:

- **Scenes Browser**, i.e., **Scenes** tab.
- **Clips Browser**, i.e., **Clips** tab.

It may be desirable to display one or more additional **Assets Browsers**, such as **Images**.

To add an **Assets Browser**:

1. Go to **View > Add Browser**. The **View** menu closes
2. Go to the **View** menu again. An **Assets** item is now displayed at the bottom of the menu.
3. Select the **Asset** item to make it visible in the Switcher UI. The **View** menu closes. The **Assets Browser** displays a new tab, labeled **Assets**. The **Assets Browser** displays the assets for the currently loaded project.



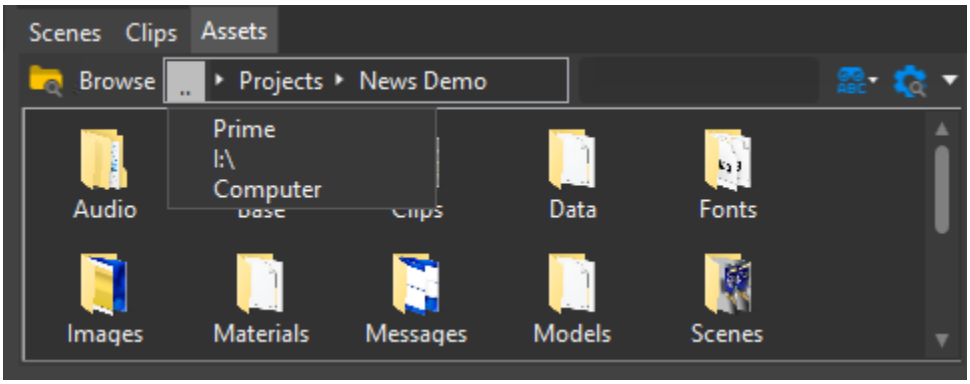
4. If desired, double-click to open folders and files displayed within the window, or browse lower or higher in the system folder hierarchy:

   To navigate lower in the hierarchy:

   - Double-click the desired folder.

   To navigate higher in the hierarchy:

   1. Click a folder name in the navigation bar at the top of the **Assets Browser**, or click "**..**" at the left in the navigation bar. The higher levels in the folder hierarchy display.



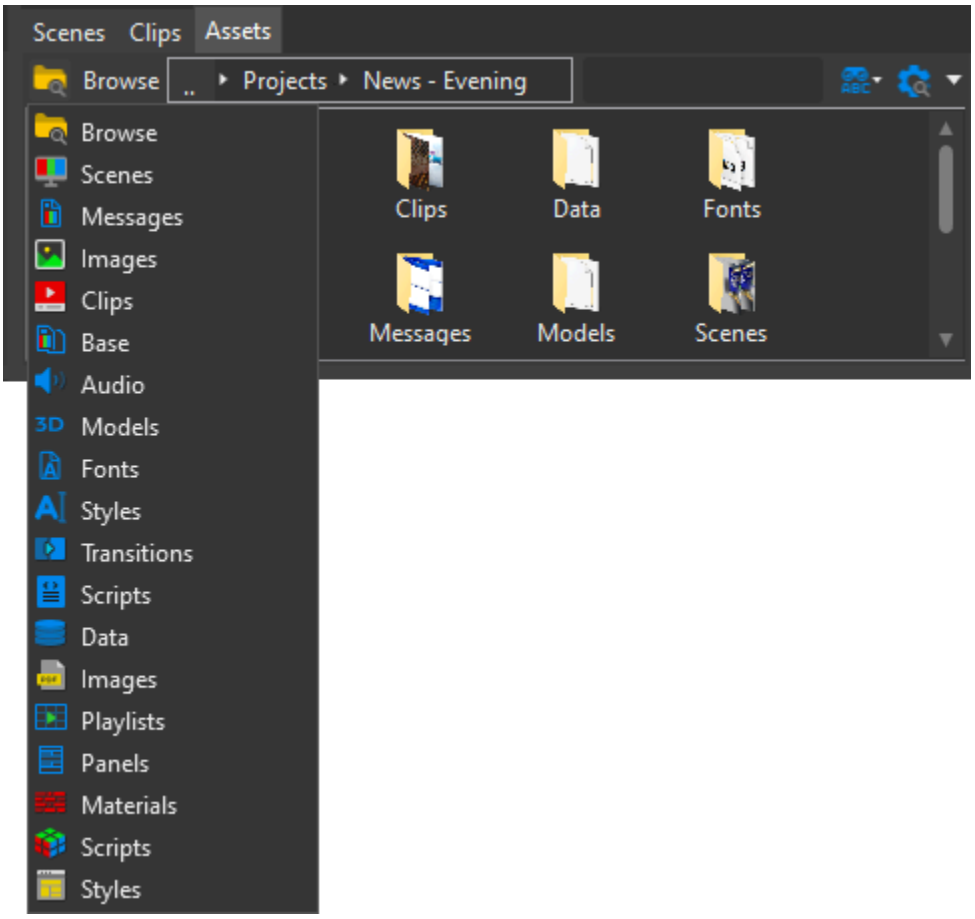
   2. Select the desired level.

Change to a Different Assets Browser Type

An **Asset-specific Browser** displays only assets that are of the specific **Asset Type**.

To change the **Assets Browser** to a different **Asset Type**:

- Click the **Browse** icon at the upper left of the **Assets Browser**. The **Assets Browser Selection** menu appears.



- Choose the desired **Asset Type**. The browser displays the current project's **Asset Type** folder (e.g., **Transitions**)) and only the assets of that **Asset Type** within the folder. The browser name and icon on the tab, and in the **View** menu, reflect the asset type.

Delete an Assets Browser

To delete an **Assets Browser**:

- Right-click the tab of the browser that you would like to remove, and then select **Close**. The browser is removed, and no longer appears in the **View** menu.

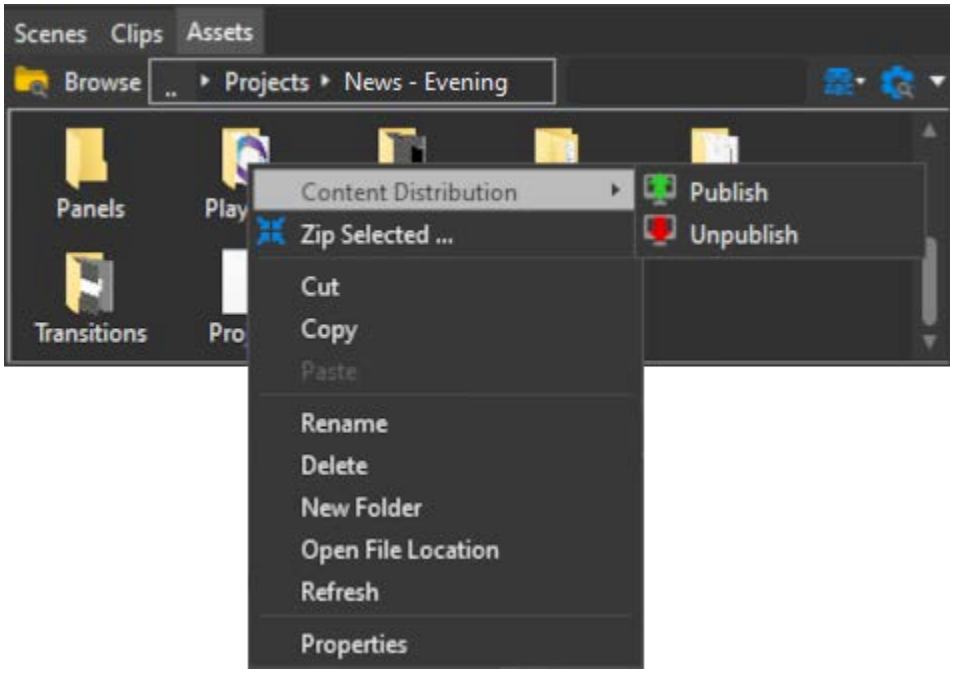
NOTE: When you delete an Assets Browser, only the view of the assets is deleted, not the assets themselves.

Assets Browser Operations

The **Assets Browser** provides operations that are the same as within a Windows browser, plus **Content Distribution**, a Chyron application that centrally manages and distributes assets. *See the Content Distribution User Guide for additional information.*

To access **Assets Browser** folder operations:

- Right-click one or more folders in the **Assets Browser**.



To access **Assets Browser** browser-wide operations:

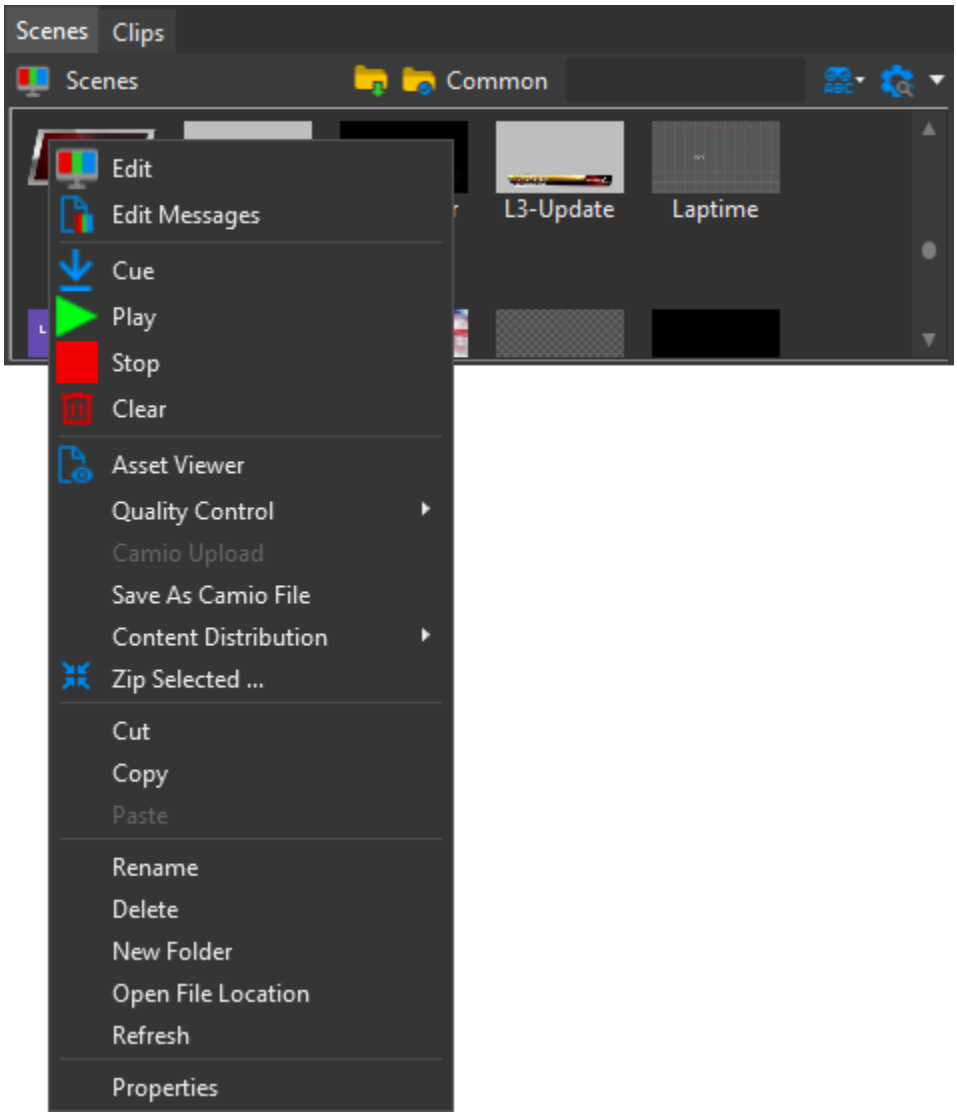
- Right-click the empty space in the **Assets Browser**. The same menu displays, but with different items enabled.

Depending upon the location of the mouse-click, the following menu functions are available.

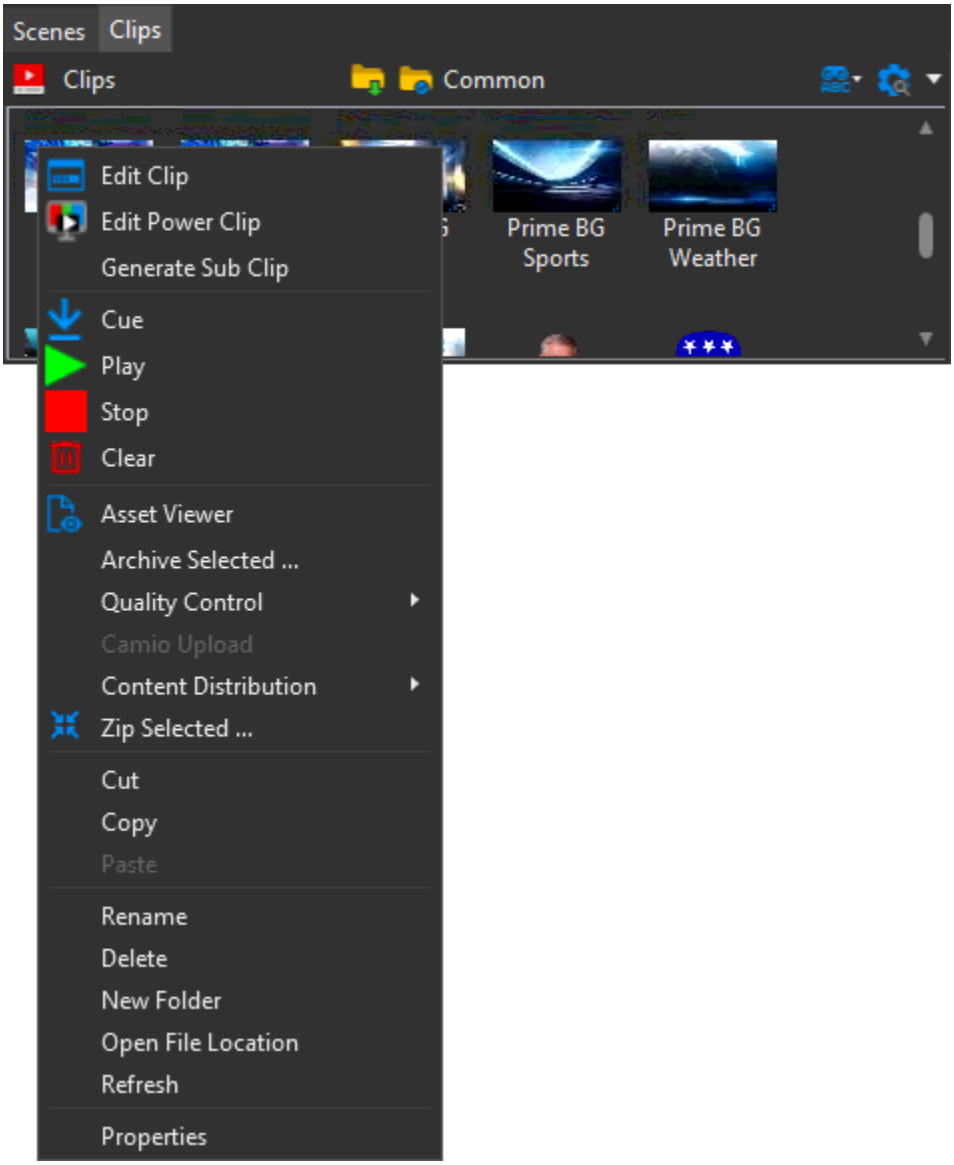
Menu Item	Available When Item Is Selected	Available When Empty Space Is Selected
Content Distribution • **Publish** • **Unpublish**	Yes	No
Zip Selected	Yes	No
Cut	Yes	No
Copy	Yes	No
Paste	No	Yes
Rename	Yes	No
Delete	Yes	No
New Folder	Yes	Yes
Open File Location	Yes	Yes
Refresh	Yes	Yes
Properties	Yes	Yes

To access file-specific browse operations:

- Right-click the file. A file-type-specific menu appears. The following figure shows a scene-specific context menu.



- The following figure shows a clip-specific context menu.

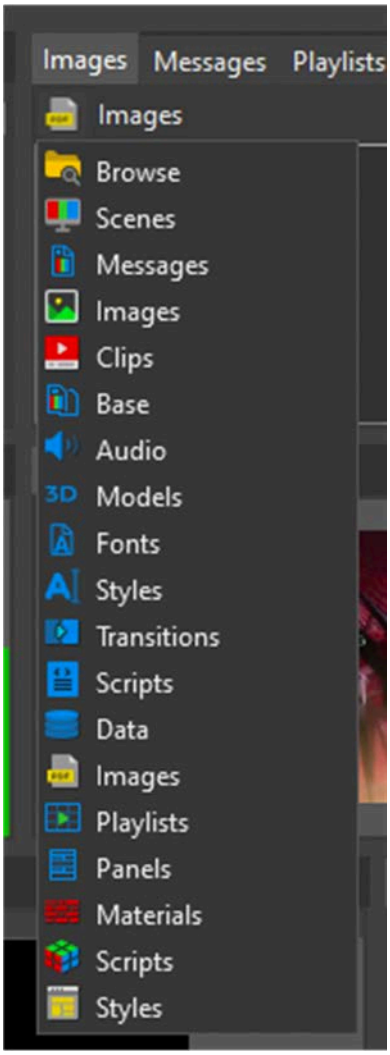


To exit the menu without selecting an item, do one of the following:

- Press **ESC**.
- Click outside of the menu.

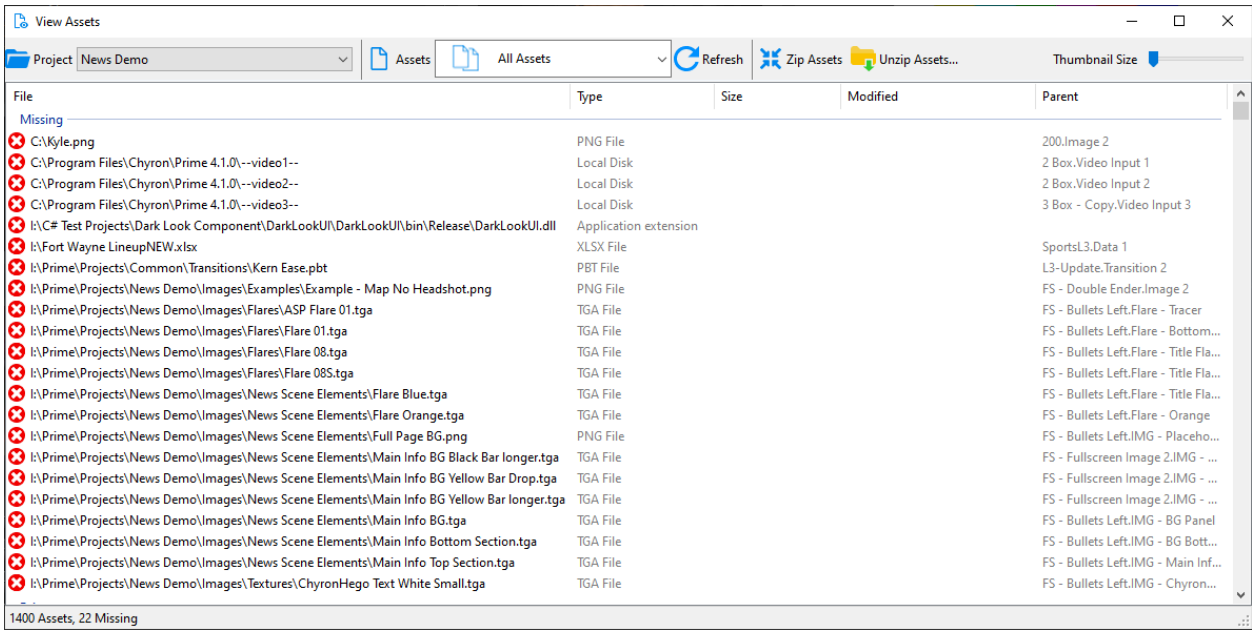
Asset Viewer

The **Asset Viewer** is available to many of the **Asset-Specific Browsers**, and displays the lists of **Missing** and **Existing** assets. This enables you to replace any missing assets prior to going on air. **Asset-Specific Browser Types** are as follows:

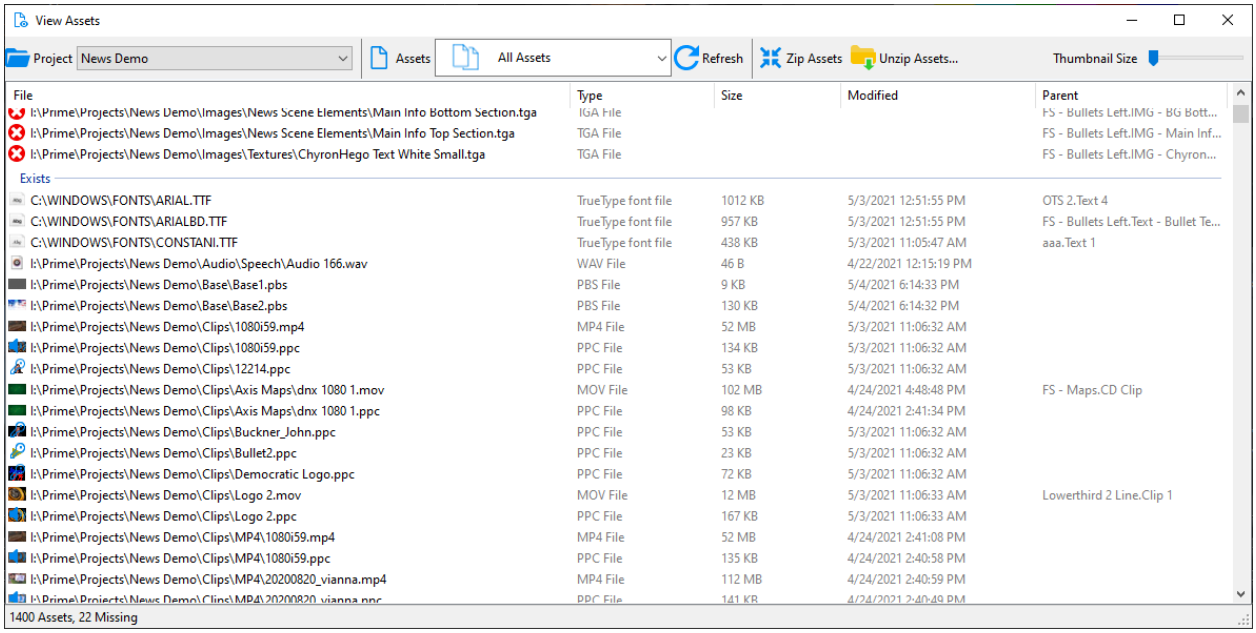


To access the **Asset Viewer**:

1. Right-click the **Assets Browser**, and then select **Asset Viewer**. The **Asset Viewer** appears:



2. Scroll down to see the **Existing** assets.



Asset Viewer tools are located along the top of the **Asset Viewer**.

- **Project:** Displays the name of the current project. To display the assets for a different project:
    - Click the dropdown arrow at the right of the **Project** field, and then select project.
- **Assets:** You can display assets as follows:
    - **All Assets:** Displays all assets in the currently selected project.
    - **All Scene Assets:** Displays the assets for the selected scene.
    - **Folders:** Displays the assets for the folder selected from the dropdown list.
    - **Individual Assets:** Displays the assets for the asset selected from the dropdown list.
- **Refresh:** Click to refresh the **Asset Viewer** display.
- **Zip Assets:** You can zip a project's assets for future use on the same or other systems. To zip a project's assets:
    1. Click **Zip Assets**. The **Zip Files** dialog appears:
    2. Select the files to export, then click **Export Selected**.
    3. Save to the desired location.
- **Unzip Assets:** Click to unzip a project file, and display the assets in the **Asset Viewer**.
- **Thumbnail Size:** Drag the slider to increase/decrease the thumbnail size.

The bottom of the **Asset Viewer** displays the number of missing assets and the total number of assets for the project.

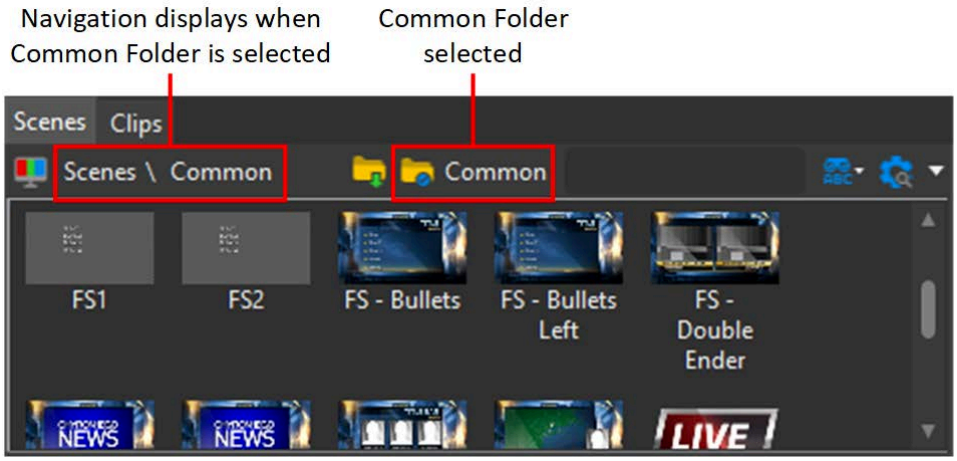
The **Asset Viewer** columns are as follows:

- **File:** Filepath of the file.
    - The **Missing** icon appears to the left of any missing asset. The **Asset Viewer** displays the missing asset's expected filepath.
    - If the asset exists, then the asset's thumbnail appears to the left of the asset's filepath.
- **Type:** File format.
- **Size:** File size. Unit is specified in each.
- **Modified:** Date that the file was last modified.
- **Parent:** The scene to which the asset belongs. Not every asset has a parent.

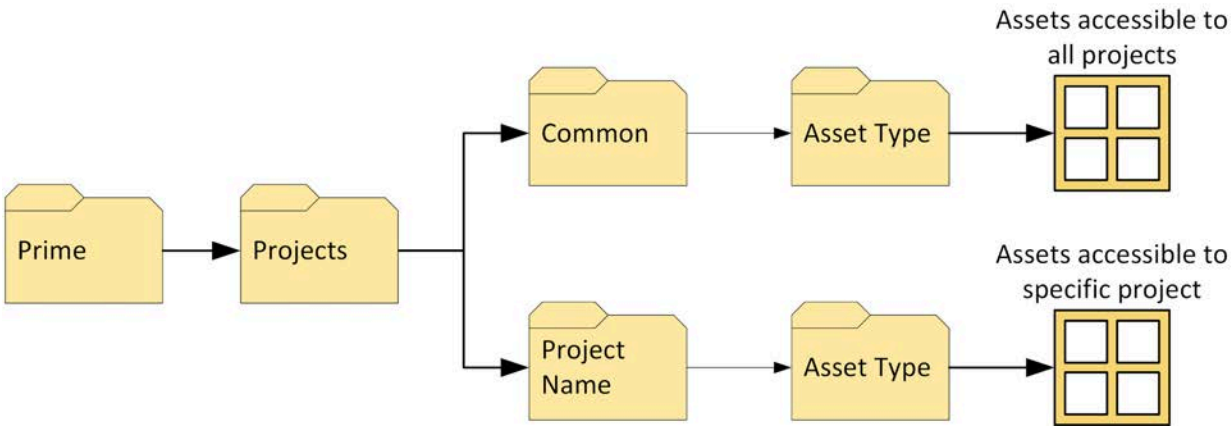
Common Folder

The **Common Folder** contains assets that are accessible to all PRIME applications. For example, if a **Scene** is in the folder, then it may be loaded from the **Common** folder into the **Graphics (Scene) Player**.

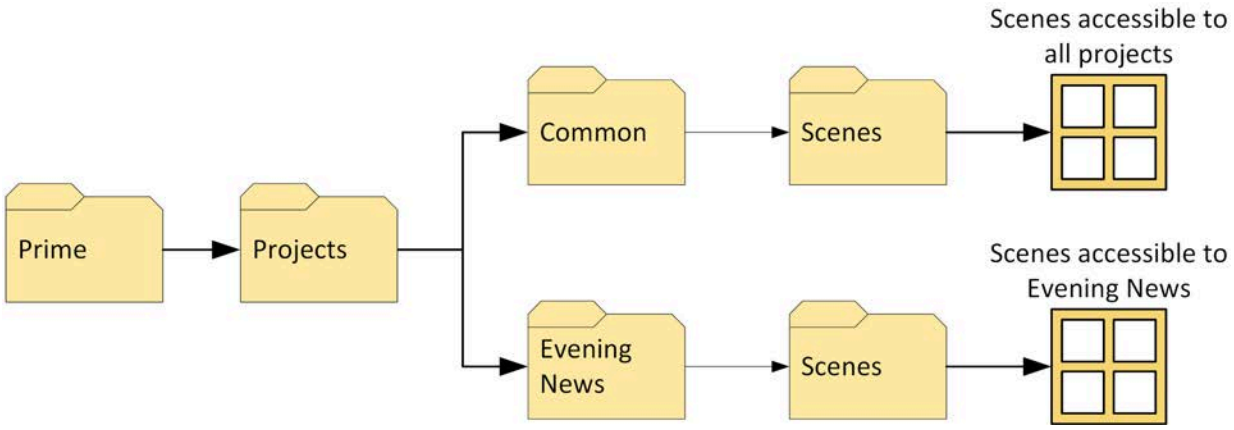
If the **Common** folder is selected from within an **Asset Type-Specific Browser**, then a navigation bar appears:



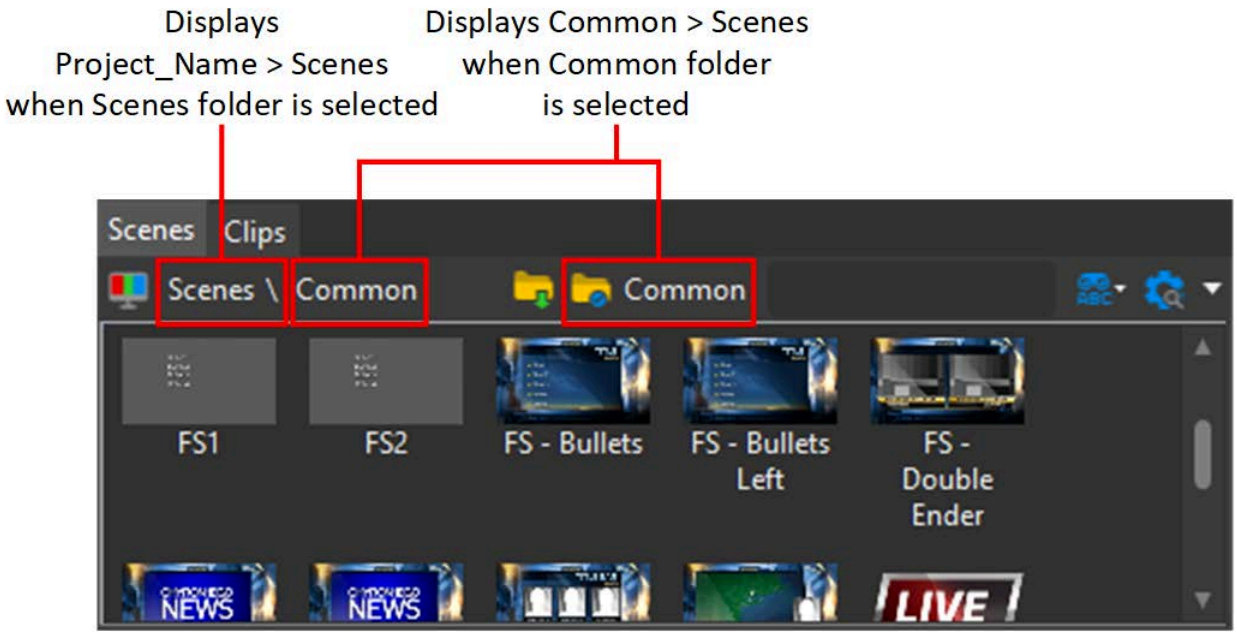
The navigation bar may appear confusing, as the actual typical folder structure is as follows:



For example, for scenes in project “Evening News,” the folder structure is as follows:



When the **Common** folder appears in the navigation, the folder hierarchy appears to be flipped:



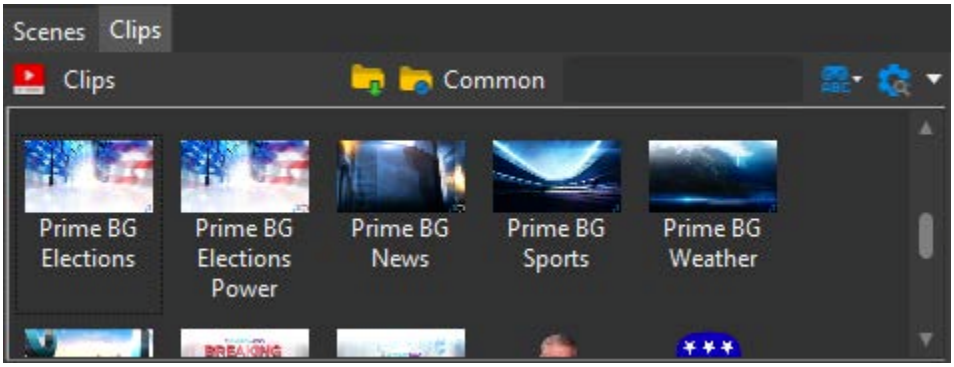
The “\” symbol does not specify hierarchy. It is simply a separator.

- Selecting **Scenes** opens the **Scenes** folder for the currently open project, e.g., **Projects > Evening News > Scenes**.
- Selecting **Common** opens the **Common** folder, e.g., **Projects > Common > Scenes**.
- **Scenes** from other projects are not accessible from this browser. They are accessible from the **Non Type-Specific Browser**.

Search Assets Browser

Overview

The **Assets Browser** provides quick search, parameter-specific search and save search functions. The following figure shows a **Clips Browser**.



Perform a Quick Search

To perform a quick search:

- In the **Search** field at the top of the browser, type a word from a file name, and then press **Enter**. Any file(s) that contains that word in its filename appears.

Cancel Search

To cancel a search and return the browser to display of all assets:

- In the **Search** field, click the **Close** icon (**x**).

What If the Search Produces No Results?

If there are no results after performing a search, then the browser displays as empty.

If search results were expected, then confirm that the search parameters were correctly entered.

Save Search

To save a search:

1. Click the **Search** icon.
2. In the dropdown menu, click the **Save Search** icon. The menu closes, and the search can be retrieved for future use. A search can be named. *See Edit Search.*

Retrieve Search

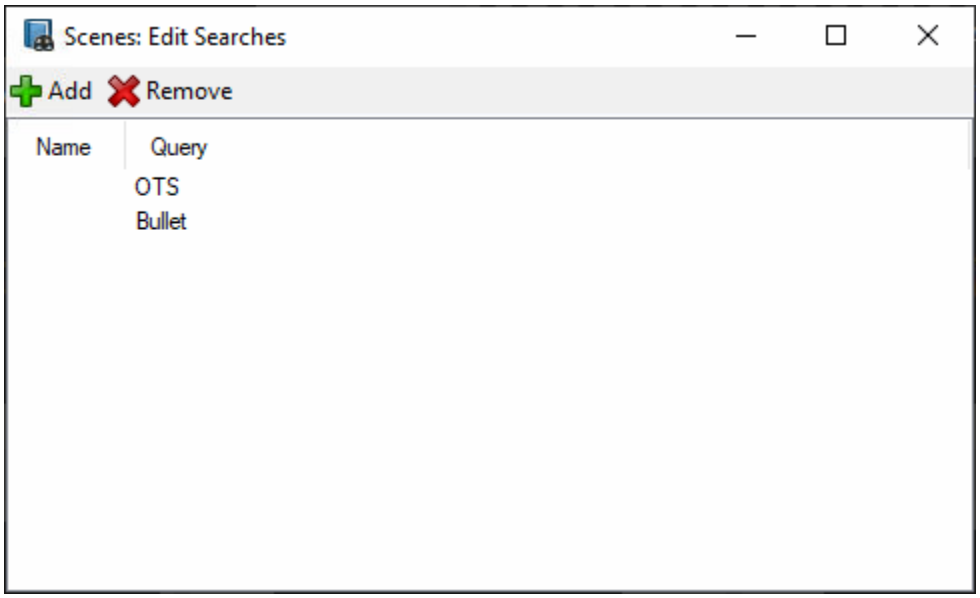
To retrieve a saved search:

1. Click the **Search** icon.
2. In the dropdown menu, select the saved search that you would like to use. The menu closes, and the results display in the browser.

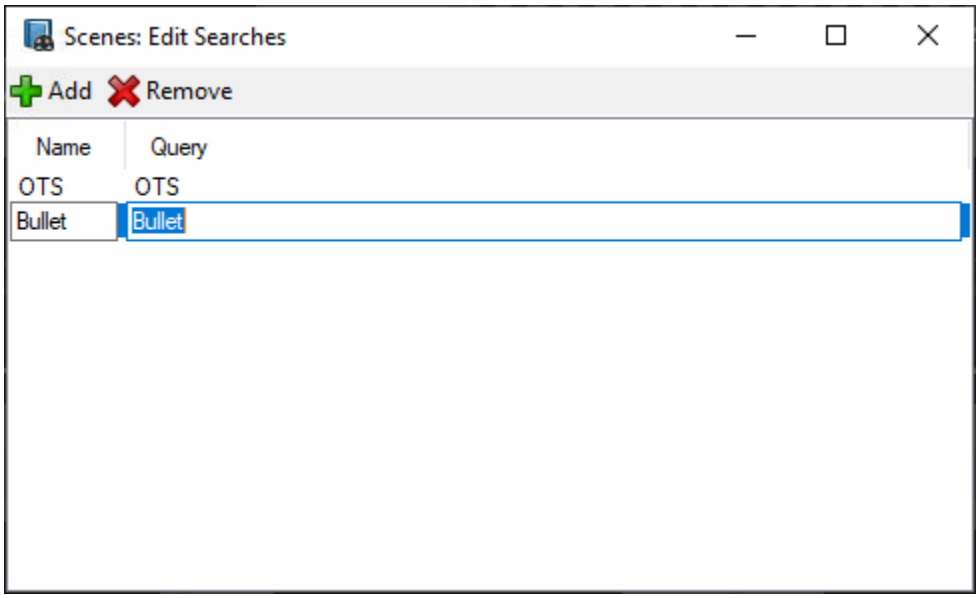
Edit Search

To edit a saved search:

1. Click the **Search** icon.
2. In the dropdown menu, select **Edit saved searches**. The **<Assets Browser Type> Edit Searches** dialog appears. For example, if searching a **Scenes Browser**, then the dialog title is **Scenes: Edit Searches**.



3. Click the search item to be edited, then edit as desired. You can rename the item, as well.



4. When edits are complete, click the **Close** icon (**x**).

Add Search

To add a search from the **Edit Searches** dialog:

1. Click the **Search** icon.
2. In the dropdown menu, select **Edit Saved Searches**. The **<Assets Browser Type> Edit Searches** dialog appears. For example, if searching a **Clips Browser**, the then dialog title is **Clips Edit Searches**.
3. Click the **Add** icon. A new search is added, with the name **Untitled Search**.
4. If desired, edit the name, and then enter a query.
5. When edits are complete, click the **Close (x)** icon.

Remove Saved Search

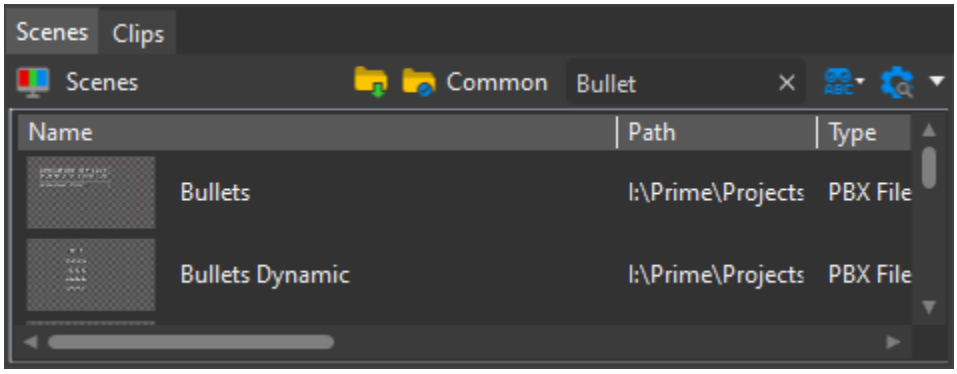
To remove a saved search:

1. Click the **Search** icon.
2. In the dropdown menu, select **Edit saved searches**. The **<Assets Browser Type> Edit Searches** dialog appears. For example, if searching a **Clips Browser**, then the dialog title is **Clips Edit Searches**.
3. Click the search item to be removed, and then click the **Remove** icon.
4. When edits are complete, click the **Close** icon (**x**).

Clear Search

To clear a search:

- Click the **Close** icon to the right of the search string.

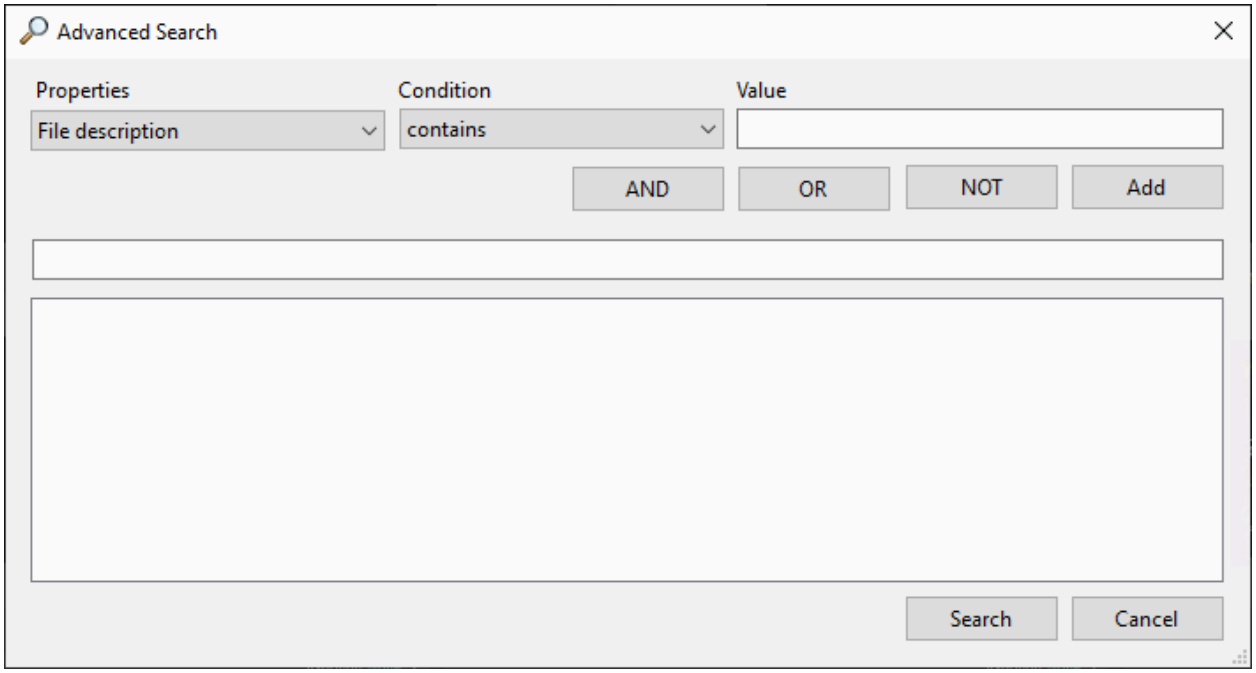


Advanced Search

PRIME Switcher provides a Boolean search tool to more precisely specify search parameters.

To access Boolean Search:

1. Click the **Advanced Search** icon. The **Advanced Search** dialog appears.



2. Set the desired parameters, and then click **Search**. The search results display in the browser.

> **NOTE:** The **Properties** field defaults to the **File** description. This is not the same as the file name. To specify a file name, select **Name** from the **Properties** dropdown, a **Condition** from the **Conditions** dropdown, and then enter a search term in the **Value** field.

You can save an **Advanced Search**. *See Save Search.*

Assets Browser Display Settings

You can set the display mode of the assets within the browser in a similar manner as in Microsoft Windows.

To set the display mode for the browser:

1. Click the **Display Settings** icon.
2. From the dropdown menu, select desired display mode:
    - **Details:** Displays a list of file names with file details. When **Details** is selected, a **Columns** item displays in the menu, from which you can select column visibility for **Path**, **Type**, **File Size** and **Last Modified**.
    - **Icons:** Displays the file thumbnails or icons.
    - **List:** Displays a list of file names without file details.
    - **Slider:** Sets the size of the thumbnails/icons.
        - Slide left to reduce the size of the thumbnails/icons.
        - Slide right to increase the size of the thumbnails/icons.
    - **Appearance:** When selected, open the **PRIME Settings** dialog, accessible from **Config Menu > Settings**, from which you can set color, font style, etc., for the PRIME interface. *See the PRIME User Guide for details.*
3. Once parameters are set, then click **Close**.

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Chapter 14: Work with Main and Mix Effect (ME) Banks and Transitions

Overview

PRIME Switcher displays, by default, a **Main Bank**, from which you select **Program**, **Preset** and **Key** video sources, and perform transitions.

You can add a **Mix Effects (ME1) Bank**, from which you can set transition effects, and then specify the **ME1 Bank** as a source in the **Main Bank**. *See Add the ME1 Bank for details on how to add the **ME1 Bank**.*

The **ME1 Bank** also provides the ability to create **Mix Effect Presets**, i.e., specific groups of settings, that you can save, edit, and recall. *See Mix Effect Presets for details.*

Each bank comprises the following main areas:

- **Buses:**
  - **General:** The bus, i.e., the row of buttons, from which a video source is selected. Each bank has three buses:
    - **PRESET Bus:** Specifies the video source for the **Background** video to transition to **Program**.
    - **PROGRAM Bus:** Specifies the video source for the **Background** video to be displayed on the PRIME Switcher output.
    - **Key Bus:**
      - Specifies the source for the active **Key**, as indicated by the **Key Bus** label.
      - Can change the source of the corresponding **Key** in the **Downstream Keyer**.
  - On the **ME1 Bank**, you can create, load and trigger **ME1 Presets**, and save **Mix Effects Presets** for reuse. *See Mix Effect Presets.*
- **Transition Area:**
  - The controls that determine:
    - The **Background** and/or **Key** video that transition on and off **Program**, and on and off **Preview** when a transition is performed.
    - The **Transition Effect** that is applied.
    - The active **Key(s)** in the **Key Bus**.
    - The **Key(s)** currently in **Program**.
  - **Video/Key** transitions can be performed from this panel.
- **Downstream Keyer:**
  - The set of controls that determine the source for each **Key**.
  - The type of key for each **Key** (**Linear** or **Chroma**).
  - The source of the active **Key** in the **Key** bus.
  - **Key** transitions can be performed from this panel.

The **Key Bus**, **Transition Area** and **Downstream Keyer** interact with each other. It is best to understand how each of them work, and then tie together how a change to one affects one or both of the others.

Main Bank vs. Mix Effect (ME1) Bank

The **Main Switcher Bank** and **ME1 Bank** provide mostly the same functions, with a few differences:

- From the **ME1 Bank**, you can configure, save, edit and recall (load) **Mix Effect (ME1) Presets**.
    - The **ME1 Bank** includes an **ID** entry field, a **Save** button, and a **Load** button.
    - There is no **ID** field, **Save** button, or **Load** button in the **Main Bank**. As such, you can configure, but not save or load, a **Mix Effect** in the **Main Bank**.

- A **Mix Effect** from the **ME1 Bank** can act as a source for the **Main Bank Preset**, **Program** or **Key**, but not vice versa. If the **ME1 Bank** is configured in the PRIME Switcher interface, then an **ME1** button appears in each of the three **Main Bank Buses**: **Preset**, **Program**, **Key**.

- The **ME1 Bank** does not transition directly to **Program**. Rather, it transitions from its own **Preview** to its own **ME1** output, which is not the PRIME Switcher **Program** output. The **ME1 Program** displays on the **ME1** monitor.
    - If the **Main Bank Program** video source is set to **ME1**, then any transitions performed from the **ME1 Bank** are routed to the **Main Bank Program** bus.
    - If the **Main Bank Preset** video source is set to **ME1**, then the **Main Bank Preset** must be transitioned to **Program**, in order for **ME1 Program** contents to display as the PRIME Switcher output.

Mix Effect Bank vs. Mix Effect (ME1) Preset

PRIME Switcher provides one **Mix Effect Bank (ME1)**; however, you can create multiple **Mix Effect Presets** that you can save, edit, and recall from the **Mix Effect Bank**. A **Mix Effect Preset** loaded in the **Mix Effect Bank** can act as a source to the **Main Bank**. *See Mix Effect Presets for details.*

Set Preset, Program, Key Buses

You can set a **Preset** source and a **Program** source in each of the banks.

- When you trigger a transition in the **Main Bank**, the contents of **Preview** transition to **Program**.
- When you trigger a transition in the **ME1 Bank**, the contents of **Mix Effects Preview** transitions to the **Mix Effects Output**.
    - PRIME Switcher provides a monitor (labeled **ME1**) dedicated to the **ME1 Bank**, which displays the contents of the **ME1 Output**. The **Cut** and **Auto** buttons act as toggles to view both the **ME1 Preview** and **ME1 Output**.
        - To view the contents of the **ME1 Preview**, click **Cut** or **Auto** in the **Transition Area**.
        - To again view the contents of the **ME1 Output**, click **Cut** or **Auto** in the **Transition Area**.
    - To display the **Mix Effect Output** in PRIME Switcher **Program**, you must select **ME1** as the **Main Bank Program** source.

To set a bank:

- In the **Preset** bus, select the desired source.
- In the **Program** bus, select the desired source.
- **Key Bus**: The **Key Bus** is actually four **Key Buses**: **KEY1**, **KEY2**, **KEY3**, **KEY4**. You can select the **Key Bus** that you would like to display, and select the **Key Type**: **LINEAR** or **CHROMA**. For each **KEY** on each **Bank**, you can also select and configure a **DVE**.
    - If the button is red, then the source is part of the **Program** mix.
    - If the button is white, then the source is part of the **Preview** mix.

To select a **Key Bus**:

- In the top row of the bank, click the **Key Bus** that you would like to display. The selected **Key** button becomes lit, and the **Key Bus** displays the name of the selected **Key** at the left of the **Bus**. The following shows **KEY1** selected.

To select a **Key** type, do one of the following:

- Click the **Linear** or **Chroma** button. The selected **Key Type** button becomes lit, and the **Key Bus** displays the name of the selected **Key Type** at the left of the **Bus**. The following shows **LINEAR** selected.

If you change the source on the **Key Bus**, then the change is reflected in the source for that **Key** in the **Downstream Keyer**.

If you change the **Key Source** in the **Key Bus**, then the change is reflected in the **Key Mode** in the **Downstream Keyer**. For example, if you change the **KEY3** source from **GFX1** to **CLP2**, then **KEY3** in the **Downstream Keyer** changes to **CLP2**.

Transitions

A transition is a visual effect that is applied when **Preview** transitions to **Program**. A transition can be simple, such as a **Cut**, **Wipe** or **Dissolve**, or a more complex effect created within PRIME and performed by the PRIME Switcher.

PRIME Switcher is an A-B switcher, i.e., when a transition is performed, the contents of **Program** and **Preview** swap:

1. The **Program** monitor displays the source selected in the **Program Bus** (also referred to as **Background**), plus any **Key** source(s).
2. The source selected in the **Preset Bus**, plus any **Key** source(s), are next in line to transition to **Program**.
3. When you perform a transition, the contents of the **Program Bus** and **Preset Bus** swap. The active (selected) **Transition Effect** is applied as the contents swap. The following figure shows a **Wipe** transition, as **Preview** video replaces **Program** video.

NOTE: You may not want all elements in Preview to swap with all elements in Program. You can control which elements (BKGD, KEY1, KEY2, KEY3, KEY4) swap via the Next Transition Selection settings in the Transition Area.

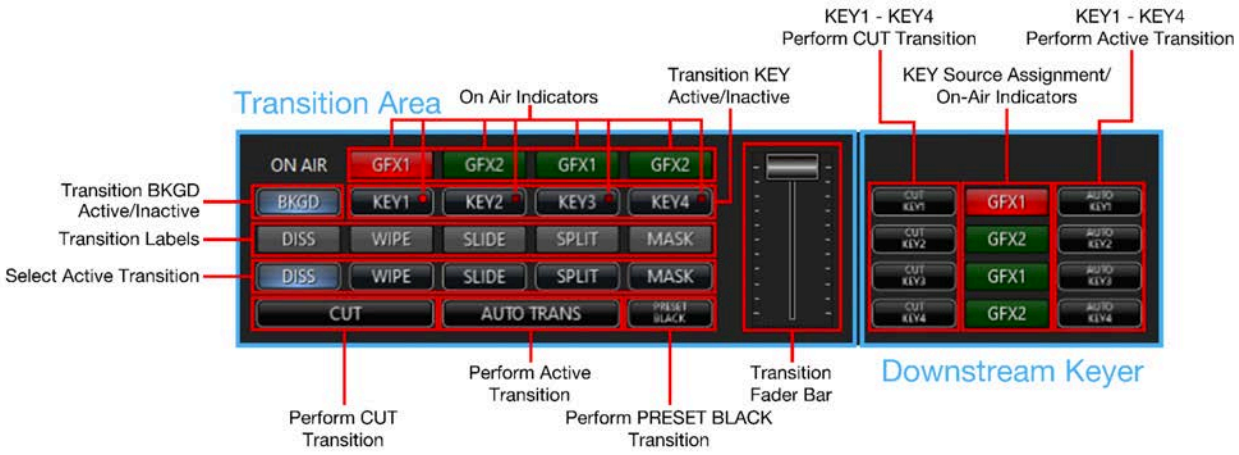
You can trigger **Background** video, **Background** and **Key**, or **Key** transitions from the following PRIME Switcher areas:

- **From the Main Bank Program bus:** Transitions only the **Background** video using a **Cut**.
- **From the Transition Area:** Transitions **Background** video and **Key** using a **Cut** or the selected **Transition Effect**.
- **From the Downstream Keyer:** Transitions the selected **Key** only using a **Cut** or the **Transition Effect** selected in the **Transition Area**.

If you perform a transition from the **ME1 Bank**, and the **ME1 Bank** is selected as a **Main Bank Program** source, then the transition in the **ME1 Bank** displays in **Program**.

You can select and perform a transition from the **Transition Area** (outlined in red on the left) and **Downstream Keyer** (outlined in red on the right):

- From the **Transition Area**, you can select the specific **Transition Effect**, and perform either that transition (**AUTO**) or a **CUT**.
- From the **Downstream Keyer**, you can perform either the transition set in the **Transition Area** (**AUTO**) or a **CUT**.



What Can Transition?

In addition to a video source such as a camera or clip, key sources such as a **Lower 3rd**, **OTS** and/or **Live Bug** can overlay the video source, and independently transition to and from **Program**. The following figure shows a **Lower 3rd** graphic, an **OTS** graphic and a **Live Bug**.

Even if a **Video Source** is selected in **Preview** to transition to **Program**, it may be desirable to take new graphics to **Program**, while leaving the **Background Video** in the **Program Channel** in **Program**, or to leave one **Key** in **Program** while transitioning a different key off **Program**. The following figures show a **Lower 3rd** graphic added to an **OTS** graphic. The **BKGD** does not change.

What is a Key?

A **Key** is video that “cuts a hole” in other video. Keying is used to overlay graphics and/or clips over **Background** video. An area of a **Key** can have full opacity or varying levels of transparency:

- If an area of a **Key** is completely opaque, then the video that it overlays is not visible. In the following figure, the **Live Bug** is completely opaque. None of the underlying video is visible.
- If an area of a **Key** is transparent, then both the **Key** and the video that it overlays are visible. In the following figure, the **Lower 3rd** and the **OTS** have opaque and transparent areas. The underlying video is visible in the transparent areas.

PRIME Switcher provides two **Key Modes**:

- **Linear Key:** The graphics are keyed into the video. **Linear Key** is typically used to overlay graphics over video.
- **Chroma Key:** Composites video based on a specified **Key Color**, also known as a **Target Color**. The specified chrominance (**Target Color**) is removed, and is replaced by other video. **Chroma Key** is commonly used for weather reports and virtual sets. The meteorologists/anchors present in front of a green screen, and the weather or virtual set graphics are keyed in any area that is the color specified as the **Key Color**.

Each PRIME Switcher **Bank** provides four **Key Presets**. **Key** transparency is set in the graphic itself, and not in the PRIME Switcher.

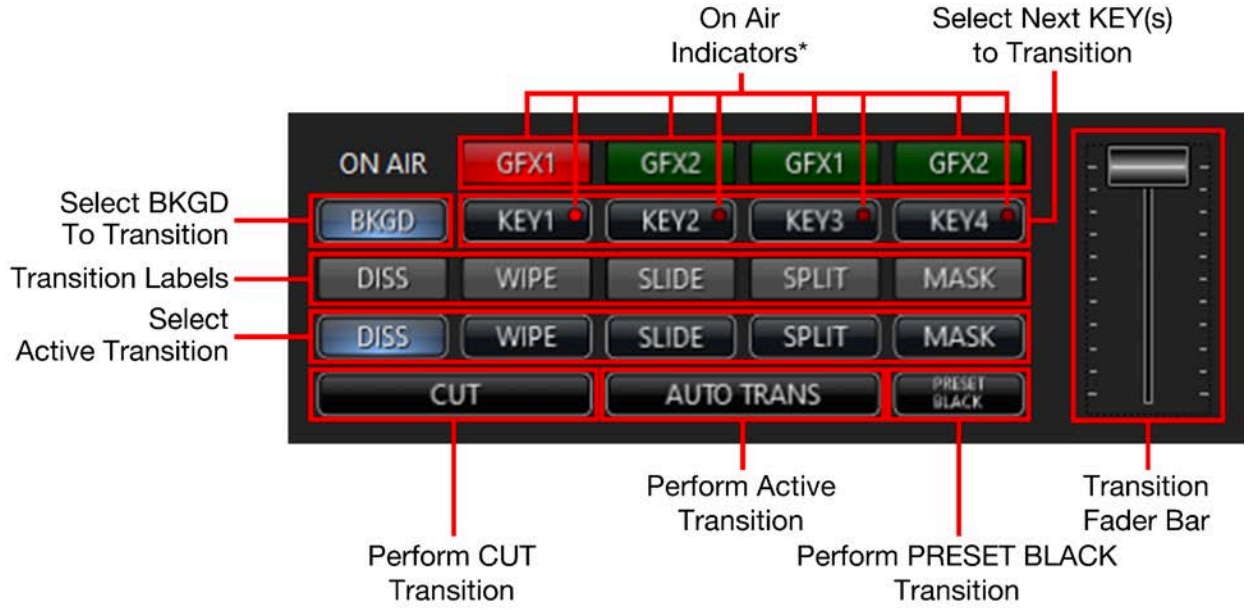
You can set each **Key Preset** to any available source. **Linear Keys** are most commonly used to display **Lower 3rd**, **Over-the-Shoulder** (**OTS**) and **Live Bug** graphics over video, or to display a partially transparent clip that plays over **Background** video. **Chroma Keys** are commonly used to display virtual sets and weather maps.

Set Transition Area

Overview

The **Transition Area** provides the ability to:

- Specify, via the **Next Transition Selection** buttons, which sources (**BKGD**, **KEY1**, **KEY2**, **KEY3**, **KEY4**) display, and how they transition to **Program**.
- Specify the **Transition Effect** that is applied to a transition.
- Perform **CUT** transitions
- Perform other transitions using preset durations (**AUTO TRANS**, **PRESET BLACK**), or manually, using the **Fader Bar**.
- Monitor which **Keyer(s)** is active/inactive.
- The **ME1 Bank** provides the ability to save and load **Mix Effects** for reuse.



Next Transition Selection

Overview

In each bank, you can independently specify the elements (**Background** (**BKGD**), **KEY1**, **KEY2**, **KEY3**, **KEY4**) that will transition when you trigger a transition effect (**CUT**, **AUTO**, **PRESET BLACK**).

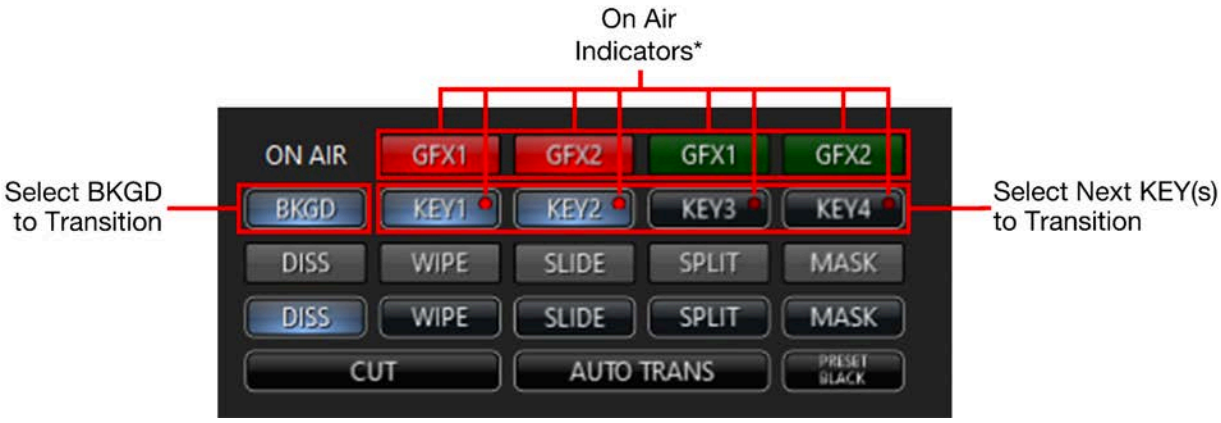
- A button that is lit indicates that the element will transition when you trigger a transition effect. As such:
    - If the element is in **Program**, then when a transition is triggered, it transitions off **Program**.

- If the element is in **Preview**, then when a transition is triggered, it transitions to **Program**.

- A button that is unlit indicates that the element will not transition when you trigger a transition.
  - If the element is in **Program**, then when a transition is triggered, it remains in **Program**.
  - If the element is in **Preview**, then when a transition is triggered, it remains in **Preview**.

For example, the following figure shows **BKGD**, **KEY1** and **KEY2** specified for transition. The lit **Active Keyer Indicator** alerts that **KEY1** is active in the output for that **Bank**.

- If active in the **Main Bank**, then active on the PRIME Switcher **Program** output.
- If active in the **ME1 Bank**, then active on the **ME1** output.



When a transition is triggered, then:

- The **BKGD** video, **KEY1** and **KEY2** transition.
- **KEY3** and **KEY4** do not transition.

Each button in the **ON AIR** row and the **Source** column in the **Downstream Keyer** display the **Source Name** for each **KEY**. In addition, **ON AIR** row and the small "LED" lights on the **Next Transition Selection KEY Buttons** both indicate the status of the **KEYS**:

- In the **Main Bank**:
    - In the **ON AIR** row and **Downstream Keyer**, if the **KEY's Source Name** is lit red, then the **KEY** is in **Program**. The **KEY's Next Transition Selection KEY Button** "LED" is also lit red.
    - In the **ON AIR** row and **Downstream Keyer**, if the **KEY's Source Name** is green, then the **KEY** is not in **Program**. The **KEY's Next Transition Selection KEY Button** "LED" is unlit.
- In the **ME1 Bank**:
    - In the **ON AIR** row and **Downstream Keyer**, if the **KEY's Source Name** is lit red, then the **KEY** is in **ME1's** output, and displays on the **ME1** monitor. The **KEY's** "LED" is also lit red.
    - In the **ON AIR** row and **Downstream Keyer**, if the **KEY's Source Name** is green, then the **KEY** is not in **ME1's** output. The **KEY's** "LED" is unlit.

To turn a **Next Transition Selection** button **ON** or **OFF**:

- Click the **Next Transition Selection** button.

Background (BKGD)

Turning **ON** the **BKGD Next Transition Selection** button specifies that when a transition is performed, the **BKGD** transitions:

- If the **BKGD** button is turned **ON**, then when the transition is performed, the **Preview** video transitions to **Program**, and the **Program** video transitions to **Preview**, i.e., they are swapped.
- If the **BKGD** button is turned **OFF**, then:
    - The **Program Background Video** remains in **Program**, and replaces the **Preview Background Video**. Note that turning the **BKGD OFF** does not change the video source setting in the **Preset** bus.
    - When you perform the transition, the video source currently in **Program** remains in **Program**.

KEY 1 - 4 (KEY1, KEY2, KEY3, KEY4)

Turning a **KEY Next Transition Selection** button **ON** specifies that when a transition is performed, the selected **Key** transitions.

To describe the operation of a **KEY Next Transition Selection** button, **KEY1** is used in the following, and the **KEY1** source is **GFX1**.

- If the **KEY1 Next Transition Selection** button is **ON**, then when the transition is performed, the **KEY1** (**GFX1**) transitions as follows:
    - If the **KEY1** (**GFX1**) displays in **Program**, then **KEY1** (**GFX1**) transitions to **Preview**.
    - If the **KEY1** (**GFX1**) displays in **Preview**, then **Key1** (**GFX1**) transitions to **Program**.
- If the **KEY1 Next Transition Selection** button is **OFF**, then when the transition is performed, **KEY1** (**GFX1**) does not transition, i.e.:
    - If the **KEY1** graphic displays in **Program**, then it remains in **Program**; and,
    - The **KEY1** graphic also displays in **Preview**.
- If the **KEY1 Next Transition Selection** button is turned **OFF** while the **KEY1** graphic displays in **Preview**, then the **KEY1** graphic is removed from **Preview**. When the transition is performed, then there is no graphic to transition to **Program**.

Transitions

PRIME Switcher provides the following **Transition Types**:

- **Cut** is always available in the PRIME Switcher interface
- **Built-in: Dissolve** and **Wipe** are built-in custom transitions that are configurable within PRIME Switcher.
- **Custom:** You can create custom transitions using PRIME Designer and save as ***.pst*** or ***.pct*** files for use in PRIME Switcher.
- **Preset Black:** Transitions the contents of **Program** to black, and then transitions the contents of **Preview** to **Program**, applying the active transition. For example:
    - If **Dissolve** is the active transition, then **Program** dissolves to **Black**, and then dissolves to the contents that were transitioned from **Preview**. On a hardware switcher, this corresponds with fade to **Black** and fade up from **Black**. This is the most typical use of **Preset Black**.
    - If **Wipe** is the active transition, then **Program** wipes to **Black**, and then wipes to the contents that were transitioned from **Preview**..

The PRIME Switcher UI can provide up to five built-in and/or custom **Transition Effects** at any time. *To configure the **Transition Effects**, see Configure Transitions*. The following figure shows **DISS** as the active transition.

When you select a transition, it becomes **active**, i.e., when you click **AUTO** or **PRESET BLACK**, or you use the **Fader Bar**, then PRIME Switcher performs the active transition. To select a transition:

- Click the **Transition Effect** button. Note that the transition is not performed when it is selected. Transitions are performed from the Perform Transition row of buttons below this row or using the **Fader Bar**.

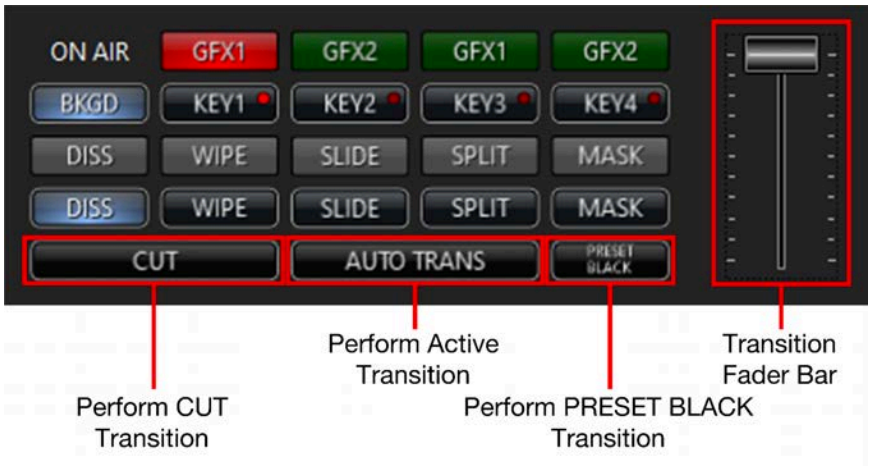
Perform Transition

Overview

Video and graphics transitions are performed from the buttons in the bottom row of the **Transition Area** and using the **Fader Bar**.

Each button has a different function:

- **CUT:** Performs a **Cut**, swapping the contents of **Preview** with the contents of **Program**.
- **AUTO TRANS:** Performs the active transition, i.e., the transition that you selected in the **Select Transition** row. *See Transitions.*
- **PRESET BLACK:** Transitions the contents of **Program** to black, and then transitions the contents of **Preview** to **Program**, applying the active transition.



You can also perform the selected **Active Transition** by clicking and dragging the **Fader Bar** up or down. When you use the **Fader Bar**, you can control the speed of the transitions.

Note also that when you click the **AUTO TRANS** or **PRESET BLACK** button to perform a transition, then:

- If the **Fader Bar** is at the bottom position, then it moves to the top.
- If the **Fader Bar** is at the top position, then it moves to the bottom.

Perform CUT

To perform a **Cut** from the **Transition Area**:

- Click **CUT**.

Perform Transition

To perform a built-in or custom transition:

1. If not already selected, then click the desired **Transition Effect**, to make it active.
2. Click **AUTO** or use the **Fader Bar**.

Note that to continue using the selected (active) transition, it is not necessary to click it each time that you would like to use it. Simply click **AUTO** or use the **Fader Bar** to perform the transition.

Perform Transition to Black then to Program

To perform a transition to **Black** and then to **Program**:

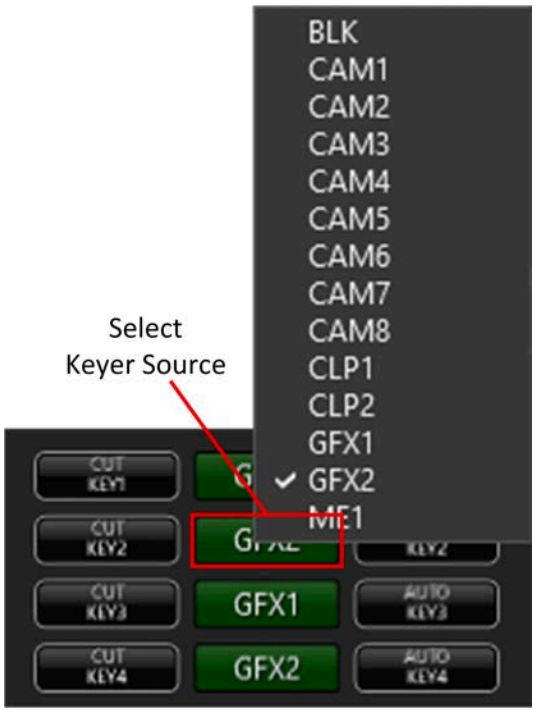
1. If not already selected, then click the desired **Transition Effect**, to make it active.
2. Click **PRESET BLACK**.

Set a Key Source

There are two methods to assign source video to a **Key**:

From the **Downstream Keyer**:

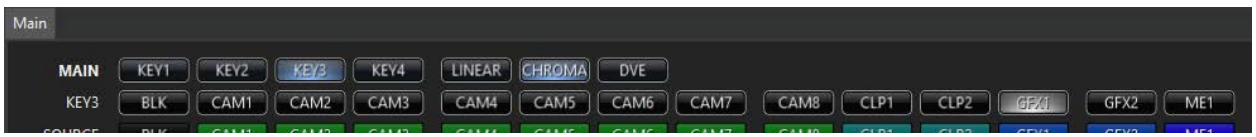
1. Right-click the **Key Source** button for the specific **Key** (**KEY1**, **KEY2**, **KEY3**, **KEY4**) in the specific bank (**MAIN**, **ME1**).
2. From the context menu, select a **Key Source**. This example displays the sources for **KEY2**. The active source has a checkmark to the left.



3. Click the desired source. The menu closes. The **Source Button** displays the updated source.

From the **Key Bus**:

1. In the top row of the **Bank** in which you are working, above the buses, select the **Key Bus**. In the following, **KEY3** is selected.



2. In the **Key Bus**, click the desired source.

The **Source** column in the **Downstream Keyer** and each button in the **ON AIR** row display the **Source Name** for each **KEY**. In addition, the small “LED” lights on the **Next Transition Selection KEY Buttons** both indicate the status of the **KEYS**:

- In the **Main Bank**:
    - In the **Downstream Keyer** and the **ON AIR** row, if the **KEY’s Source Name** is lit red, then the **KEY** is in **Program**. The **KEY’s Next Transition Selection KEY Button** “LED” is also lit red.
    - In the **Downstream Keyer** and the **ON AIR** row, if the **KEY’s Source Name** is green, then the **KEY** is not in **Program**. The **KEY’s Next Transition Selection KEY Button** “LED” is unlit.
- In the **ME1 Bank**:
    - In the **Downstream Keyer** and the **ON AIR** row, if the **KEY’s Source Name** is lit red, then the **KEY** is in **ME1’s** output, and displays on the **ME1** monitor. The **KEY’s** “LED” is also lit red.
    - In the **Downstream Keyer** and the **ON AIR** row, if the **KEY’s Source Name** is green, then the **KEY** is not in **ME1’s** output. The **KEY’s** “LED” is unlit.

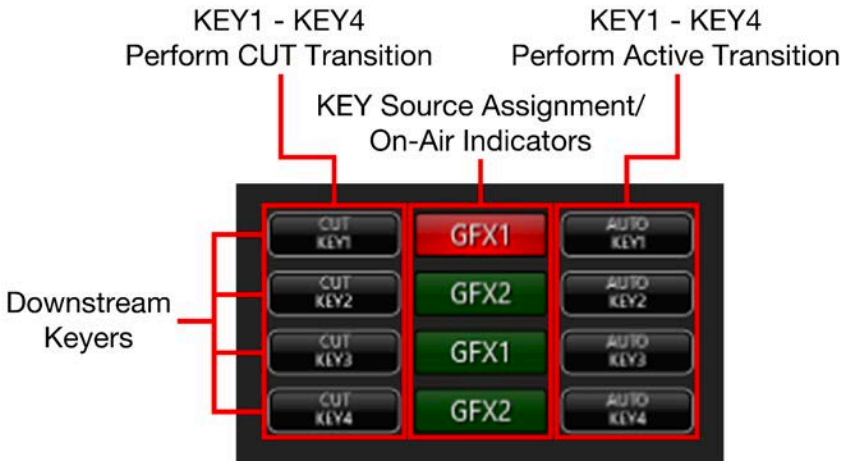
Downstream Keyer

Overview

Each **Bank** has a dedicated **Downstream Keyer** that provides four **Downstream Keyers**—**KEY1**, **KEY2**, **KEY3** and **KEY4**—each of which you can set as **Linear Key** or **Chroma Key**.

Key layer priority is as follows:

- **KEY1** has the highest priority and displays on top of **KEY2**, **KEY3**, **KEY4**, and **BKGD**.
- **KEY2** displays behind **KEY1**, and on top of **KEY3**, **KEY4**, and **BKGD**.
- **KEY3** displays behind **KEY1** and **KEY2**, and on top of **KEY4** and **BKGD**.
- **KEY4** displays behind **KEY 1**, **KEY2**, and **KEY3**, and on top of **BKGD**.
- All **KEYS** display on top of **BKGD**.



A **Downstream Keyer** has the following functions:

- Specifies the type of **Key**: **Linear Key** or **Chroma Key**.
- Specifies source for each **Downstream Keyer**.
- Transitions a selected **Key**. When a **Downstream Keyer Source Button** is red, then the **Key Source** is in **Program**.

Set Key Mode

Key Mode Overview

Each **Keyer** can act as either a **Linear Keyer** or a **Chroma Keyer**. By **Default**, the **Keyers** are **Linear**.

- **Linear:** Composites one or more video layers.
- **Chroma:** Composites video based on a specified **Key Color**, also known as a **Target Color**. The specified chrominance (**Target Color**) is removed, and is replaced by other video.

You can use a mix of **Linear** and **Chroma Keys**. The following shows a virtual set keyed in via **Chroma Key** with a graphics overlay keyed in via **Linear Key**:

Linear/Chroma Key settings are included when saving a **Mix Effect Preset**.

Set Linear Key

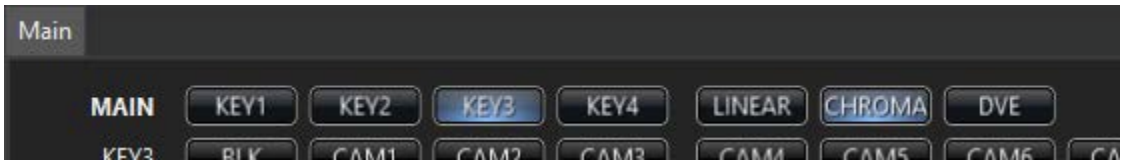
To specify a **Keyer** as **Linear**:

1. In the **Downstream Keyer**, click the **Key Mode** label, located underneath the **Keyer** number.
2. From the dropdown, select **Linear**.

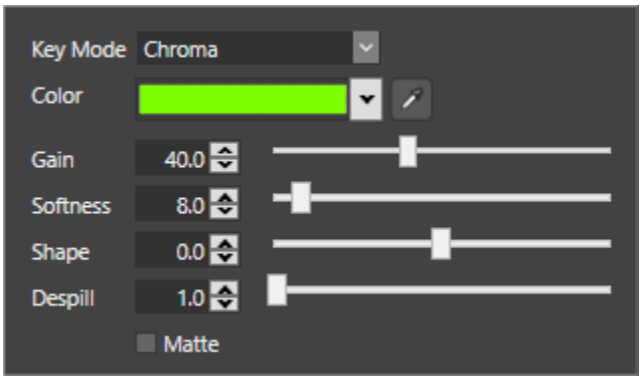
Set Chroma Key

To specify a **Keyer** as **Chroma**:

1. In the top row of the **Bank** in which you are working, above the buses, select the **KEY** to set to **CHROMA**, and select **CHROMA**. In the following, **KEY3** is selected.



   The **Chroma Key** settings display.



2. Set the following parameters. As you adjust parameters, the adjustments reflect in the PRIME Switcher display.

   - **Color Indicator:** Displays the color that is the current **Key Color**, also referred to as the **Target Color**. You can set **Key Color** using one or more of the following methods:

     - **Color Picker Standard Settings**
     - **Color Picker Advanced Settings**
     - **Eyedropper**

     See Set Key Color via Color Picker Standard Settings, Set Key Color via Color Picker Advanced Settings, and Set Key Color via Eyedropper for details.

- **Gain:** The hue threshold for the **Target Color**.
    - Increasing this value makes colors similar to the **Target Color** also transparent.
    - Decreasing this value makes colors similar to the **Target Color** less transparent.
- **Softness:** Sets pixels within the gain threshold to semi-transparent.
- **Shape:** Linear to non-linear softness value adjustments.
- **Despill:** Removes some of the key color from the remaining pixels, correcting for spillage of the **Key Color**.
- **Matte:** Displays the alpha values as grayscale. If desired, then enable **Matte** to fine-tune the key, and then disable **Matte** when fine-tuning is complete.

3. Click outside of the **Chroma Key** settings. The **Chroma Key** settings close.

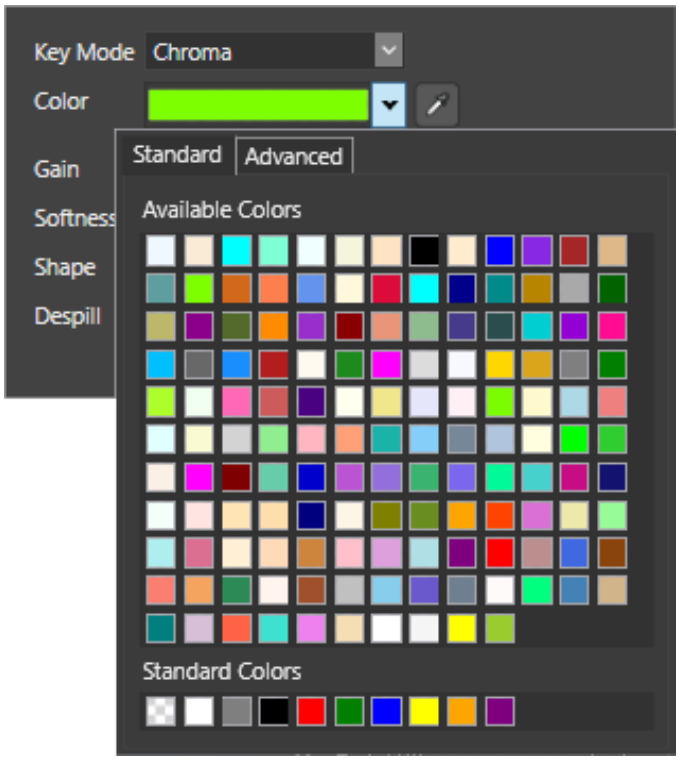
Set Key Color via Color Picker Standard Settings

You can set **Key Color** via the **Color Picker Standard Settings**, in which you select a pre-existing color to act as the **Key Color**.

To use the **Color Picker Standard Settings** to set **Key Color**:

1. In the **Downstream Keyer**, click the **Key Mode** label, located underneath the **Keyer** number.
2. From the dropdown, select **Chroma**. The **Chroma Key** settings display.
3. Click the **Color Indicator**.

4. If not already displayed, then click the **Standard** tab. The **Standard Color Palette** appears.



5. Click a color chip from either the **Available Colors** or **Standard Colors**. As you select a color, PRIME Switcher reflects the selection in real time.

6. Do one of the following:
    - Click outside of the **Standard Color Palette**, but on the **Chroma Key** settings dialog to return to the **Chroma Key** settings.
    - Click outside of both the **Standard Color Palette** and the **Chroma Key** settings dialog to return to PRIME Switcher.

Set Key Color via Color Picker Advanced Settings

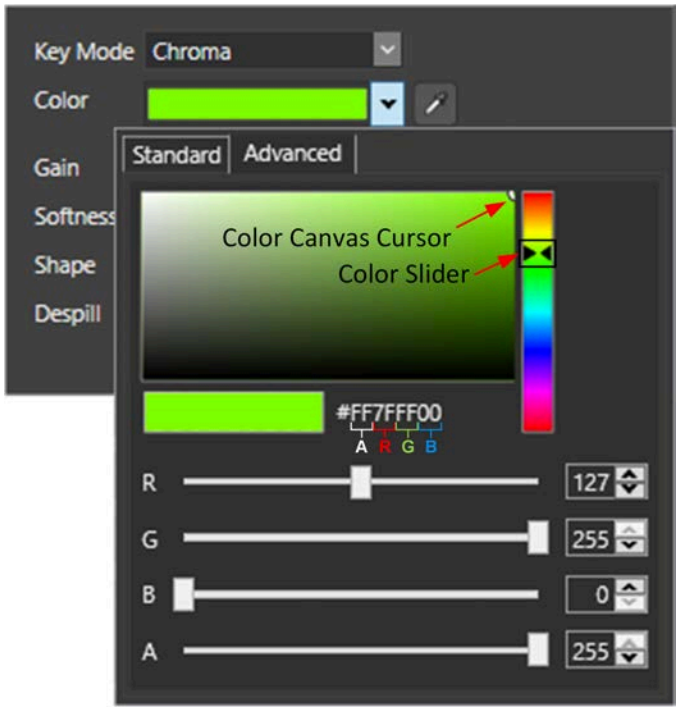
You can set **Key Color** via the **Color Picker Advanced Settings**, in which you precisely set a color and alpha to act as the **Key Color**.

To use the **Color Picker Standard Settings** to set **Key Color**:

1. In the **Downstream Keyer**, click the **Key Mode** label, located underneath the **Keyer** number.

2. From the dropdown, select **Chroma**. The **Chroma Key** settings display.

3. Click the **Color Indicator**.
4. If not already displayed, then click the **Advanced** tab. The **Advanced Color Palette** appears.



5. Set a **Key Color** and **Key Alpha** using one or more of the following methods:

    - In the **Color Canvas**, drag the cursor to the desired location.
    - In the **Color Slider**, drag the slider to the desired location.
    - Set the **HTML** or **RGBA** parameters. Note that in the **HTML** setting:
        - Digits 1 and 2 of the **HTML** specify **A (Alpha)**.
        - Digits 3 and 4 of the **HTML** specify **R (Red)**.
        - Digits 5 and 6 of the **HTML** specify **G (Green)**.
        - Digits 7 and 8 of the **HTML** specify **B (Blue)**.

    As you adjust the settings, PRIME Switcher reflects the changes in real time.

6. Do one of the following:

    - Click outside of the **Advanced Color Palette**, but on the **Chroma Key** settings dialog to return to the **Chroma Key** settings.

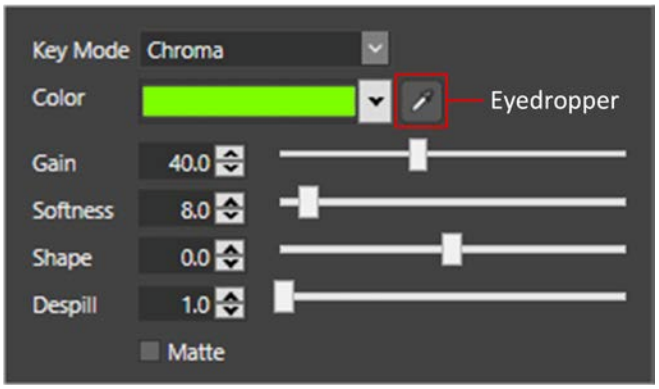
- Click outside of both the **Advanced Color Palette** and the **Chroma Key** settings dialog to return to PRIME Switcher.

Set Key Color via Eyedropper

The **Eyedropper** operates much like the eyedropper in many graphics applications, and enables you to quickly clone a **Key Color** from the PRIME Switcher interface, or even from a different application on your desktop.

To use the **Eyedropper** to set **Key Color**:

1. In the **Downstream Keyer**, click the **Key Mode** label, located underneath the **Keyer** number.
2. From the dropdown, select **Chroma**. The **Chroma Key** settings display.
3. Click the **Eyedropper** icon, located to the right of the **Color Indicator**.



The **Eyedropper** cursor appears.

4. Drag the **Eyedropper** cursor to the location from which you would like to clone the color, and then click. You can select from within the PRIME Switcher interface, or from any other open application, window, or the desktop. The color appears in the **Color** indicator, and now acts as the **Chroma Key** color.

5. If desired, then adjust the **Gain**, **Softness**, **Shape**, and **Despill** settings. If desired, then enable **Matte** to fine-tune the key, and then disable **Matte** when fine-tuning is complete.

Perform a Key Transition

An individual **Key** can transition, independent of the background (**BKGD**) and other **Key** video.

To perform a **Cut** transition:

- Click **CUT** for the specific **Key**.

To perform the currently active built-in or **Custom** transition that is active in the **Transition Area**:

- Click **AUTO** for the specific **Key**.

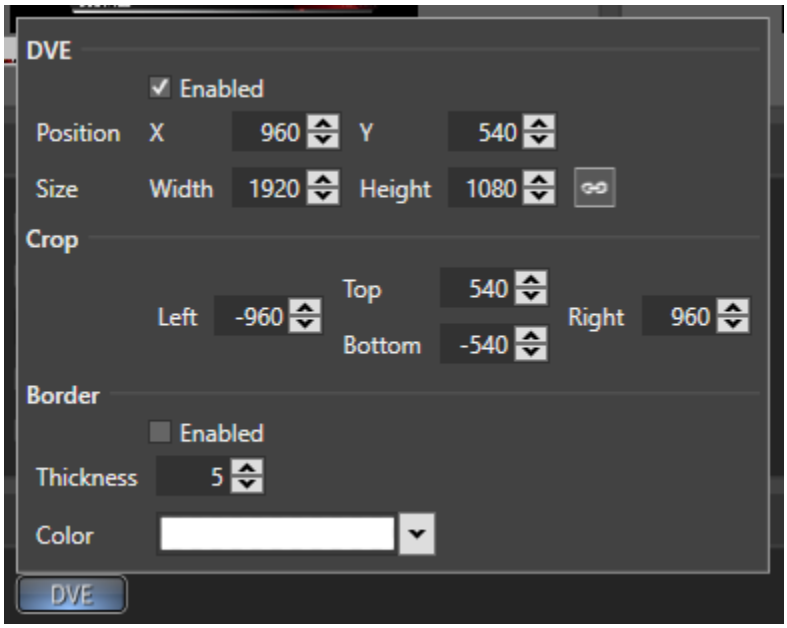
PRIME Switcher DVE (Digital Video Effect)

PRIME Switcher DVE Overview

PRIME Switcher can apply **DVE** crop and border to the **Key** in any **Key Bus** in the **Main** and **ME1 Banks**. You can set a **DVE** independently for each **Key Bus** in each **Bank**. The following shows **ME1 Bank DVEs** set for **KEY1**, **KEY2**, **KEY3** and **KEY4**. You can save **DVE** setups as **Mix Effect Presets**.

To access the **DVE** settings for a **Bus**:

1. In the top row of the **Main** or **ME1 Bank**, select the **Key** to which to apply the **DVE**.
2. In the top row of the same **Bank**, click the **DVE** button to make it active, and then right-click the **DVE** button. The **DVE** dialog displays.



The **DVE** dialog comprises the following areas:

- **Enable/Disable DVE**
- **Position**
- **Size**
- **Crop**
- **Border**

In order to view the **DVE** as you edit:

- If working in the **Main Bank**, ensure that the **Key** to which the **DVE** is applied is displayed in **Program**.
- If working in the **ME1 Bank**, ensure that the **Key** to which the **DVE** is applied is displayed in the **ME1 Bank** monitor.

Changes to settings are immediately applied, and are reflected in PRIME Switcher.

In addition to **DVEs** created within PRIME Switcher, you can display complex **DVE** scenes created in PRIME Scene Designer. *See* *Create a PRIME DVE Scene*.

Reset Settings to Default

While you are working, you may want to reset a setting to the default value. To perform a reset:

- Click the label of the setting that you would like to reset. The value resets to the default.

When there are two settings for a category, such as **Position**, which has **X** and **Y** components, you can reset an individual component by clicking the **X** label or the **Y** label, or reset both components, by clicking the **Position** label.

Enable/Disable DVE

The state of the **DVE** button indicates whether or not the **DVE** is active, i.e., enabled.

- If the **DVE** button is lit, then the **DVE** is enabled.
- If the **DVE** button is not lit, then the **DVE** is disabled.

You can enable/disable the **DVE** from directly from the PRIME Switcher **Bank** or from within the **DVE** dialog:

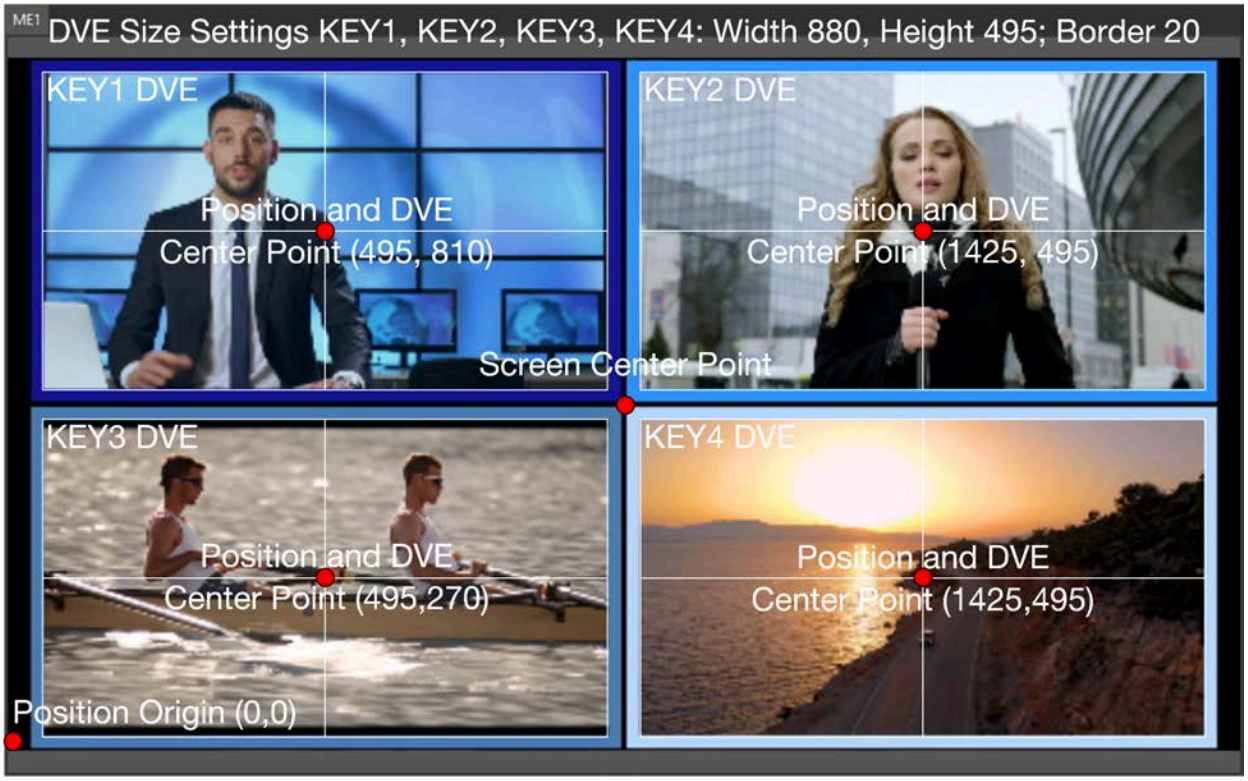
- From the PRIME Switcher **Bank**, click the **DVE** button to toggle it between enabled and disabled.
- From the **DVE** dialog, click the **Enabled** checkbox to enable/disable the **DVE**.

Note that you can set up the **DVE**, disable it, and then click the **DVE** button at any time during a broadcast to apply the **DVE**.

Set DVE Position

The origin point **(0,0)** of the **x, y** parameters of the **DVE** is at the lower left of the screen.

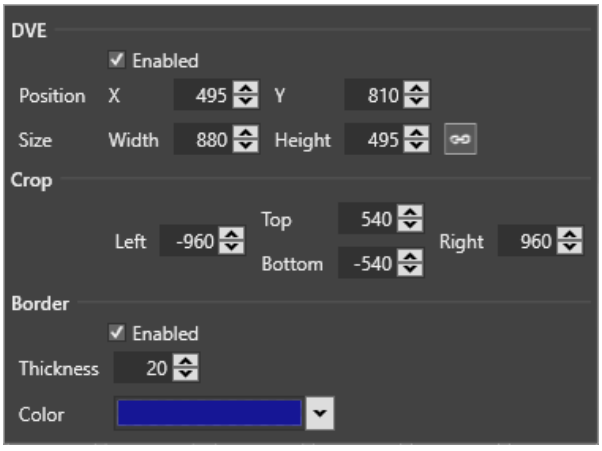
The **(x,y)** parameters specify the center point of the **DVE Position**. For example, in a **1920 x 1080** format, **(960, 540)** specifies that the center point of the **DVE** is at the horizontal and vertical center of the screen. The following shows four **DVEs** and their center points, sizes and crop settings.



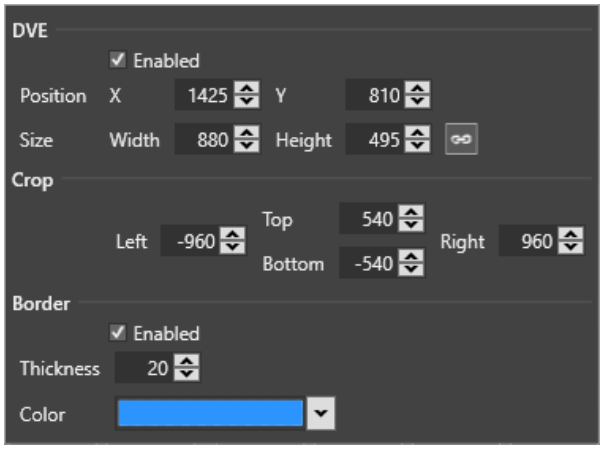
Note that in the above image, the **KEY** sources are resized from full screen; however, they are not cropped. As such, there is no need to change the **Crop** settings from the default values.

Following are the **DVE** settings for each of the **KEYs**.

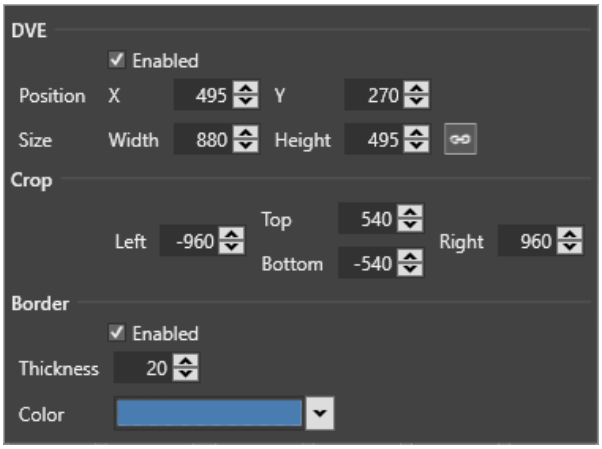
KEY1



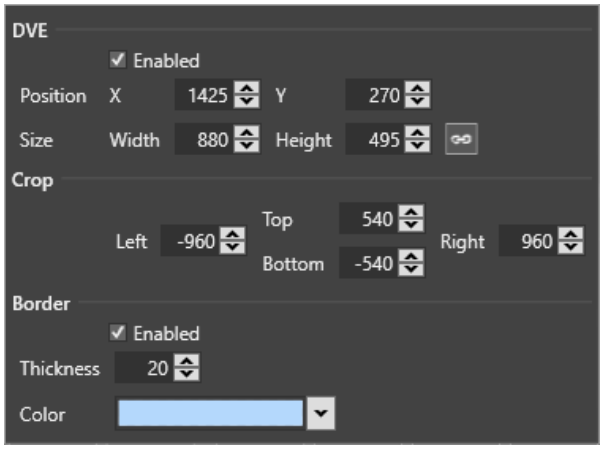
KEY2



KEY3



KEY4



Set DVE Size

Changing the size of the **DVE** changes the size of the contents of the entire selected **KEY**.

To set the **Width** and **Height** of the **DVE**:

- Enter the **Width** and **Height** settings or use the spin boxes.

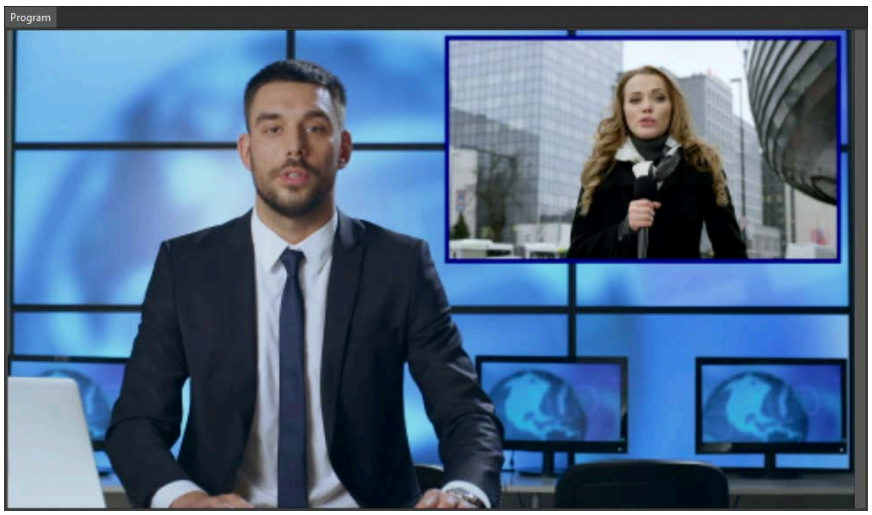
You can lock the **Aspect Ratio**, so that when you adjust the **Width** and/or **Height**, the **Aspect Ratio** is preserved. Default setting is **Locked**. To lock/unlock the **Aspect Ratio**:

- Click the **Aspect Ratio Lock** icon to toggle between **Locked**  or **Unlocked**  .

Set Crop

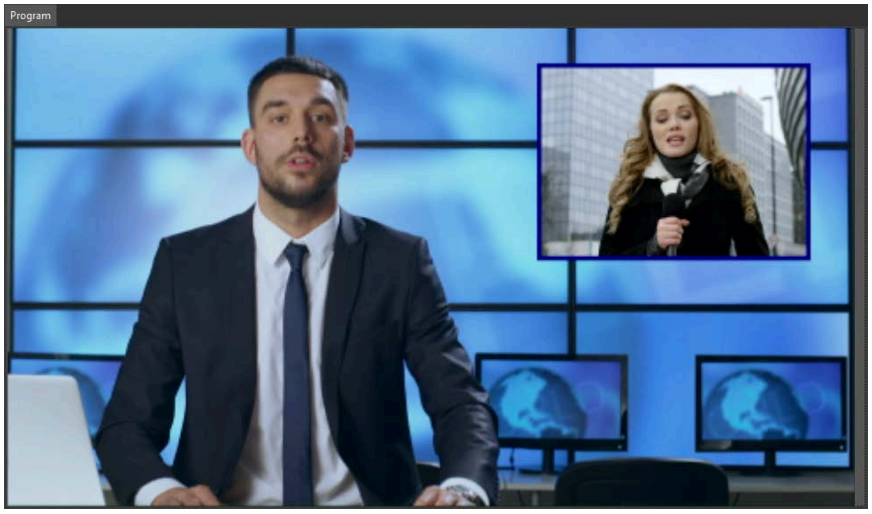
Crop is applied to the currently selected **Key**. The **Left**, **Top**, **Right**, and **Bottom** settings are measured using the center point of the DVE. The crop settings are in relation to the center point of the DVE. The **Crop** settings are not based on the **Position** of the **DVE**, only the **Size**, even if the DVE is resized or repositioned. As with the **Size**, the **(0,0)** point is at the center of the **DVE**.

The following shows a **DVE OTS** that is not cropped.

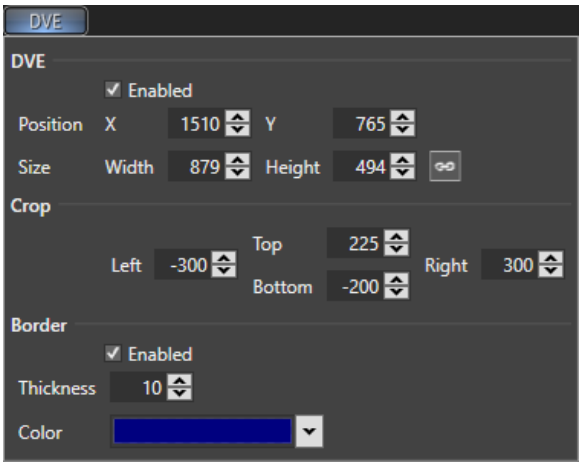


The **DVE Size** is **879 x 494**. The **Crop** settings are the default **Crop** settings, fall outside of the borders of the **DVE**, and therefore, do not affect the **DVE**.

The following shows a **DVE** with a cropped and repositioned **OTS**:



Note the comparison between the **Size** and the **Crop** settings. The **Size** is still **879 x 494**, but as shown by the following settings, it has been cropped on all sides.



To set the the **DVE Crop** parameters:

- Enter the **Left**, **Top**, **Right**, and **Bottom** settings, or use the spin boxes.

NOTE: Be aware that even though the KEYS in the previous example all display when the DVEs are enabled, they are still layered. KEY1 is the top layer, followed by KEY2, KEY3, and then KEY4 as the bottom layer. As such:

- **If you disable the DVE associated with KEY1, then the KEY1 Source displays full screen, covering the KEY2, KEY3, and KEY4 DVEs.**
- **If you disable the DVE associated with KEY2, then:**
    - **The KEY1 DVE displays.**
    - **The KEY2 Source displays full screen, under the KEY1 DVE, and covering the KEY3 and KEY4 DVEs.**
- **If you disable the DVE associated with KEY3, then:**
    - **The KEY1 and KEY2 DVEs display.**
    - **The KEY3 Source displays full screen, under the KEY1 and KEY2 DVEs, and covering the KEY4 DVE.**
- **If you disable the DVE associated with KEY4, then:**
    - **The KEY1, KEY2, and KEY3 DVEs display.**
    - **The KEY4 Source displays full screen under the other KEYS.**

If, however, you deactivate a KEY, then the remaining KEYS continue to display.

Set Border

The **DVE** can have a border for which you can set the width and the color.

To enable/disable the visibility of the **Border**:

- Check the **Enabled** checkbox to enable the visibility of the **Border**, or uncheck the enabled checkbox to disable the visibility of the Border.

You can set the **Border** parameters and then disable visibility until you need to display it.

To set **Border Thickness**:

- Enter the setting, or use the spin box. The **Size** of the area surrounded by the **Border** stays the same. The border extends out from the specified Size of the DVE.

  For example, if the **DVE Width** = **500**, **DVE Height** = **400**, and **Border Thickness = 20**, then:

  - **DVE Width** plus **Border Thickness** (left + right) = **540**
  - **DVE Height** plus **Border Thickness** (top + bottom)= **440**.

To set **Border Color**:

- Click the **Color** dropdown arrow, and then use the **Color Picker** to set the color. The **Color Picker** and **Advanced Color Picker** settings operate in the same manner as those used for setting **Chroma Key**. *See Set Key Color via Color Picker Standard Settings and Set Key Color via Color Picker Advanced Settings.*

Exit and Apply DVE Settings

To exit the **DVE** dialog and apply the settings:

- Click outside of the **DVE** dialog. The dialog closes. As the settings were applied as you edited them, they are retained upon exiting the **DVE** dialog.

Remember that you can retain the settings, disable the **DVE**, and then enable the **DVE** as needed.

DVE Exercise

You can incorporate DVEs to create complex, eye-catching effects, such as transitioning **DVEs** into **Program** as an anchor promos each story.

The basic steps are as follows:

1. In the **ME1 Bank**, set up four **DVEs**, so that each occupies a quadrant of the screen. Ensure that each **DVE** is cropped to the size of its **DVE**. Set each **DVE** to display video corresponding to the anchor script.
2. In the **ME1 Bank**, set a clip as the **ME1 Program** source.
3. Save as a **Mix Effect Preset**.
4. Load the **Mix Effect Preset**. It loads into the **ME1 Bank**.
5. In the **Downstream Keyer**, set all **DVEs** to **OFF AIR**. Their buttons should display green.
6. Set the **Main Bank Preset Source** to **ME1**.
7. In the **Main Bank**, perform a transition.
8. As the anchor introduces each story, click the corresponding **CUT** or **AUTO KEY** in the **Downstream Keyer**. As you click each **KEY**'s **CUT** or **AUTO KEY**, the **DVE** associated with that **KEY** transitions into **Program**.

Tying Together the Transition Area, Key Bus and Downstream Keyer

Overview

The **Transition Area**, **Key Bus** and **Downstream Keyer** interact with each other. For example, when you make a change to the **Key Bus**, it affects the **Downstream Keyer**. When you activate or deactivate a **Transition Area** button, it can affect both the **Key Bus** and the **Downstream Keyer**.

What Happens When You Activate (Select) a Key Source?

If you click a **KEY** button in the **Transition Area** to make it active, then:

- The most recent **KEY** button that was made active in the **Transition Area** causes the following to occur:
    - The **Key Bus Label** changes to match the **Key** number of the most recent **KEY** button that was made active in the **Transition Area**.
    - Any change to the **Key Bus** source is reflected in its corresponding **Downstream Keyer** source.

For example, if you activate **KEY2** in the **Transition Area**, then:

- The **Key Bus Label** changes to **KEY2**.
- Any change to the selected source in the **Key Bus** is reflected in **KEY2** of the **Downstream Keyer**. For example, if you set the **Key Bus to CLP1**, then **KEY2** in the **Downstream Keyer** changes to **CLP1**.

This behavior holds, even if other **KEY** buttons are active in the **Transition Area**.

If no **KEY** buttons are active in the **Transition Area** and then you click a source button, (e.g. **CAM2**), in the **KEY** bus, then:

- The same source (**CAM2**) is reflected in the **Downstream Keyer KEY** number of the **KEY** specified in the **Key Bus Label**.
- The **Key Bus Label** is determined by the **KEY** number of the last active **KEY** button in the **Transition Area**. You can change the **Key Bus Label** From the **Key Bus** dropdown *See* *Set Preset, Program, Key Buses*.

What Happens When You Deactivate (Deselect) a Key Source?

If you click a **KEY** button in the **Transition Area** to make it inactive, then the lowest-priority active **KEY** determines which **Downstream Keyer** source reflects a change in the **Key Bus** source.

Key layer priority is as follows:

- **KEY1** has the highest priority and displays on top of **KEY2**, **KEY3**, **KEY4**, and **BKGD**.
- **KEY2** displays behind **KEY1**, and on top of **KEY3**, **KEY4**, and **BKGD**.
- **KEY3** displays behind **KEY1** and **KEY2**, and on top of **KEY4** and **BKGD**.
- **KEY4** displays behind **KEY 1**, **KEY2**, and **KEY3**, and on top of **BKGD**.
- All **KEYS** display on top of **BKGD**.

For example:

- If **KEY2** and **KEY4** are active, then a change in the **Key Bus** source is reflected in **KEY2** of the **Downstream Keyer**.
- If **KEY1**, **KEY3** and **KEY4** are active, then a change in the **Key Bus** source is reflected in **KEY1** of the **Downstream Keyer**.

What Happens When You Change a Key Bus or Downstream Keyer Source?

You can change the source of any **Key Bus** or of any **KEY** button in the **Downstream Keyer**.

- If you change the source of the currently selected **Key Bus**, as indicated by the **Key Bus Label**, then the change is reflected in the corresponding **Downstream Keyer KEY** button.
- If you change the source of a **Downstream Keyer KEY** button, then the change is reflected in the corresponding Key Bus

For example:

- If you change the **KEY2 Bus** source from **CAM6** to **CAM7**, then the change is reflected in the **Downstream Keyer KEY3** button.
- If you change the **KEY3** source in the **Downstream Keyer** from **GFX1** to **CLP1**, then the change is reflected in the **KEY3 Bus**.

Set up Graphics 1 on Program, and Graphics 2 on Preview

You may like to set up **Graphics 1** and **Graphics 2** so that when **Graphics 1** displays on **Program**, then **Graphics 2** displays on **Preview**, and vice versa. These instructions assume that the **KEY1** source is **Graphics 1**, and the **KEY2** source is **Graphics 2**. *See Downstream Keyer for instructions on how to assign a **Key** source.*

To do so:

1. In the **Transition Area**, click **KEY1**, so that it is active (lit).
2. Load a graphic into **Graphics 1**.
3. Depending upon the state of the switcher, **Graphics 1** appears on either **Program** or **Preview**.
    - If **Graphics 1** displays in the **Program** monitor, then proceed to step 4.
    - If **Graphics 1** displays in the **Preview** monitor, then in the **Transition Area**, click **CUT**, **AUTO** or **PRESET BLACK** to perform a transition. **Graphics 1** should then display in **Program**.
4. In the **Transition Area**, click **KEY2** so that it is active (lit).
5. Load a graphic into **Graphics 2**. **Graphics 2** should display in the **Preview** monitor.
6. In the **Transition Area**, click **CUT**, **AUTO** or **PRESET BLACK** to perform a transition. **Graphics 1** swaps to **Preview**, and **Graphics 2** swaps to **Program**. Each time that you perform a subsequent transition, the contents of **Graphics 1** and **Graphics 2** swap monitors.

Mix Effect Presets

Mix Effect Overview

You can create, save and recall **Program/Preview/Key/Transition** settings on the **ME1 Bank** as **Mix Effect Presets**. The **Mix Effect Preset** outputs on **ME1 Bank Program**, which the **Main Bank** can then use as a source, enabling the creation of more complex mixes.

The output of the **ME1 Bank** displays in its own monitor. As such, you can perform and adjust **Mix Effect Preset** settings without affecting **Program** output, as long as the **ME1 Bank** is not the selected **Program** source for the **Main Bank**.

Mix Effect Operations

Mix Effect Preset Operations from the Keypad

The **Keypad** provides the following **Mix Effect Preset** operations:

- **ID Entry:** Numeric keypad to enter **Mix Effect Preset ID** numbers in the **Recall Box**.
- **LOAD:** Applies the **Mix Effect Preset** whose **ID** is displayed in the **Recall Box**, and advances the **Mix Effect Preset ID** in the **Recall Box** to the next available **Mix Effect Preset ID**.
- **SAVE:** Saves the **Mix Effect Preset** to the **ID** displayed in the **Recall Box**.
- **PLAY:** Applies the **Mix Effect Preset** whose **ID** is displayed in the **Recall Box**. Does not advance the **Mix Effect Preset ID** in the **Recall Box** to the next available **Mix Effect Preset ID**.
- **PREV:** In the **Recall Box**, displays the **Mix Effect Preset ID** of the previous available **Mix Effect Preset**.
- **NEXT:** In the **Recall Box**, displays the **Mix Effect Preset ID** of the next available **Mix Effect Preset**.
- **CLEAR:** Not applicable to **Mix Effects**. As such, the button is grayed out.
- **DEL:** Clears the **Mix Effect Preset ID** from the **Recall Area Recall Box**.

Mix Effect Preset Operations from the Recall Area/Recall Box

The **Recall Area/Recall Box** provides the following operations:

- **ID Entry:** Enter **Mix Effect Preset ID**. The **ID** can be numeric or alphanumeric.
- **Press Enter:** Applies (loads) a **Mix Effect** and advances the **ID** to the next available **ID**.

Create a New or Edit an Existing Mix Effect Preset

To create a new **Mix Effect Preset** or edit an existing **Mix Effect Preset**:

1. Do one of the following:
    - If creating a new **Mix Effect Preset**, then in the **ME1 Bank**, perform the desired modifications, and then save the **Mix Effect Preset**.

      or

    a. If working from an existing **Mix Effect Preset** that is not loaded, then load the saved **Mix Effect Preset** on which the new **Mix Effect Preset** is to be based.

b. Perform the desired modifications, and then save the **Mix Effect Preset**.

Save a Mix Effect Preset

If you would like to reuse a specific **Mix Effect**, then you can save the **ME1 Bank** settings to a **Mix Effect Preset** for quick recall. The following settings are saved:

- **Preset**, **Program** and **Key Bus** settings, including any **DVEs** created within PRIME Switcher.
- **Transition Area** settings.
- **Downstream Keyer** settings, including **Linear/Chroma Key**.

To save a **Mix Effect Preset**:

1. In the **ME1 Bank**, configure the settings that you would like to save.
2. In the **Recall Area** or on the **Keypad**, click the **ME1** button. **The ME1** button highlights in both areas, as shown in the following figures.

3. Do one of the following:
    - To save the **Mix Effect Preset** to the **ID** number currently displayed in the **Recall Box**, click **SAVE** on the **Keypad**. The edited settings overwrite the previously saved settings.
    - To save the **Mix Effect Preset** to a different **ID** number:
        - If using the **Keypad** or a physical keypad, enter an **ID** number. The number displays in the **Recall Area Recall Box**.
        - If using an alphanumeric keyboard, then click the **Recall Box** and enter an **ID** number.

      The number displays in the **Recall Area Recall Box**.
4. On the **Keypad**, click **SAVE**. The **Mix Effect Preset** is saved to the specified **ID** number.

WARNING! There is no prompt when saving over an existing Mix Effect ID number. If you save a Mix Effect Preset over an existing Mix Effect ID number, overwrite permission is NOT requested. The Mix Effect Preset is overwritten. Be careful not to accidentally overwrite an existing Mix Effect Preset.

Load/Play (Apply) a Mix Effect Preset

Load/Play (Apply) Overview

The **Recall Area** and **Keypad** provides two methods to apply a **Mix Effect Preset** to the **ME1 Bank**:

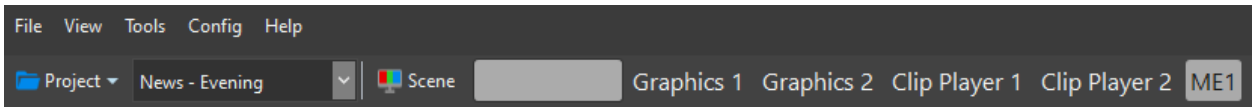
- **LOAD/Enter:** Applies the **Mix Effect Preset** whose **ID** is displayed in the **Recall Box** and advances the **Mix Effect ID** in the **Recall Box** to the next available **Mix Effect ID**.
- **PLAY:** Applies the **Mix Effect Preset** whose **ID** is displayed in the **Recall Box**, and does not advance the **Mix Effect ID** in the **Recall Box** to the next **ID**. **PLAY** is available only from the **Keypad**.

Load/Play (Apply) Mix Effect Presets

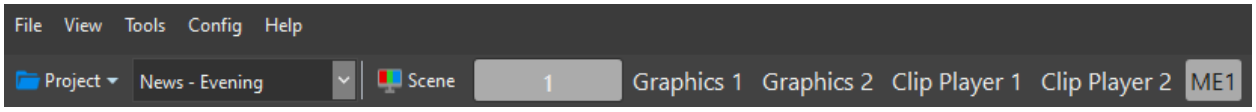
When you load or play a **Mix Effect Preset**, the **Mix Effect Preset** settings are applied to the **ME1 Bank**. You can load or play a **Mix Effect Preset** from the **Recall Area** or the **Keypad**.

To apply a saved **Mix Effect Preset**:

1. In the **Recall Area** or on the **Keypad**, click the **ME1** button. The **ME1** button highlights in both areas, as shown in the following figures.



2. Do one of the following:
    - Using the **Keypad** or a physical keyboard/keypad, enter the **ID** number of the **Mix Effect Preset** that you would like to load. The **ID** number displays in the **Recall Box**. The following figure shows **ID 1** entered.



- On the **Keypad**, click **PREV** or **NEXT** to navigate to the desired **ID**.

Note that If you do not enter an **ID** number and click **LOAD**, then the next available **Mix Effect Preset** is applied in the **ME1 Bank Transition Area**.

3. Do one of the following:
    - To apply the **Mix Effect Preset** and advance the **ID** in the **Recall Box** to the next available **Mix Effects Preset ID**, press **Enter**, or on the **Keypad**, click **LOAD**.
    - To apply the **Mix Effect Preset** and retain the same **Mix Effect ID** in the **Recall Box**, on the **Keypad**, click **PLAY**.
4. To apply additional **Mix Effect Presets**, repeat steps 2 and 3.

To set up a sequence of **Mix Effect Presets** to play in order, save the **IDs** in the numerical/alphabetical order, and then use the **LOAD** function to apply and advance the **ID** to the next available **ID**.

Delete Mix Effects ID from Recall Box

To clear, i.e., erase the **ID** in the **Recall Box** in the **Recall Area**, do one of the following:

- In the **Recall Box**, erase the **ID**.
- On the **Keypad**, click **DEL**.

Troubleshoot Transitions

Preview Video Does Not Transition to Program

In the **Transition Area**, **BKGD** is not active (unlit).

- Click **BKGD** to activate (lit).

Preview Video Transitions to Program, When It Should Not

In the **Transition Area**, **BKGD** is active (lit).

- Click **BKGD** to deactivate (unlit).

Key Video Does Not Transition to Program

In the **Transition Area**, the desired **KEY** is not active (unlit).

- Click the desired **KEY** to activate (lit).

Key Video Transitions to Program, When It Should Not

In the **Transition Area**, the desired **KEY** is active (lit).

- Click the desired **KEY** to deactivate (unlit).

Graphics 1 and Graphics 2 Both Display in Program, or Both Display in Preview, When They Should Alternate

Graphics 1 and **Graphics 2** are not properly set up to alternate.

- *See Set up Graphics 1 on Program, and Graphics 2 on Preview.*

The Graphic(s) Plays, but Does Not Transition to/from Switcher Program

If a graphic(s) is playing, and does not transition to/from Program, then ensure that the **Graphics Player** is associated with a **Key**, and that the **Key** is active in the **Transitions Area**, i.e., the **Key** button is lit.

For example, if you would like **Graphics 1** to transition as a source for **Key 1**, then you must associate it with **Key 1**. To specify that it should transition, then you must activate the **Key 1** button in the **Transition Area**.

See Set Transition Area, Set a Key Source, and Tying Together the Transition Area, Key Bus and Downstream Keyer for additional details.

ME1 (Mix Effect) Output Does Not Display on Program or Preview

ME1 is not selected as a **PROGRAM** or **PREVIEW** source in the **Main Switcher Bank**.

- Select **ME1** in the **PROGRAM** or **PRESET** bus.

Chapter 15: Work with Clips

Overview

The Prime Switcher **Clip Player** can cue, load, preview, scrub, play, pause, return to frame **0**, stop, and loop a clip, as well as apply a **Transition Effect** between clips.

The **Clip Player** can display clips and images in the following file formats:

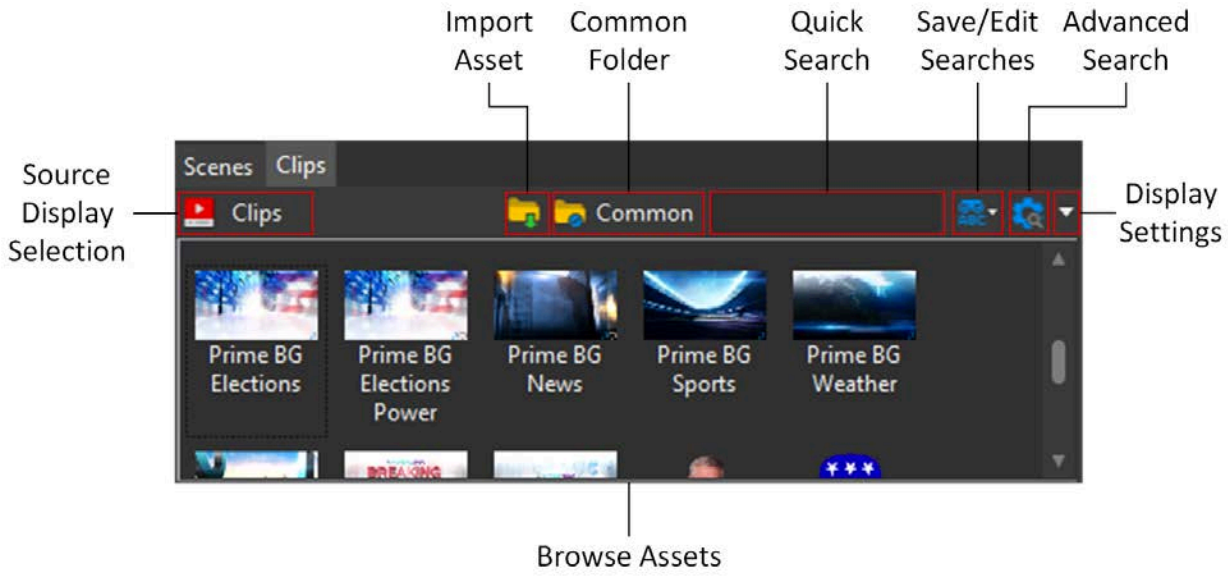
- ***.gtc*:** Proprietary PRIME clip file format.
- ***.ppc:*** Proprietary PRIME clip file format.
- ***.mov*:** Apple QuickTime® Movie format - same codec as PRIME. ProRes is the ***.mov*** wrapper.
- ***.mp4:*** MPEG-4 video file format.
- Various image file formats.

BEST PRACTICES
Ensure that clips have the same resolution and frame rate as PRIME Switcher configuration; otherwise, they may not play correctly.

Ensure that images that are to be played in the Clip Player have the same resolution as PRIME Switcher; otherwise, they may not display correctly.

Clips Browser

The **Clips Browser** works in conjunction with the **Clip Player**. Clip resources are managed within the **Clips Browser**.

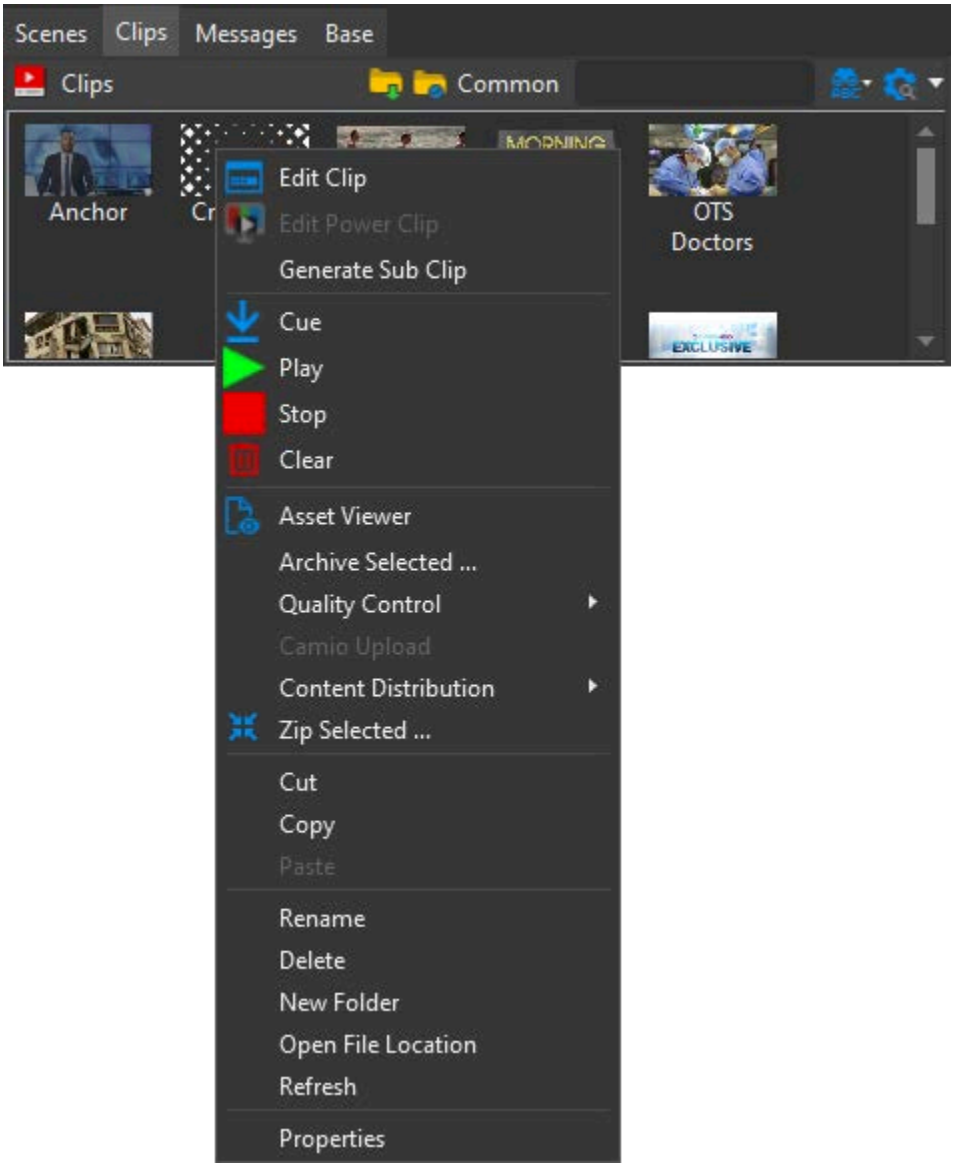


PRIME Switcher can import clips. To import a clip:

1. Click the **Import Clip** icon. The file browser opens.
2. From the browser, select the desired clip(s), and then click **Open**. The clip(s) is added to the **Clips Browser**.

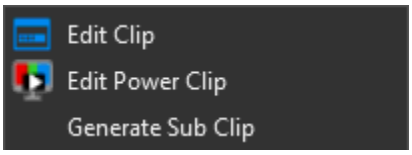
The **Clips Browser** also provides features accessible from the **Clips Browser** context menu. To access:

- In the **Clips Browser**, right-click a clip thumbnail. The **Clips Browser** context menu displays:

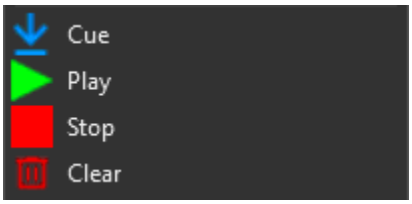


Many of the items on this menu are available to all **Assets Browsers**. Items specific to clips are as follows:

- Clip Edit functions, with which you can edit existing clips and create subclips.

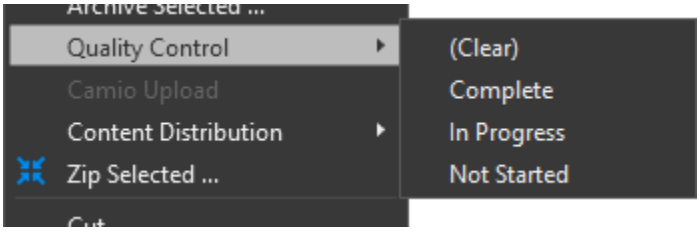


- **Clip Player Control** functions: **Cue (Load)**, **Play**, **Stop** and **Clear**.



Other items, including the following, are available to multiple types of browsers:

- **Quality Control** provides the ability to view the state of PRIME clips.



See the PRIME User Guide for information about this feature.

- **Content Distribution** is a Chyron application that centrally manages and distributes assets. From this menu, you can publish or unpublish assets.

See the Content Distribution User Guide for information about this feature.

Clip Edit Functions

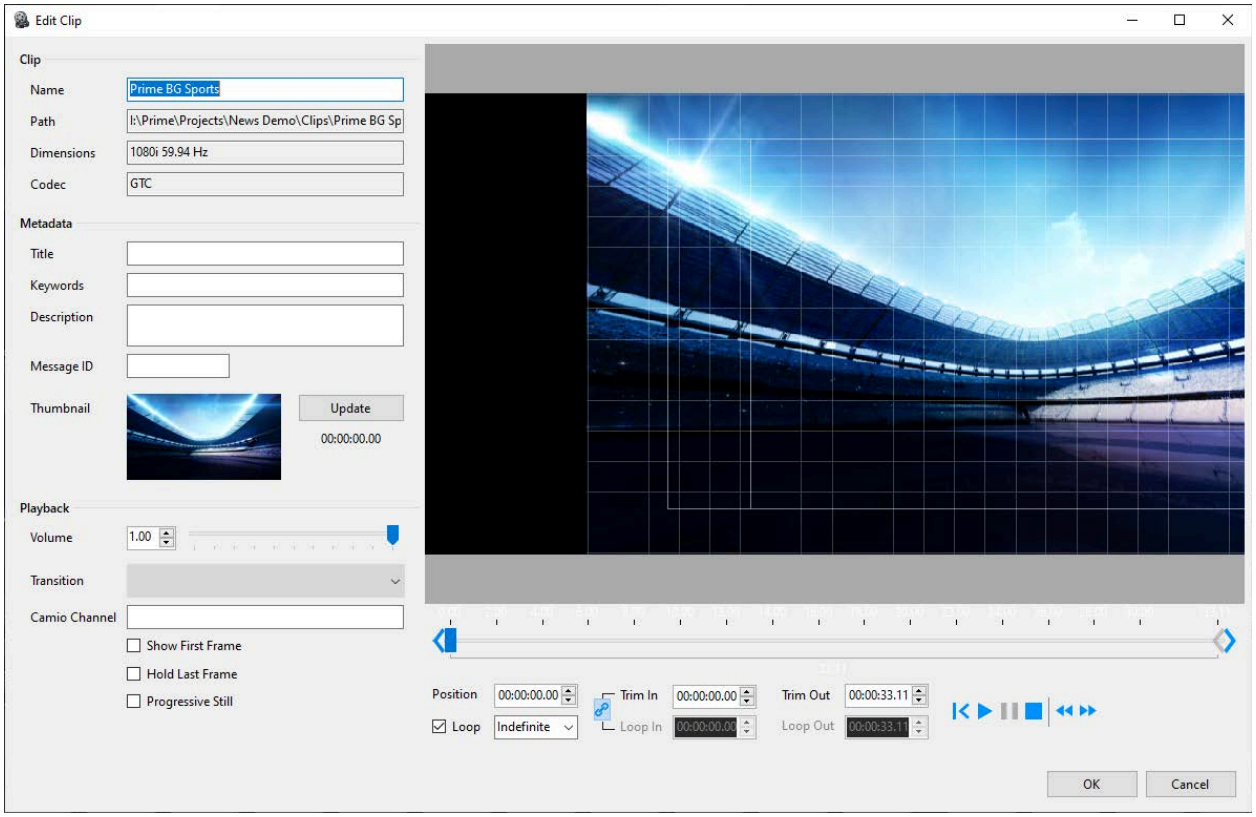
Edit Clip

You can edit the parameters of an individual clip, including clip characteristics, clip metadata and playback parameters.

CAUTION: Make sure that you retain a copy of the clip in its original version, as any edits to a clip are permanent. Generate Sub Clip provides the ability to create a new clip while preserving the original clip.

To edit a clip:

1. In the **Clips Browser**, right-click the clip thumbnail, and then select **Edit Clip**. The **Edit Clip** dialog appears.



2. Edit clip parameters.
3. When complete, click **OK**. The edits are permanently applied to the clip.

Clip/Sub Clip Parameters

Overview

PRIME Switcher provides the ability to customize the metadata and playback parameters of each clip as follows.

Clip

The **Clip** settings display the basic information about the clip.

- **Name:** Edit name.
- **Path:** Displays the location of the clip. Not editable.
- **Dimensions:** Displays the clip resolution. Not editable.
- **Codec:** Displays the clip codec. Not editable.

Metadata

You can add clip metadata for easier searching and sorting.

- **Title:** Enter title, which can be different from the clip **Name**.
- **Keywords:** Enter keywords to categorize and improve searchability.
- **Description:** Enter description.
- **Message ID:** Enter a clip ID.
- **Thumbnail:** Displays clip thumbnail.
- **Update:** Set the frame to display as the thumbnail.

Playback

The **Playback** settings include volume control, transition, first/last frame hold, and trim and loop parameters, and the ability to preview the clip. *See Set Trim and Loop for information on setting trim and loop.*

- **Volume:** Set audio playback volume.
- **Transition:** Select a transition to apply as the clip starts to play.
- **CAMIO Channel:** If connected to CAMIO, then select the CAMIO channel on which the clip is to play.
- **Show First Frame:**
    - Enable to display and hold the first frame of the clip upon loading the clip to **Clip Player Program**.
    - Disable to not display and hold the first frame of the clip upon loading the clip to **Clip Player Program**.
- **Hold Last Frame:**
    - Enable to display and hold the last frame of the clip when clip playback is complete.
    - Disable to not display and hold the last frame of the clip when clip playback is complete.
- **Progressive Still:**
    - Enable to hold as a **Progressive** frame.
    - Disable to hold as a **Field**.

Set Trim and Loop

You can trim the length of a clip by adjusting the **Trim In** and/or **Trim Out** points, and loop the clip by setting **Loop In** and **Loop Out** points.

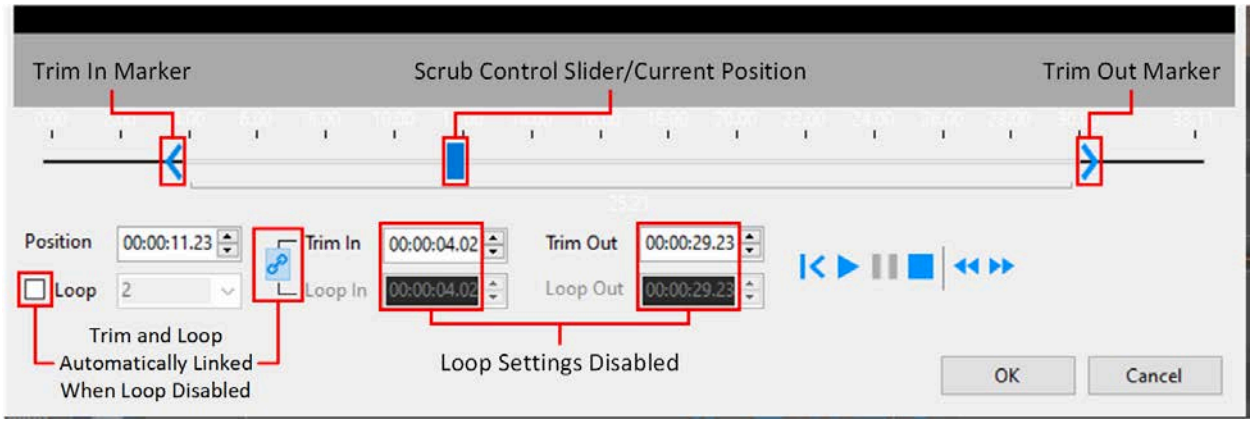
The **Position** field displays the current frame. The position of the **Scrub Control** slider reflects the frame number displayed in the Position field, and vice versa.

- Drag the **Scrub Control** slider to the left to scrub in reverse, and to the right to scrub forward.

To set **Trim In** and **Trim Out**:

- Drag the **Trim In** marker and **Trim Out** set **In** and **Out** points. You can also enter frame numbers into the **Trim In** and **Trim Out** fields.

The following figure shows **Loop** disabled.



You can loop the entire length of the clip, or set a **3-Point** or **4-Point Loop**.

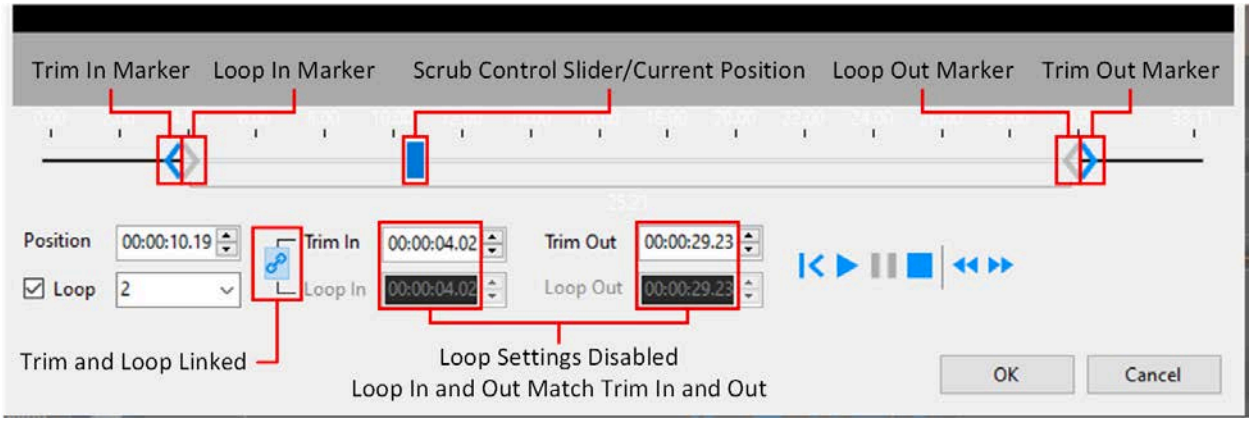
To loop a clip:

- Enable (check) the **Loop** checkbox.

There are two **Loop** modes:

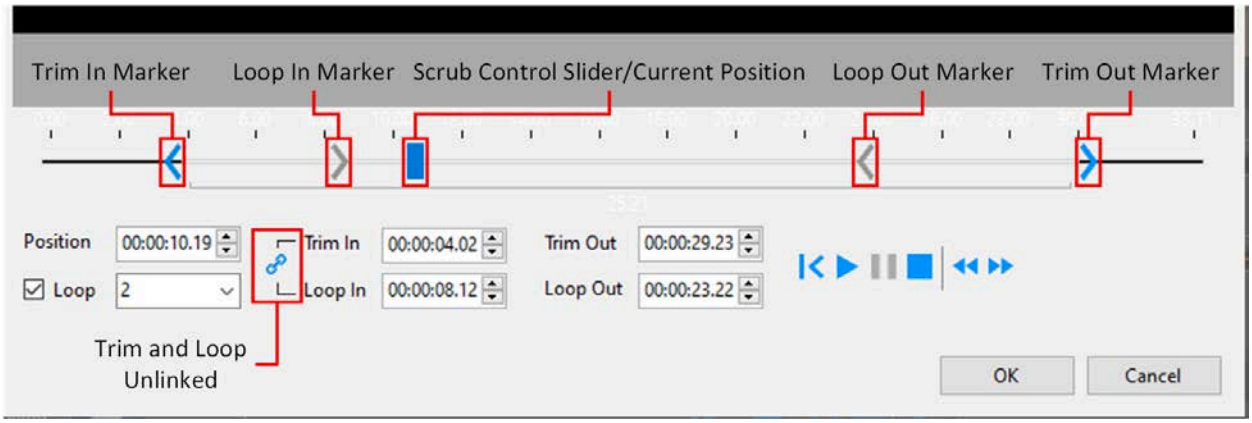
- **Linked:** The entire clip, as bounded by the **Trim In** and **Trim Out** points, loops. The **Loop In** frame is the same as the **Trim In** frame, and the **Loop Out** frame is the same as the **Trim Out** frame. To link **Loop** and **Trim** settings, click the **Link** icon so that it is highlighted and displays a blue background.

The following figure shows **Loop** enabled, and **Loop** linked with **Trim**. The **Loop In** and **Loop Out** markers are locked to the **Trim In** and **Trim Out** markers.



- **Unlinked:** A segment of the clip loops. The **Loop In** frame is independent of the **Trim In** frame, and the **Loop Out** frame is independent of the **Trim Out** frame. To unlink **Loop** and **Trim** settings, click the **Link** icon so that it is not highlighted and displays no background.

The following figure shows **Loop** enabled, and **Loop** unlinked with **Trim**. You can set **Trim In**, **Loop In**, **Trim Out** and **Loop Out** markers independent of each other.



In **Unlinked Mode**, you can set a **3-Point Loop** or a **4-Point Loop**.

- **3-Point Loop:**
  - The **Trim In** and **Loop In** frame is the same. The **Trim Out** and **Loop Out** frames are different.
  - The **Trim In** and **Loop In** frames are different. The **Trim Out** and **Loop Out** frame is the same.
- **4-point Loop:** The **Trim In**, **Loop In**, **Trim Out** and **Loop Out** frames are all different.

To set **Loop In** and **Loop Out**:

- Drag the **Loop In** marker and **Loop Out** set **In** and **Out** points. You can also enter frame numbers into the **Loop In** and **Loop Out** fields.

To set the number of times that a clip plays in when looping:

- Select loop type from dropdown:
  - **Indefinite:** Starts clip playout from the **Trim In** point and plays the portion of the clip bounded by the **Loop In** and **Loop Out** markers until stopped or transitioned off by another clip.
  - **2:** Starts clip playout from the **Trim In** point and plays the portion of the clip bounded by the **Loop In** and **Loop Out** markers twice.
  - **3:** Starts clip playout from the **Trim In** point and plays the portion of the clip bounded by the **Loop In** and **Loop Out** markers three times.
  - **4:** Starts clip playout from the **Trim In** point and plays the portion of the clip bounded by the **Loop In** and **Loop Out** markers four times.
  - **5:** Starts clip playout from the **Trim In** point and plays the portion of the clip bounded by the **Loop In** and **Loop Out** markers five times.
  - Disable to play clip once.

Preview the Clip

As you edit, you can preview the clip using the **Scrub Control** slider or the **Transport Controls**:

From left to right, the **Transport Controls** are as follows:

- **Rewind:** Returns the clip to frame **0**. You can restart the clip.
    - If **Show First Frame** is enabled, then displays the first frame.
    - If **Show First Frame** is not enabled, then displays black.
- **Play:** Plays the clip at normal speed.
- **Pause:** Pauses the clip at the current frame.
- **Stop:** Stops the clip. The clip player displays black. To replay the clip, you must reload it.
- **Reverse:** Plays the clip in reverse.
- **Fast Forward:** Plays the clip forward at faster speed for quick preview.

Edit Power Clip

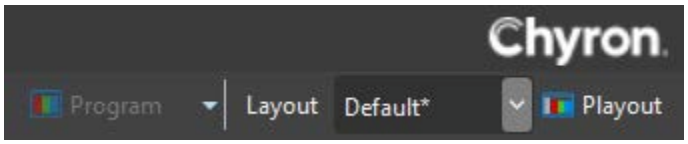
Power Clips (*.ppc) are clips that are not part of individual PRIME scenes, but that can play from the independent **Clip Players** created within the PRIME configuration. You can edit a clip as a PRIME **Power Clip**. *See the PRIME User Guide and the PRIME Playout Configuration Guide for additional information.*

To edit the clip as a **Power Clip**:

1. In the **Clips Browser**, right-click the clip thumbnail, and then select **Edit Power Clip**. The PRIME Scene Designer opens.
2. Edit the clip as desired.

To close the **Scene Designer** and return to the PRIME Switcher interface:

- At the upper right corner of the PRIME Switcher interface, do one of the following:
    - Click the **Playout** icon.



    - Press **Alt+Tab** to cycle through the open applications, until you reach the PRIME Switcher application. You may have to press **Alt+Tab** more than once.
    - In the taskbar, typically at the bottom of the screen, right-click the Chyron logo icon and then select the PRIME Switcher window.

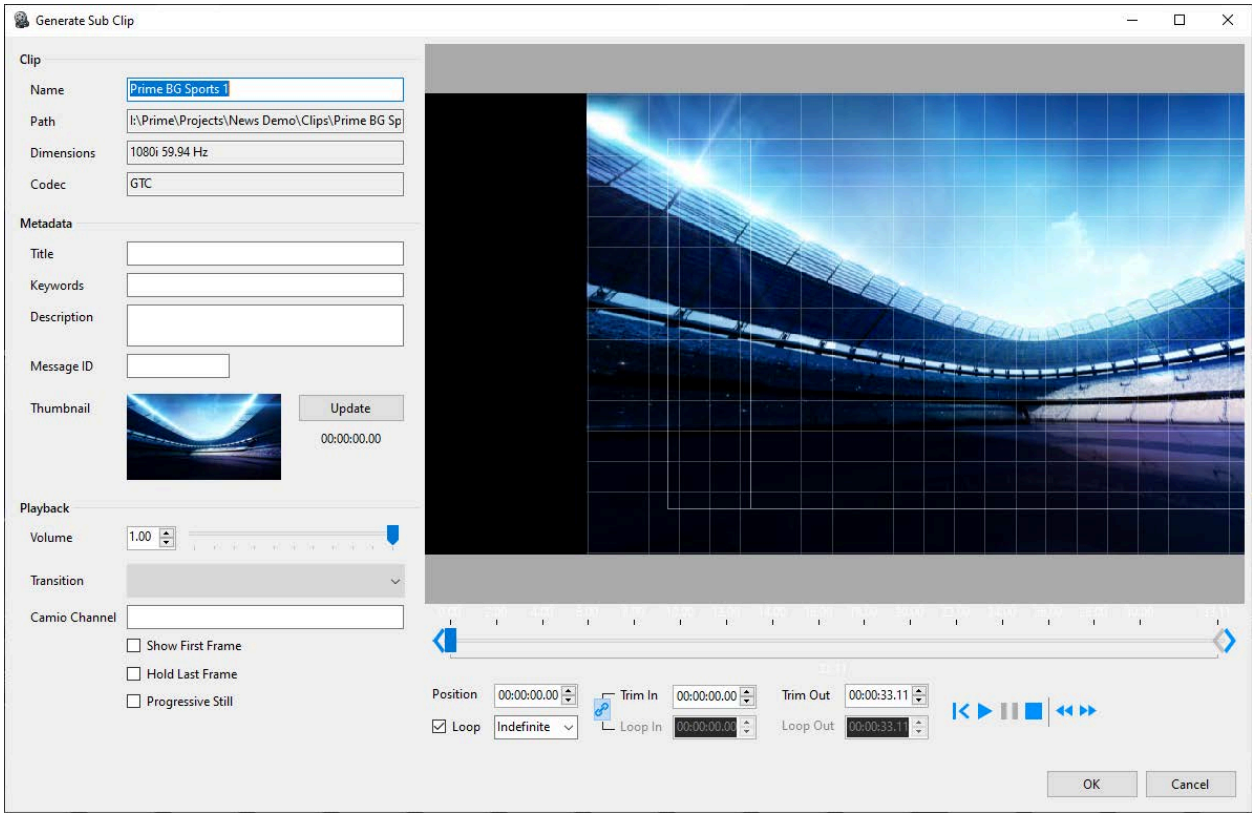
  The PRIME Switcher interface displays.

Generate Sub Clip

You can create a sub-clip from an existing clip. The process is similar to editing a clip, but creates a new clip, instead of overwriting the existing clip.

To create sub-clip:

1. In the **Clips Browser**, right-click the clip thumbnail, and then select **Generate Sub Clip**. The **Generate Sub Clip** dialog appears.

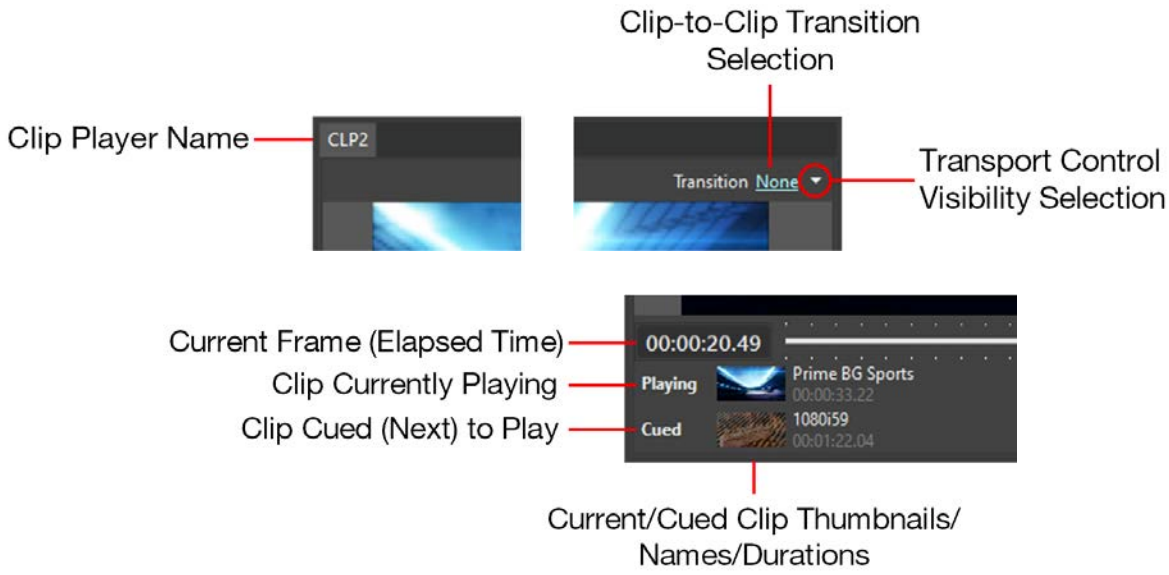


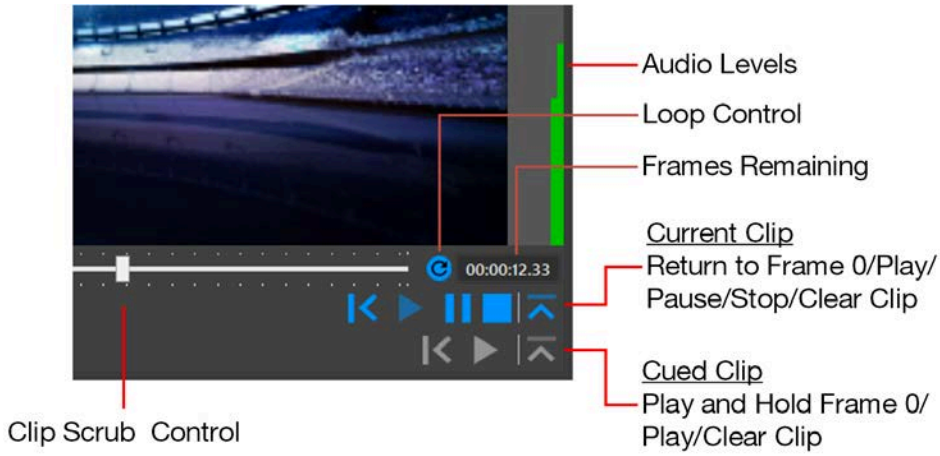
2. Edit sub clip parameters. When complete, click **OK**. The new sub clip is added to the **Clips Browser**.

Clip Player

Clip Player Overview

The **Clip Player** plays clips and images, provides the ability to loop the clip, and to apply a transition as the clip starts to play.





Clip Player Cued and Playing Channels vs. Switcher Preview and Program Channels

In the PRIME Switcher, the **Preview** and **Program** channels each contain background video, and clips and/or graphics.

- Contents of the **Preview** channel are “next up” for transition to **Program**.
- Contents of the **Program** channel are on **Program**.

The **Clip Player Cued** and **Playing** channels work differently.

- The **Clip Player Cued** channel contains the clip that is to be played to the **Clip Player Playing** channel.
- The **Clip Player Playing** channel displays the clip that is playing on **Clip Player**.

Clip Operations

Clip Player Selection

To perform most **Clip Player** operations, you must first select the specific **Graphics Player**. To do so, use any of the following methods:

- Click the **Clip Player**.

- Click the **Clip Player** button on the **Keypad**.

- Click the **Clip Player** button in the **Recall Area**.

Clip Operations from the Clip Player

The **Clip Player** provides two sets of transport controls. Except where noted, click a **Transport Controls** to operate:

- **Playing:** Playback controls for currently loaded clip.
    - **Rewind:** Returns the clip to frame **0**. You can restart the clip.
        - If **Show First Frame** is enabled, then displays the first frame.
        - If **Show First Frame** is not enabled, then displays black.
    - **Play:** Plays the clip. If the clip is the selected **Program** source, then it plays to **Program**.
    - **Pause:** Pauses the clip. The clip displays at the paused frame.
    - **Stop:** Stops the clip and rewinds the clip to frame **0**. The **Clip Player** displays black. You can restart the clip.
    - **Clear Clip:** Clears the clip from the **Clip Player**. The **Clip Player** cuts to black.
    - **Loop:** Loops the clip. *See Loop a Clip for details.*
- **Cued:** Playback controls for cued clip.
    - **Play First Frame:** Plays and holds the first frame of the clip.
    - **Play:** Simultaneously plays and transitions the cued clip to **Playing**, transitioning off the clip in **Playing**.
    - **Clear Clip:** Clears the clip from the **Clip Player**.

Frame Counters display the elapsed and remaining durations during clip playback.

- The **Current Frame Counter** displays the frame, i.e., elapsed duration, of the clip as it plays. You cannot edit the **Current Frame Counter**.
- The **Frames Remaining Counter** displays the remaining duration left in the clip. You cannot edit the **Frames Remaining Counter**.

The **Scrub Control** provides the ability to scrub through the clip. To do so:

- Drag the **Scrub Control** slider to the left to scrub in reverse, and to the right to scrub forward.

If the **Clip Player** is added as an **Audio Mixer** source, then the **Audio Level Display** displays the audio level of the clip, which is also reflected in the **Audio Mixer**.

Clip Operations from the Keypad

The **Keypad** provides the following clip operations:

- **ID Entry:** Numeric keypad to enter clip **ID** numbers in the **Recall Box**.
- **LOAD:** Loads a clip into the **Clip Player Cued** channel, and advances the **ID** in the **Recall Box** to the next **ID**.
- **SAVE:** Not applicable to clips. As such, the button is grayed out.
- **PLAY:** Plays the loaded clip. Does not advance the clip **ID** in the **Recall Box**. **Note that when a PLAY is performed, the clip specified in the Recall Box overrides the clip that is loaded in the Clip Player Cued channel.**
- **PREV:** In the **Recall Box**, displays the **ID** of the previous clip listed in the **Browser**.
- **NEXT:** In the **Recall Box**, displays the **ID** of the next clip listed in the **Browser**.
- **CLEAR:** Clears the clip from the **Clip Player Playing** channel. The **Clip Player** cuts to black.
- **DEL:** Clears the **ID** from the **Recall Box**.

Clip Operations from the Recall Box Are/Recall Box

The **Recall Box** provides the following clip operations:

- **ID Entry:** Enter clip **ID** numbers.
- **Load:** Press **Enter** to load a clip into **Cued**.

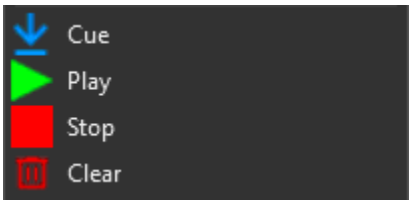
Clip Operations from the Clips Browser

From the **Clips Browsers**, you can drag and drop a clip into a **Clip Player Cued** or **Playing** channel.

- If you drop the clip into the **Clip Player Cued** channel, then it loads into the **Graphics Player Cued** channel.
- If you drop the clip into the **Graphics Player Playing** channel, then it immediately plays in the **Graphics Player Playing** channel.

You can also **Cue**, **Play**, **Stop** and **Clear** a graphic from the selected **Clip Player** as follows:

1. In the **Clips Browser**, right-click the clip's thumbnail. The clip's context menu appears:



2. Select the desired action.

    - **Cue:** Loads the clip into the **Cued** channel of the selected **Clip Player**.
    - **Play:** Plays the clip on the selected **Clip Player**.
    - **Stop:** Stops the clip playout on the selected **Clip Player** and transfers it to the **Clip Player Cued** channel.
    - **Clear:** Clears the clip from the selected **Clip Player**.

Clip Operations Summary

The following table summarizes the availability of clip operations from the various PRIME Switcher UI components: See legend below table for abbreviations.

Operation ⇨ Component ⇩	Select Clip Player	Enter Clip ID	Play Clip	Load Clip	Stop Clip	Clear Clip	PREV/ NEXT/ DEL
Clip Player	Click **Clip Player**	NA	NA	NA	NA	NA	NA
Clip Player Playing Channel	Click **Clip Player**	NA	NA	NA	Click **Stop** icon	Click **Clear** icon	NA
Clip Player Cued Channel	Click **Clip Player**	NA	Click **Play** icon	NA	NA	Click **Clear** icon	NA
Keypad	Click **Clip Player** button	Click **ID** numbers	Click **Play** button	Click **ID** numbers, then click **LOAD** button	NA	Click **CLEAR** button	Click **PREV/ NEXT/DEL** button
Recall Area	Click **Clip Player** button	Enter (type) **ID**	NA	Enter **ID**, then press **Enter**	NA	NA	**PREV:** NA **NEXT:** NA **DEL:** Erase **Recall Box**
Clips Browser D&D	NA	NA	D&D into **Playing** channel	D&D into Cued channel	NA	NA	NA
Clips Browser Item DD	NA	NA	Select item, then select **Play** icon. Plays in selected **Clip Player Playing** channel.	Select item, then select **Cue** icon. Loads in selected **Clip Player Cued** channel.	Select item, then select **Stop** icon. Stops selected clip.	Select item, then select **Clear** icon. Clears selected clip.	NA

LEGEND

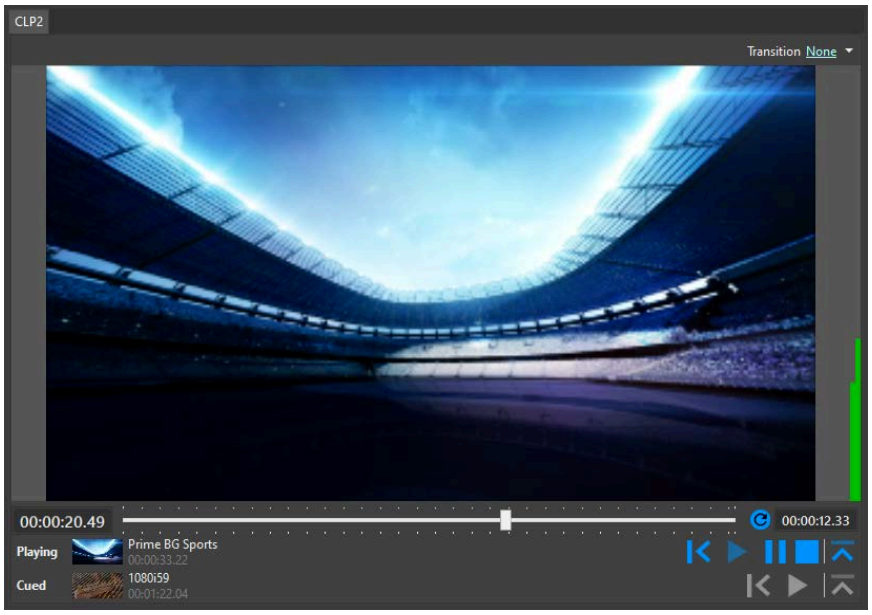
D&D: Drag and drop **DD:** Drop-down **NA:** Not applicable

Enable/Disable Transport Controls

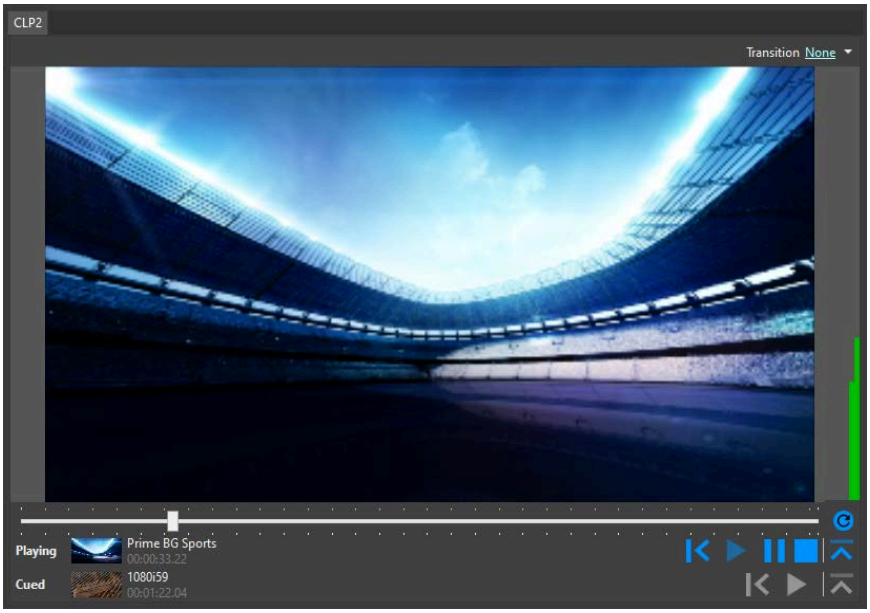
You can set the **Clip Player** to enable or disable the display of:

- **Transport Controls**
- **Current Frame Counter**
- **Frames Remaining Counter**

The following figure shows **Transport Controls**, including **Current** and **Remaining Frames**:

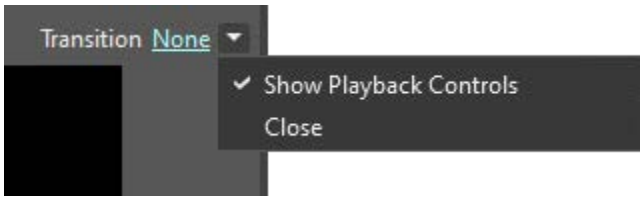


The following shows **Current** and **Remaining Frames** display disabled.



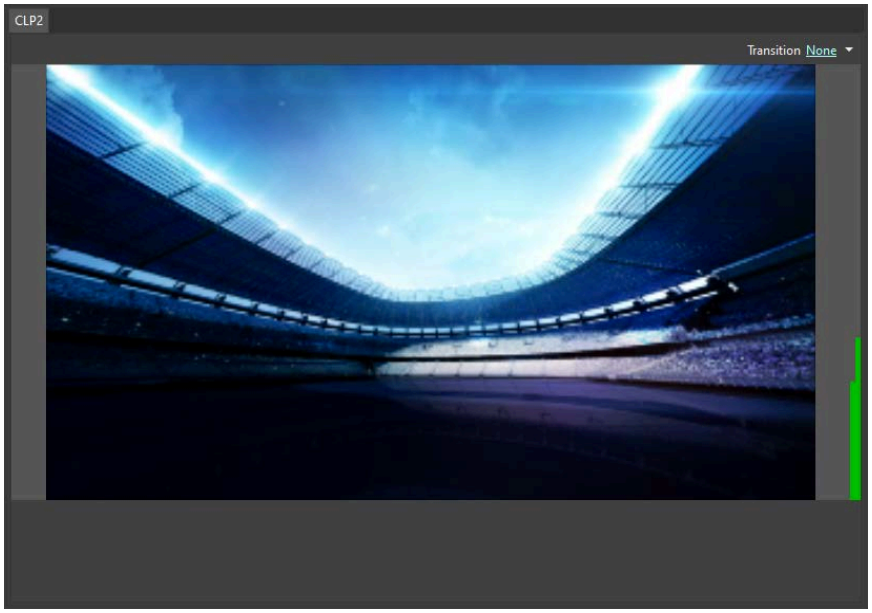
To enable/disable **Transport Control** display:

1. Click the dropdown arrow at the upper right of the **Clip Player**.



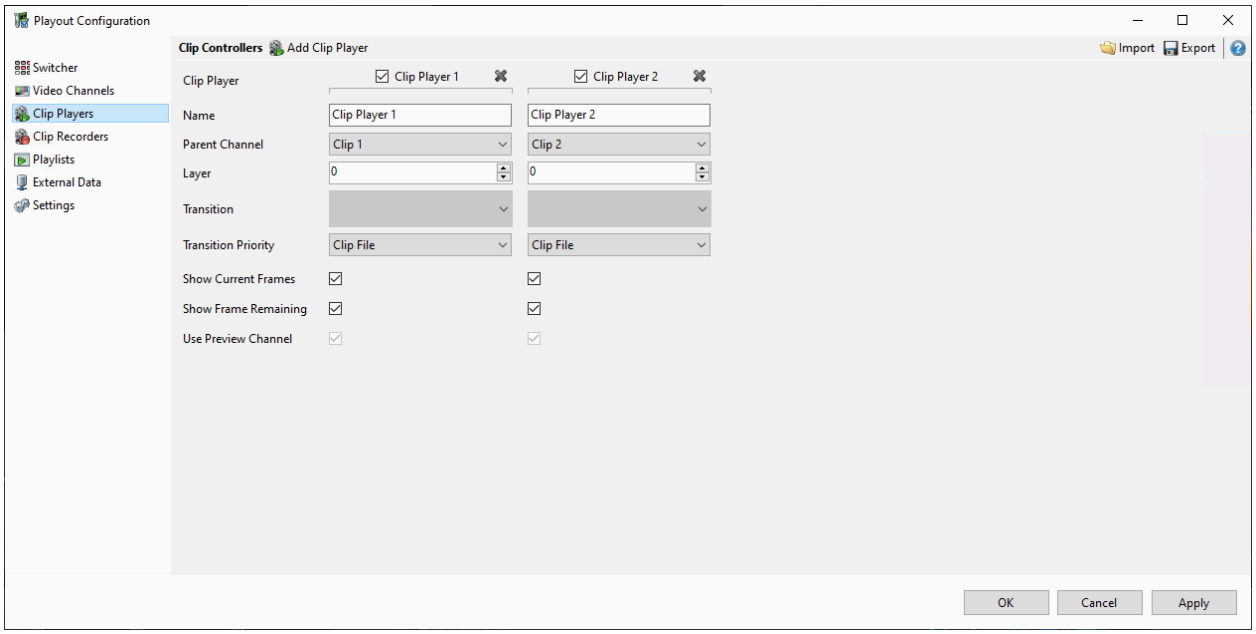
2. Click **Show Playback Controls** to either enable or disable **Transport Control** display.
    - Check to enable **Transport Control** visibility.
    - Uncheck to disable **Transport Control** visibility.

The following figure shows the **Clip Player** with **Transport Control** visibility disabled:



To enable/disable **Current Frames** and/or **Frame Remaining** display:

1. Go to **Config Menu > Playout Configuration > Clip Players**. The **Clip Controllers Playout Configuration** dialog appears.



2. For each **Clip Player**, click **Show Current Frames** to either enable or disable **Current Frame** display:
    - Check to enable **Current Frame** display.
    - Uncheck to disable **Current Frame** display.
3. For each **Clip Player**, click **Show Frame Remaining** to either enable or disable **Remaining Frames** display:
    - Check to enable **Remaining Frames** display.
    - Uncheck to disable **Remaining Frames** display.
4. Do one of the following:
    - Click **Apply** to continue modifying other settings.
    - Click **OK** to apply **Clip Player** settings and close the dialog.
5. Close and restart PRIME Switcher to apply modifications.

Navigate the Clips Browser

When you select a **Clip Player** and enter an **ID** into the **Recall Box**, either directly or via the **Keypad** or external keypad or keyboard, PRIME Switcher automatically locates the clip with that **ID** in the **Clips Browser**. Any **PREV**, **NEXT**, **LOAD** and **PLAY** operation from the **Keypad** then occurs in the **Clips Browser**.

You can also load and play a clip using drag and drop, or play directly from the **Clip Player**.

Display the ID of the Previous Clip in the Browser

Clips in a **Browser** are ordered numerically, followed by alphabetically. To display the **ID** of the previous available clip:

1. If the **Clip Player** button is already selected in the **Recall Area** or the **Keypad**, then proceed to the next step. If the **Clip Player** button is not already selected, then click the desired button.
2. Click **PREV**.

This operation does not load the clip into the **Clip Player Cued** channel. As such, you can click **PREV** multiple times to display the **ID** of the clip that you would like to load, and then click **LOAD** to load the clip into **Cued**.

Display the ID of the Next Clip in the Browser

Clips in a **Browser** are ordered numerically, followed by alphabetically. To display the **ID** of the next available clip:

1. If the **Clip Player** button is already selected in the **Recall Area** or the **Keypad**, then proceed to the next step. If the **Clip Player** button is not already selected, then click the desired button.
2. Click **NEXT**.

This operation does not load the clip into the **Clip Player Cued** channel. As such, you can click **NEXT** multiple times to display the **ID** of the clip that you would like to load, and then click **LOAD** to load the clip into **Cued**.

Load and Play Clips

Clip Load and Play Overview

Clip playout can be a one or two-step process:

- **Play:** The clip plays in the **Clip Player Playing** channel in one operation.

- **Load, then Play:** The clip loads into the **Clip Player Cued** channel, and then a separate operation plays the clip in the **Clip Player Playing** channel.

You can perform clip **Load** and **Play** operations using any of the following methods, and can mix and match them:

- Drag and drop from **Clips Browser** into **Clip Player**
- **Clip Player Transport Controls**
- **Keypad**
- **Recall Area/Recall Box**
- **Clips Browser Transport Controls**

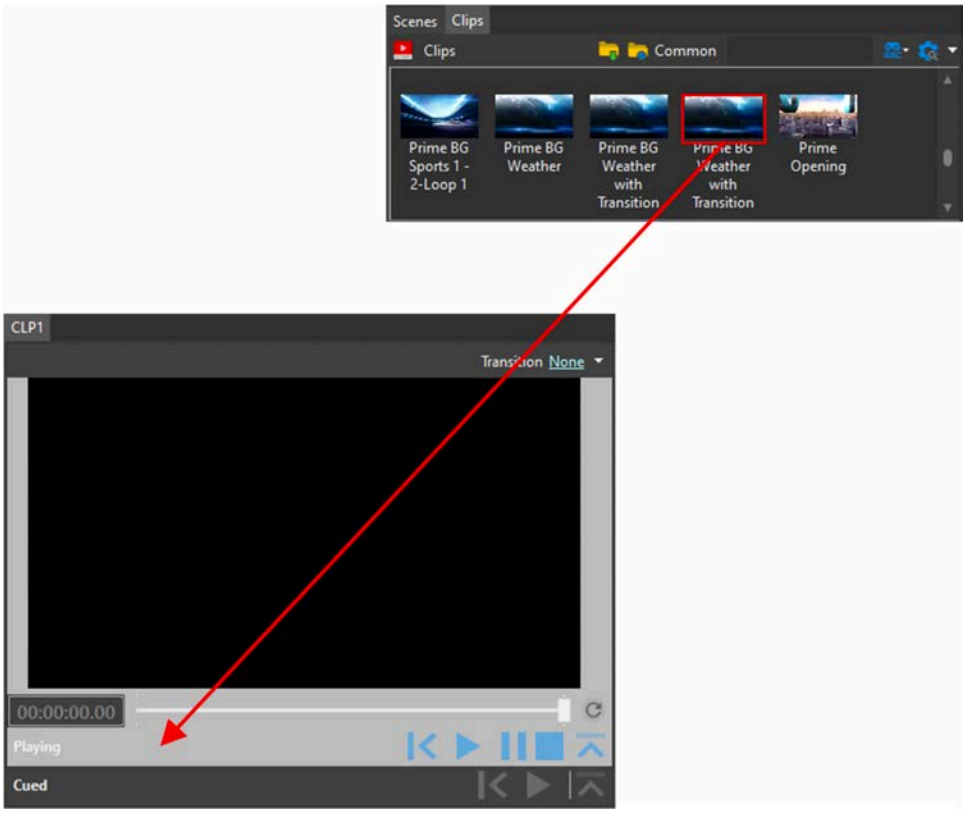
To display a clip in PRIME Switcher **Preview** or **Program**, the **Clip Player** must be selected as a switcher source, or, if acting as a key, then the **Clip Player** must be selected as a **Key** source. *See Set Transition Area, Set a Key Source, and Tying Together the Transition Area, Key Bus and Downstream Keyer, and The Clip Plays, but Does Not Display in Switcher Program or Preview for additional information.*

Play a Clip via Drag and Drop

You can load/play a clip in a single operation by dragging the clip directly into the **Playing** channel of the **Clip Player**. This operation loads the clip into the **Cued** channel and immediately plays it to the **Playing** channel, applying the specified transition (if any). As such, if a clip is already loaded into the **Clip Player Cued** channel, then this operation replaces the previously loaded clip.

To play a clip via drag and drop:

1. From the **Clips Browser**, drag the desired clip to the **Clip Player** monitor, until the **Clip Player** monitor and the **Playing** transport controls are highlighted.



2. Release the mouse button. The clip loads and immediately plays. The clip's thumbnail briefly appears next to "**Cued**," and then immediately switches to the **Playing** channel.

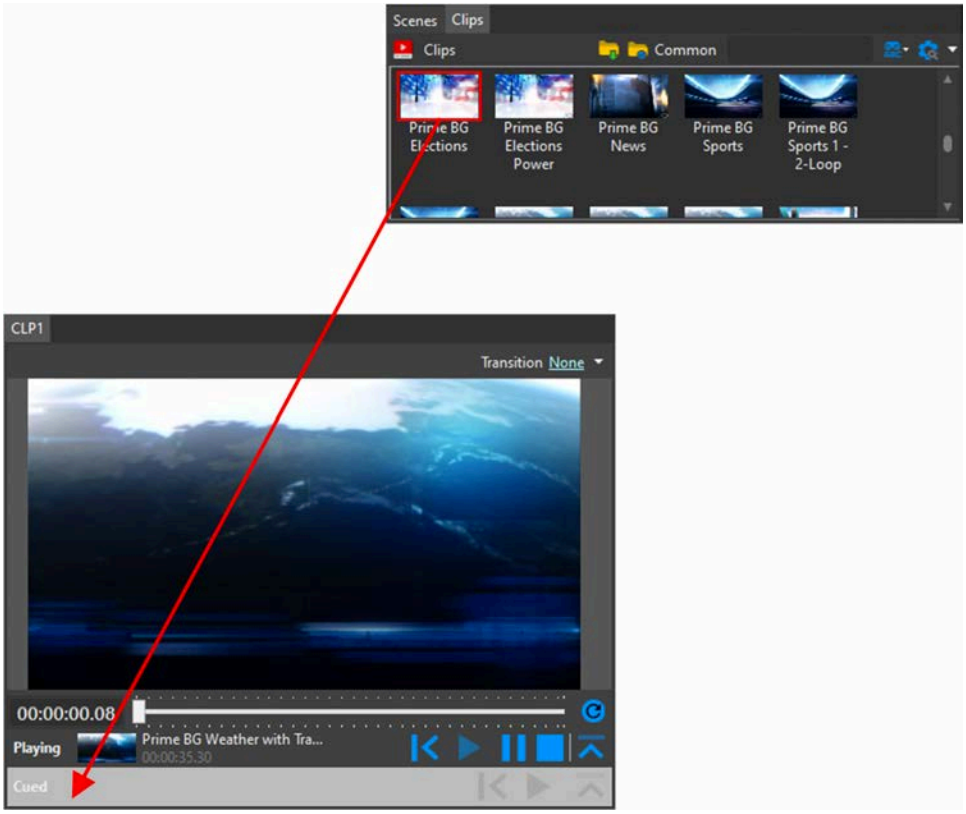
You can drag a clip into the **Clip Player** while another clip is playing. The selected **Transition Effect** is applied as the current clip transitions off screen and the dragged clip transitions on screen.

Load a Clip via Drag-and-Drop, then Play

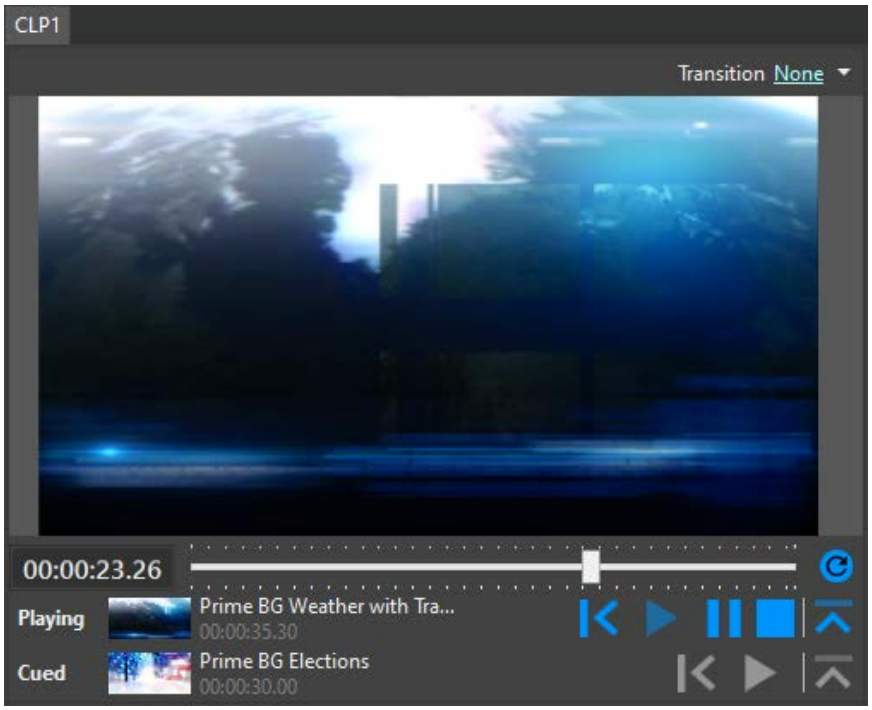
You can load a clip into the **Cued** channel via drag and drop, and then play the **Cued** clip when ready.

To load a clip into the **Cued** channel:

1. From the **Clips Browser**, drag the desired clip to the **Cued** row until the **Cued** row is highlighted.



2. Release the mouse/touchpad select button. The clip is now loaded. The clip's thumbnail appears next to "**Cued**."



To play the clip, do one of the following:

- From the **Cued** transport controls, click the **Play** icon.
- On the **Keypad**, click **PLAY**.

Play a Clip from the Recall Area/Keypad

You can load/play a clip from the **Recall Area** and **Keypad**. This operation loads the clip into the **Cued** channel and immediately plays it to the **Playing** channel, applying the specified transition (if any). As such, if a clip is already loaded into the **Clip Player Cued** channel, then this operation replaces the previously loaded clip.

You can repeat this operation to play a sequence of clips. The selected **Transition Effect** is applied as the current clip transitions off screen and the next clip transitions on screen.

To play a clip from the **Recall Area/Keypad**:

1. In the **Recall Area** or the **Keypad**, click the name of the **Clip Player** in which the clip is to be loaded. The selected **Clip Player** highlights in the **Recall Area** and the **Keypad**. The following figures show **Clip Player 2** selected:

2. Do one of the following:
    - On the **Keypad**, enter the **ID** of the clip to be displayed. This method works only for numeric **IDs**.
    - Click **NEXT** or **PREV** until the **ID** clip to be displayed appears in the **Recall Box**. This method works for both numeric and alphanumeric **IDs**.
    - Click the **Recall Box**, and then enter the **ID**. This method works for both numeric and alphanumeric **IDs**.

3. Do one of the following:
    - On the **Keypad**, click **PLAY**.
    - On the **Clip Player**, click the **Play** icon in the **Cued** channel **Transport Controls**.

Load a Clip from the Recall Area/Keypad, then Play

You can load a clip into the **Cued** channel via using the **Recall Area/Keypad**, and then play the **Cued** clip when ready.

To load a clip from the **Recall Area/Keypad**:

2. In the **Recall Area** or on the **Keypad**, click the name of the **Clip Player** in which the clip is to be loaded. The selected **Clip Player** highlights in the **Recall Area** and the **Keypad**. The following figures show **Clip Player 2** selected:

3. Do one of the following:
    - On the **Keypad**, enter the **ID** of the clip to be displayed. This method works only for numeric **IDs**.
    - Click **NEXT** or **PREV** until the **ID** clip to be displayed appears in the **Recall Box**. This method works for both numeric and alphanumeric **IDs**.
    - Click the **Recall Box**, and then enter the **ID**. This method works for both numeric and alphanumeric **IDs**.
4. Press **Enter**, or on the **Keypad**, click **LOAD**. The clip loads into the **Cued** area of the specified **Clip Player**, and the **ID** advances to the next available **ID** in the **Clips Browser**.

To play the clip, do one of the following:

- On the **Keypad**, click **PLAY**.
- On the **Clip Player**, click the **Play** icon in the **Cued** channel **Transport Controls**.

Since the **Recall Box** has advanced to the next available **ID** in the **Clips Browser**, you can repeat step 4, and then play the next clip.

Play a Cued Clip from the Clip Player

To play a clip that is in the **Clip Player Cued** channel from the **Clip Player**:

- Click the **Play** icon  in the **Clip Player Cued** channel **Transport Controls**. The clip immediately transitions to the **Clip Player Playing** channel using the selected transition (if any), and starts to play.

Play the Clip Whose ID is Currently Displayed in the Recall Box

To play the clip whose **ID** is currently displayed in the **Recall Box**:

- On the **Keypad**, click **PLAY**. The **ID** remains the same and does not advance to the next available clip or graphic **ID**.

Load and Play an Ordered Sequence of Clips

Clip Sequence Playout Overview

You can load and play an ordered sequence of clips. As a clip is loaded into the **Cued** area, the **Clip ID** of the next clip in the directory displays in the **Recall Box**.

To ensure that you load only the intended clip files, in the order in which they will display:

- Move the clips into the directory that will be open in the **Clips Assets Brower**.
- Remove from the directory any files that you do not intend to display.
- Name the clips in numerical/alphabetical order of their appearance. Clips with **Clip IDs** that start with numbers load before clips with **Clip IDs** that start with alphabetic characters.

A clip sequence can be triggered from the **Recall Area**, the **Keypad**, or a combination of both. The following sets of instructions describe how to load and play a clip sequence from the **Recall Area** and from the **Keypad**. For clarity, the two sets of instructions are separate; however, you may switch between them.

Note also that if you are playing sequences in the other components, i.e., the **Graphics Players** and **ME1 (Mix Effects)**, you may want to set PRIME Switcher to independently keep track of each component's last **ID**, so that you can resume where you left off. This applies to **Keypad ID** entry.

Load and Play an Ordered Sequence of Clips from the Recall Area

To recall and play an ordered sequence of clips from the **Recall Area**:

1. In the **Recall Area**, click the name of the **Clip Player** in which the clip is to be loaded. The **Keypad** reflects the selection. The following figures show **Clip Player 2** selected in the **Recall Area** and on the **Keypad**:

2. Clear (erase) the **Recall Box**.

3. You can start the sequence from the first clip in the **Clips Browser**, or from a different clip in the **Clips Browser**.
    - If starting from the first clip in the **Clips Browser**, then with the cursor still in the **Recall Box**, press **Enter**.
    - If starting from a different clip in the **Clips Browser**, then in the **Recall Box**, enter the **ID** of the first clip to display in the sequence.
4. With the cursor in the **Recall Box**, press **Enter**. The clip loads into the **Clip Player Cued channel** of the specified **Clip Player**.

    Note that any clip that is already in the **Cued** area is replaced. Only one clip can be loaded into the **Cued Channel** at any time.

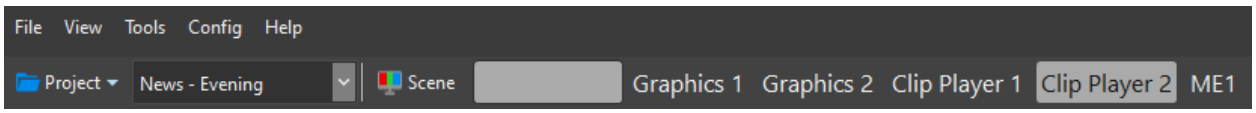
    In addition, the **ID** of the next available clip in the **Clips Browser** displays in the **Recall Area**.
5. Do one of the following to play the clip:
    - From the **Clip Player** **Cued** transport controls, click the **Play** icon.
    - On the **Keypad**, click **PLAY**.

    The **Cued** clip plays.
6. Repeat steps 4 and 5 as needed to play through the sequence.

Load and Play an Ordered Sequence of Clips from the Keypad

To recall and play an ordered sequence of clips from the **Keypad**:

1. On the **Keypad**, click the name of the **Clip Player** in which the clip is to be loaded. The **Recall Area** reflects the selection. The following figures show **Clip Player 2** selected on the **Keypad** and in the **Recall Area**:



2. Click **DEL** to clear the **Recall Box**.

3. You can start the sequence from the first clip in the **Browser**, or from a different clip in the **Browser**.
    - If starting from the first clip in the **Browser**, then on the **Keypad**, click **LOAD**.
    - If starting from a different clip in the **Browser**, then do one of the following:
        - On the **Keypad**, enter the **ID** of the first clip to display in the sequence. This method works only for numeric **IDs**.
        - Click **NEXT** or **PREV** until the **ID** first clip to be displayed appears in the **Recall Box**. This method works for both numeric and alphanumeric **IDs**.
4. On the **Keypad**, click **LOAD**.

    The clip loads into the **Cued** channel of the specified **Clip Player**. Note that any clip that is already in the **Cued** area is replaced. Only one clip can be loaded into the **Cued** channel at any time.

    In addition, the **ID** of the next clip in the sequence displays in the **Recall Area**.
5. Do one of the following to play the clip:
    - From the **Clip Player** **Cued** transport controls, click the **Play** icon.
    - On the **Keypad**, click **PLAY**.

    The **Cued** clip plays.
6. Repeat steps 4 and 5 as needed to play through the sequence.

Delete Clip ID from Recall Box

To clear, i.e., erase the **ID** in the **Recall Box** in the **Recall Area**, do one of the following:

- In the **Recall Box**, erase the **ID**.
- On the **Keypad**, click **DEL**.

The Clip Plays, but Does Not Display in Switcher Program or Preview

For a clip to appear on the switcher **Preview** or **Program** channel, you must do one of the following:

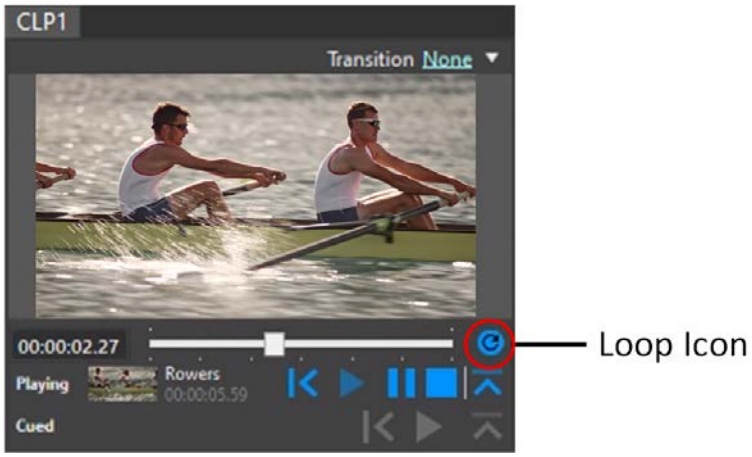
- Select the **Clip Player** as a source for the **Main Bank Preset** or **Program** bus, respectively.
- Select the **Clip Player** as a source for the **ME1 Bank Program** bus, and select **ME1** as a source for the **Main Bank Preset** or **Program** bus, respectively.
- Select the **Clip Player** as a **KEY** source for the **Main Bank Preset** or **Program** bus, respectively.
- Select the **Clip Player** as a **KEY** source for the **ME1 Bank Program** bus, and select **ME1** as a source for the **Main Bank Preset** or **Program** bus, respectively.

Otherwise, the clip plays only in the **Clip Player**.

Loop a Clip

A clip can be looped prior to playing or while playing. To loop a clip:

- Click the **Loop** icon in the **Clip Player**. Note that only the clip in **Playing** can be looped.



Stop a Clip, with Ability to Replay

Stop Clip Overview

When you stop a clip, the clip stops playing, but remains in the **Clip Player Playing** channel, so that you can replay it. The **Stop** operation does not affect the contents of the **Clip Player Cued** channel.

Stop a Clip from the Clip Player, then Replay

To stop a clip from the **Clip Player's Playing Channel**:

- In the **Clip Player**, click the **Clip Player Stop** icon . The clip stops, and remains in the **Clip Player Playing** channel.

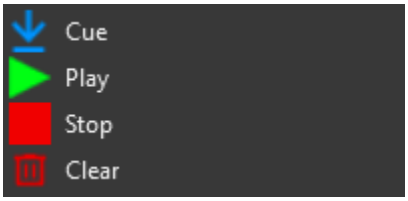
To replay the clip:

- In the **Clip Player Playing** channel, click the **Play** icon . As the clip is already in the **Clip Player Playing** channel, if a transition is specified, it is not applied to the replay.

Stop a Clip via the Clips Browser

To stop a clip in the selected **Clip Player**, from the **Clip Browser** context menu:

1. In the **Clip Browser**, right-click the clip's thumbnail. The clip's context menu appears:



2. Click the **Stop** icon.

To replay the clip:

- In the **Clip Browser**, right-clip the clip's thumbnail, and then click the **Play** icon. As the clip is already in the **Clip Player Playing** channel, if a transition is specified, it is not applied to the replay.

Clear a Clip from the Clip Player

To clear a clip from a **Clip Player**:

1. Click the **Clip Player** from which you would like to clear a clip, click the **Clip Player** button. If the button is already selected, then proceed to the next step.
2. Click **CLEAR**. The following occurs, depending upon the **Clip Player** configuration:
    - If the **Clip Player Cued Channel** and **Clip Player Program Channel** display on discrete **Clip Player** monitors, then the clip clears from the last selected channel (**Clip Player Cued** or **Clip Player Program**).
    - If the **Clip Player Cued Channel** and **Clip Player Program Channel** display on the same **Clip Player** monitors, then:
        i. The clip clears from the **Clip Player Program Channel**.
        ii. Once the **Clip Player Preview Channel** is cleared, then the next click clears the **Clip Player Program Channel**.

Clearing a clip removes the clip from the **Clip Payer**. To clear a clip from either **Playing** or **Cued**, do one of the following:

- In the **Clip Player**, click the **Clear Clip** icon in the **Playing** or **Cued** channel. If the clip that you cleared was in **Playing**, then the **Clip Player** monitor cuts to black.
- On the **Keypad** or in the **Recall Area**, ensure that the correct **Clip Player** is selected, and then on the **Keypad**, click the **CLEAR** button.
    - If a clip is currently playing, then the clip is cleared from the **Playing** channel, and the **Clip Player** cuts to black.
    - If there is no clip in the **Playing** channel, and a clip is loaded in the **Cued** channel, then the clip is cleared from the **Cued** channel.
    - If a clip is playing and there is and a clip is loaded in the **Cued** channel, then:
        - The clip is cleared from the **Clip Player**, and the **Clip Player** monitor cuts to black.
        - To clear the clip in the **Cued** channel, click **CLEAR** again.

Clip Transitions

Overview

A transition can be applied as a clip transition from **Cued** to **Playing**. This transition is independent of the transition that is set in the switcher **Transition Area**.

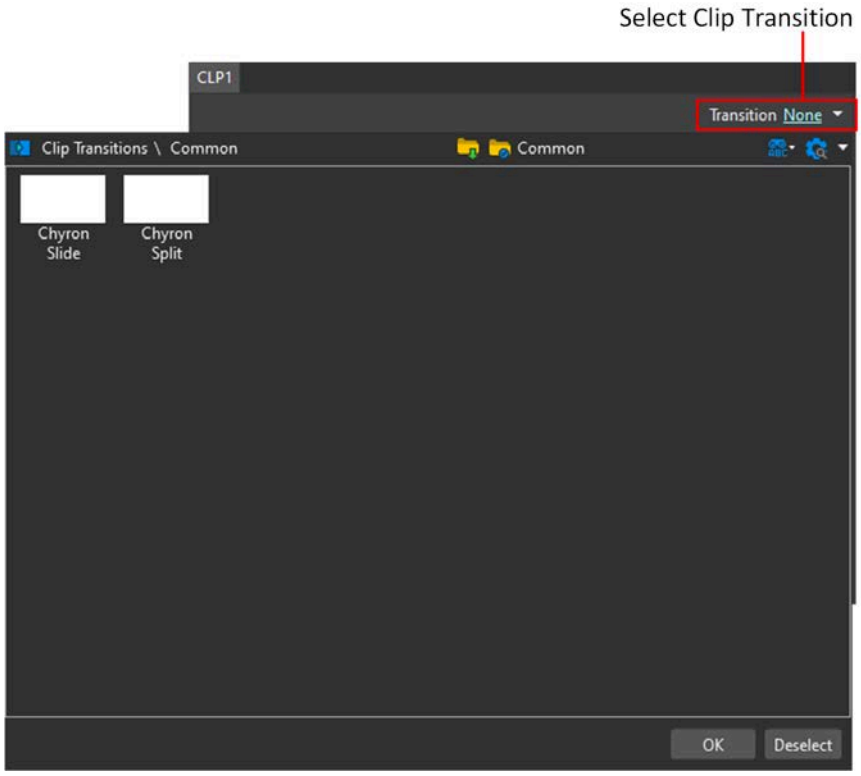
The transition is applied only between clips, not when the first clip is played on screen, nor as the last clip is playing off screen.

In the upper right corner of the **Clip Player** tab, the name of the active transition or "**None**" appears next to "**Transition**."

Select a Clip Transition

To select a clip transition:

1. Click **None** or the transition name (whichever is displayed).
2. From the browser, select the desired clip transition.



3. Click **OK**. The selected transition is applied to clip-to-clip transitions.

A **Clip Transition** file is in ****.pct*** format. **Switcher Transition** files are in ****.pst*** format. A ****.pst*** file cannot be used as a **Clip Transition**.

Switch to a Different Transition

To switch from one transition to another:

1. Click the transition name. The **Clip Transitions \ Common** folder opens, and displays the available transitions.
2. Select the desired transition.
3. Click **OK**. The selected transition is applied to clip-to-clip transitions.

Import a Transition

If a desired transition(s) is located elsewhere, then it (they) can be imported into the **Clips Transitions \ Common** folder.

To import a transition:

1. Click **None** or the transition name. The **Clip Transitions \ Common** folder opens, and displays the available transitions.
2. Click the **Import Files** icon. The **Import PRIME Transition** files browser opens.
3. Browse to the desired file(s), select them, and then click **Open**. The browser closes. The imported transitions are now available to the Clip Player.

Inactivate (Deselect) a Transition

A transition can be made inactive, i.e., deselected, so that it is no longer applied to clip-to-clip transitions.

To deselect a transition:

1. Click the transition name. The **Clip Transitions \ Common** folder opens. The active transition is highlighted.
2. Click **Deselect**. The **Clip Transitions \ Common** folder closes. The transition is no longer active. Transition Name appears as **None**.

Use Image as Clip in Clip Player

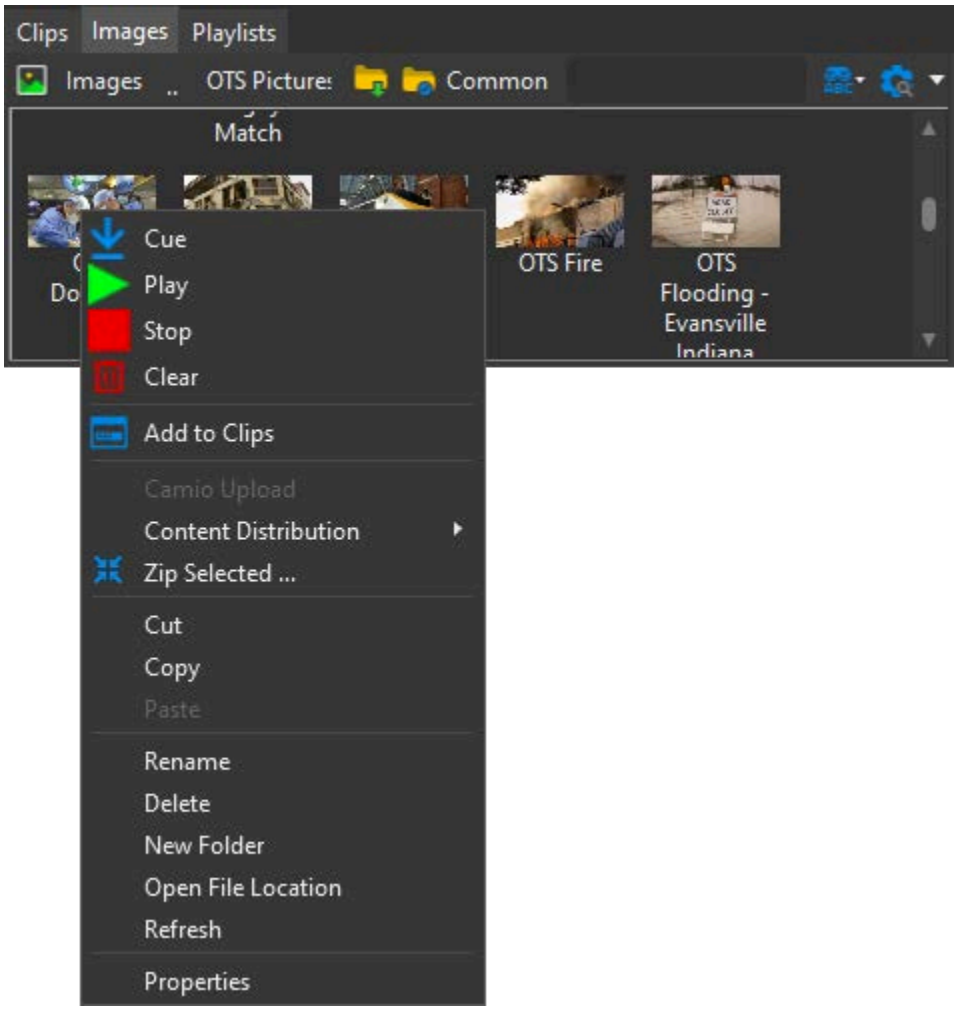
The **Clip Player** can play images, and an image can be added to the **Clips Browser**.

To play or cue an image to the **Clip Player**:

- Drag the image into the **Clip Player** screen or **Clip Player Cued** in the same manner as you would a clip.

or

1. In the **Images Browser**, right-click the image thumbnail. The **Images** context menu appears:



2. Select the desired action.
    - **Cue:** Loads the image into **Clip Player Cued**.
    - **Play:** Plays the image in the **Clip Player**. Because the image is static, the **Scrub Bar** displays at the end point. The **Current Frame Counter** and **Frames Remaining Counter** both display **00:00:00.00**.
    - **Stop:** Stops the image playout. The image thumbnail remains in **Playing** and can be replayed.
    - **Clear:** Clears the image from the **Graphics Player**.

When the **Clip Player** displays an image, the **Clip Player's Transport Control Pause** and **Stop** buttons are grayed out and do not operate.

Add Image as Clip

You can add an image to the **Clips Browser**. Doing so converts the image to ***.ppc** file, which is the PRIME Switcher native clip file format.

To add an image to the **Clips Browser**:

- In the **Images Browser**, right-click the image thumbnail, and then select **Add to Clips**. The image remains unchanged in the **Images Browser**, and the converted ***.ppc*** clip version of the image appears in the **Clips Browser**.

Note that to stop the clip, i.e., to remove it from the screen, but keep it in **Playing**, you select the **Stop** item from the clip's context menu, as the **Transport Control Stop** is grayed out.

Clip Playback via PRIME Playlist and PRIME Commander

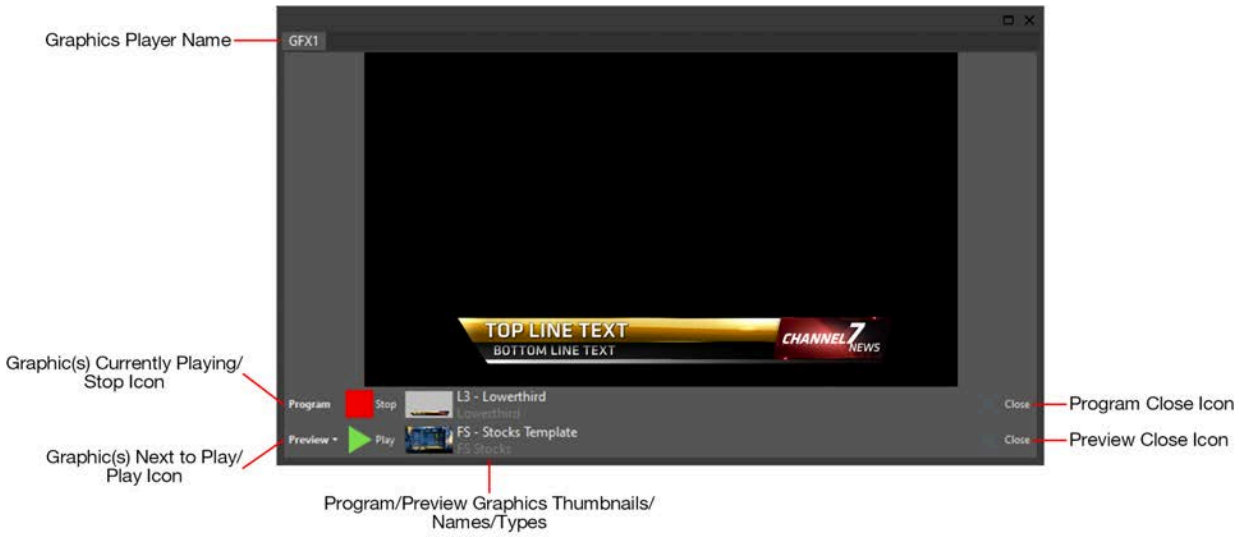
In addition to direct playout from the **Clip Player(s)**, **Keypad**, **Recall Area**, and **Clips Browser**:

1. The PRIME Playlist can trigger clip playback from within PRIME Switcher.
2. Chyron PRIME Commander, an optional PRIME Live Platform control interface, can trigger clip playback.

Chapter 16: Work with Graphics

Overview

PRIME provides two **Graphics Players** in which one or more scenes and/or messages, collectively known as graphics, can be cued, loaded, previewed, and played.



Scenes, clips, and images in the following formats can be displayed by PRIME Switcher:

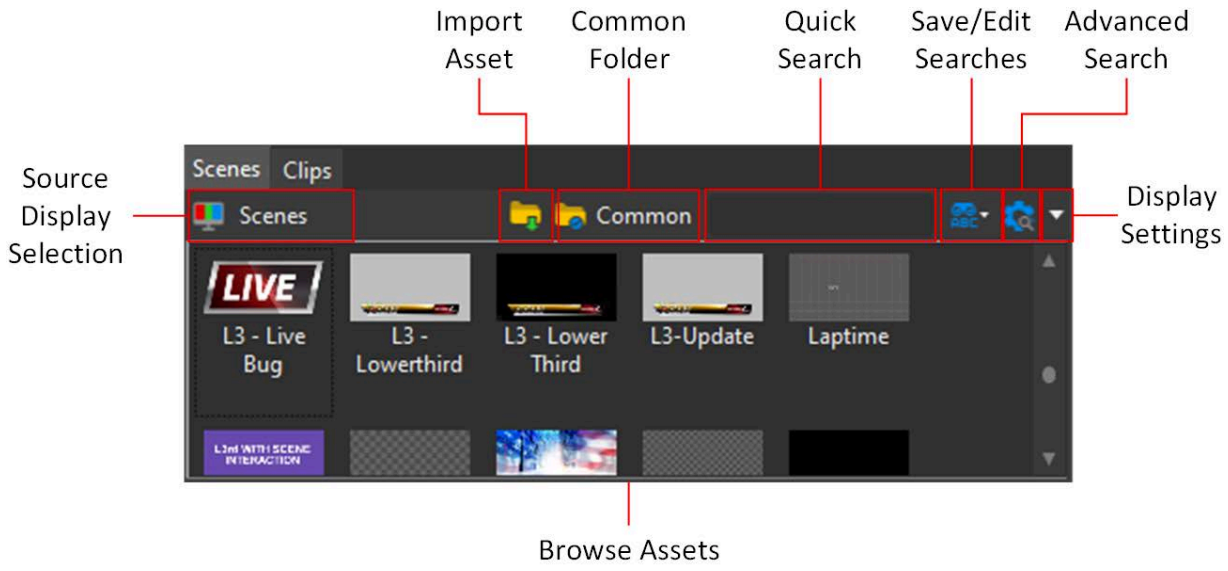
- ***.pbx*:** PRIME scene file
- ***.pbm:** PRIME message file
- ***.ppc:** Proprietary PRIME Power Clip file format
- ***.gtc*:** Proprietary PRIME clip file format
- Various image file formats

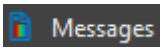
BEST PRACTICES
Ensure that scenes and clips have the same resolution and frame rate as PRIME Switcher configuration; otherwise, they may not play correctly.

Ensure that images have the same resolution as PRIME Switcher; otherwise, they may not display correctly.

Scenes/Messages Browsers

The **Scenes** and **Messages Browser** work in conjunction with the **Graphics Player**. Graphics resources are managed within the **Scenes** and **Messages Browsers**. The following shows a **Scenes Browser**.



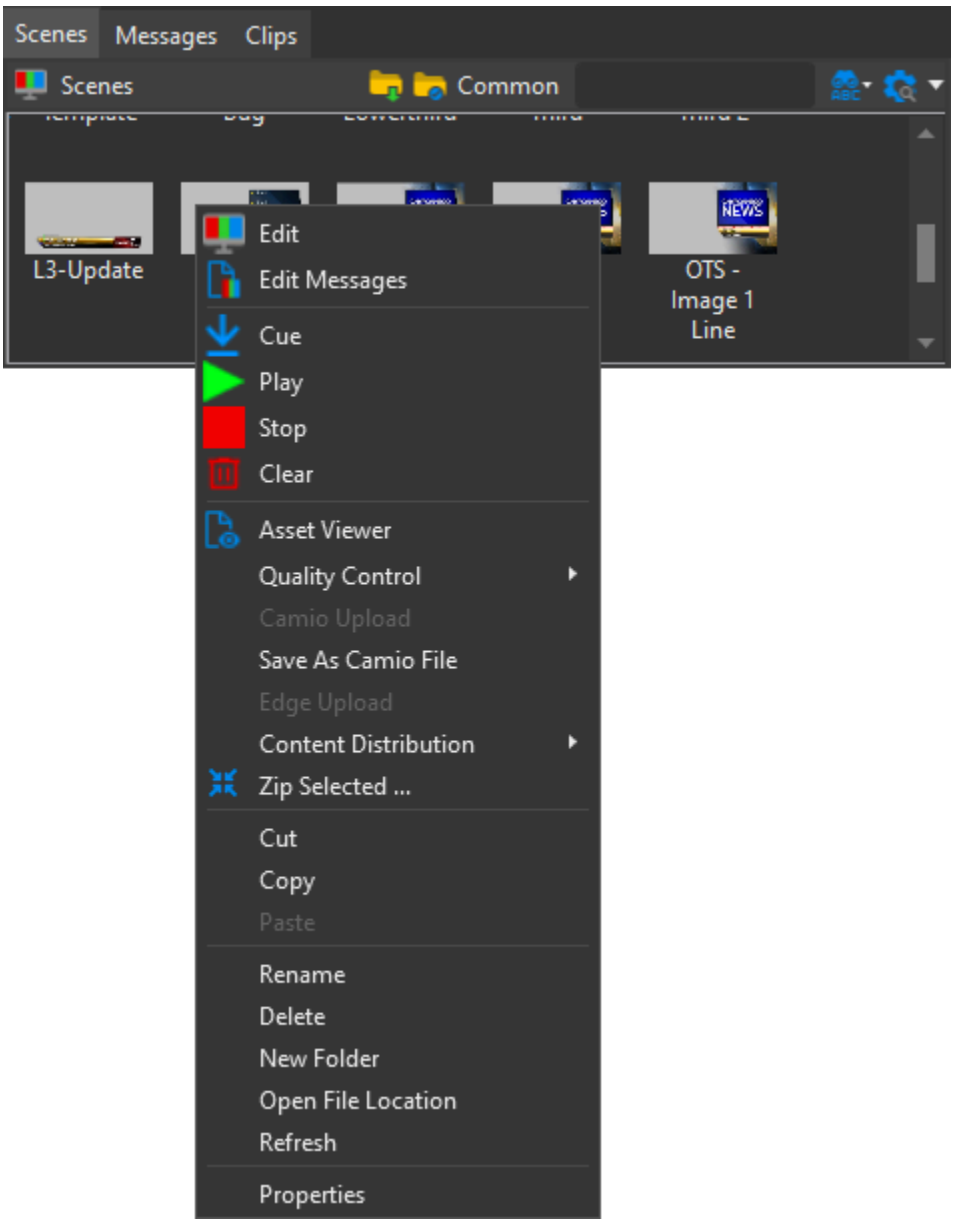
The **Messages Browser** operates in the same manner. The **Messages Browser** displays the **Messages Source Display Selection** icon 

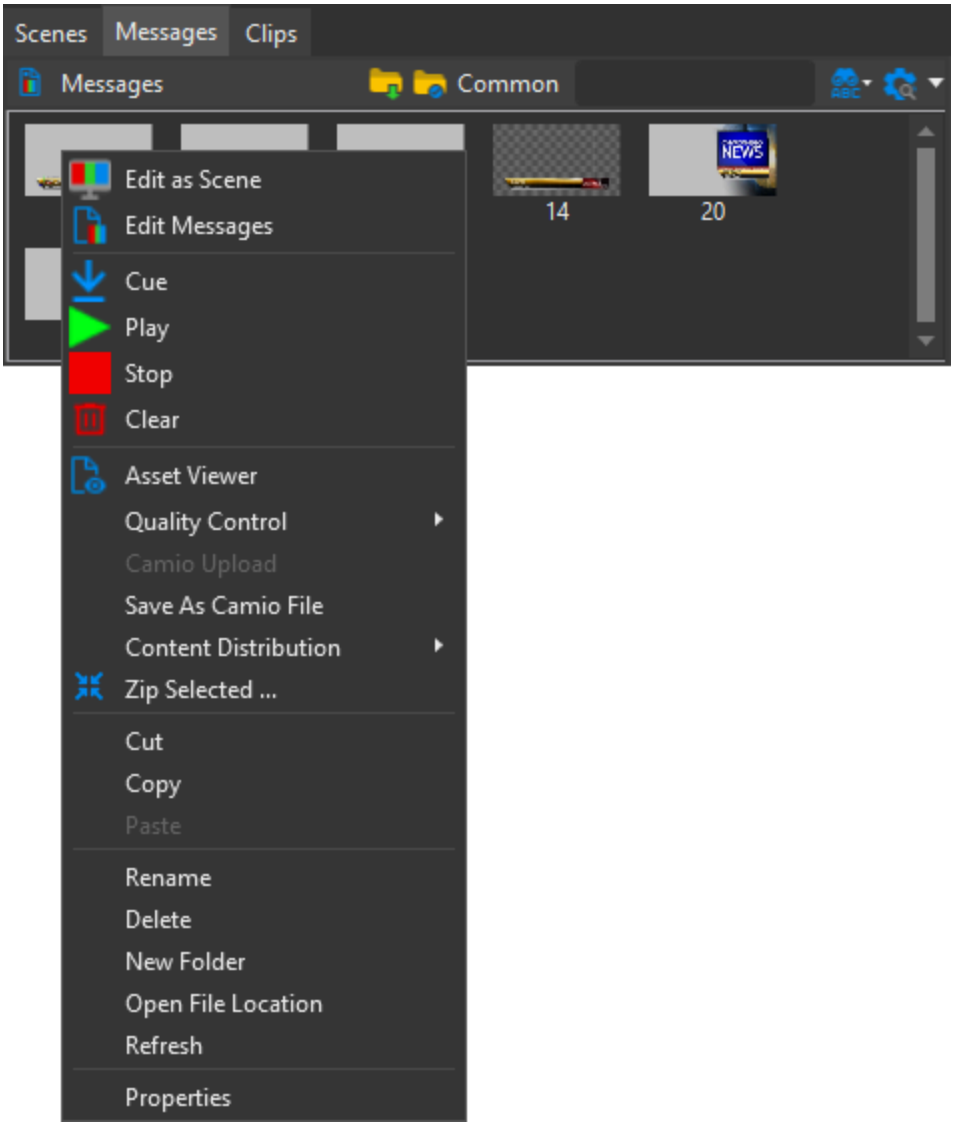
.

For simplicity, a number of the operations are described in the following sections show the **Scenes Browser**. Unless otherwise noted, the **Messages Browser** provides the same functions.

The **Scenes** and **Messages Browsers** also provide features accessible from a context menu. To access:

- In the **Scenes** or **Messages Browser**, right-click a scene thumbnail. The **Scenes** or **Messages Browser** context menu, respectively, displays:

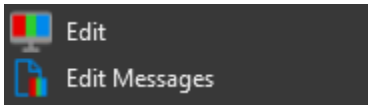




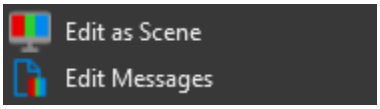
Many of the items on this menu are available to all **Assets Browsers**. Items specific to graphics are as follows:

- Scene and Message Edit Functions, with which you can edit existing scenes and messages. The following shows the **Scenes Browser** and **Messages Browser** menu items.

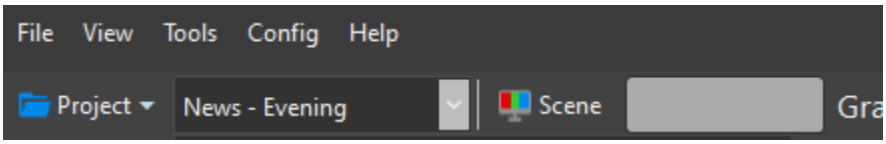
Scene Edit Functions

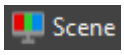


Message Edit Functions



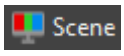
You can also access the **Scene Editor** from the **Recall Area**. This works for both scenes and messages.



- Click the **Scene** icon 

, and then select **Edit Scene** from the dropdown.

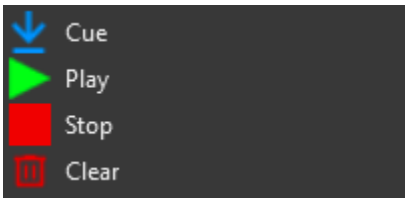
You can create a new scene:

- Click the **Scene** icon 

, and then select **New Scene** from the dropdown. The PRIME Scene Designer opens.

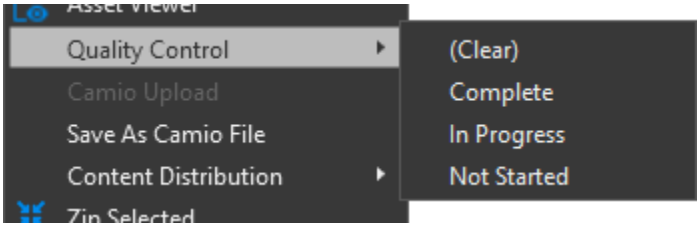
See the PRIME User Guide for information on creating and editing scenes.

- **Graphics Player Control** functions: **Cue (Load)**, **Play**, **Stop** and **Clear**.



Other items, including the following, are available to multiple types of browsers:

- **Quality Control** provides the ability to view the state of PRIME scenes and messages.



See the PRIME User Guide for information about this feature.

- **Content Distribution** is a Chyron application that centrally manages and distributes assets. From this menu, you can publish or unpublish assets.

See the Content Distribution User Guide for additional information about this feature.

Scene and Message Edit Functions

Edit Scene

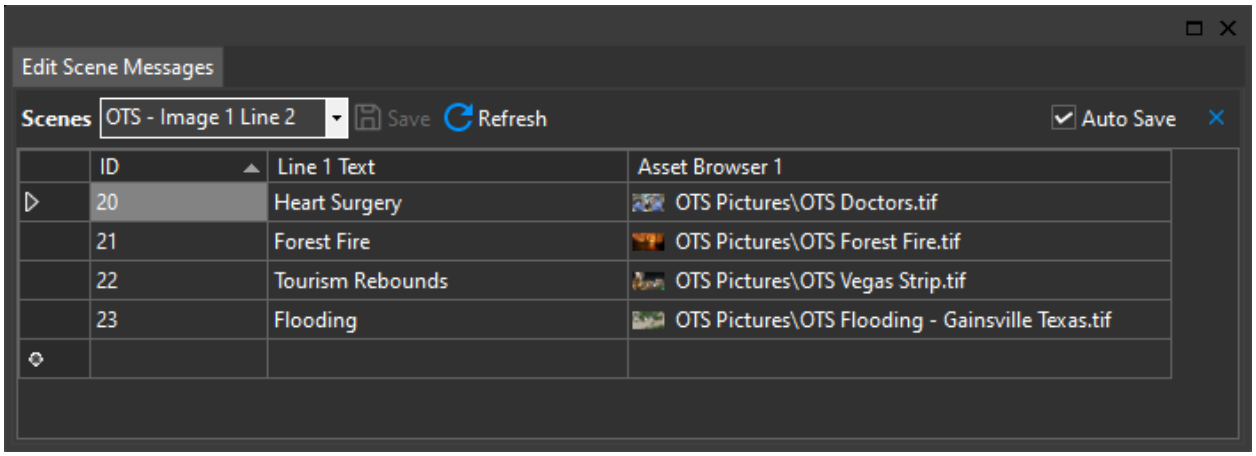
Edit Scene opens the PRIME Editor. *See the PRIME User Guide for information on editing PRIME scenes.*

Edit Message

Overview

Edit Message provides the ability to quickly create PRIME messages based on existing PRIME scene templates, and edit the replaceable text, graphics and/or clip elements of existing messages. *See the PRIME User Guide for additional information about working with scenes and messages.*

For example, you can create a set of messages based on an **Over-the-Shoulder (OTS)** graphic. If you create multiple sets of messages based on different templates, then for easier playout OTS messages:



Save Mode

Each edit to a message can automatically save, or you can save edits at will.

- To automatically save edits, enable the **Auto Save** checkbox 

. The **Save** icon grays out.
- To save at will, disable the **Auto Save** checkbox. The **Save** icon becomes active. To save edits, click the **Save** icon 

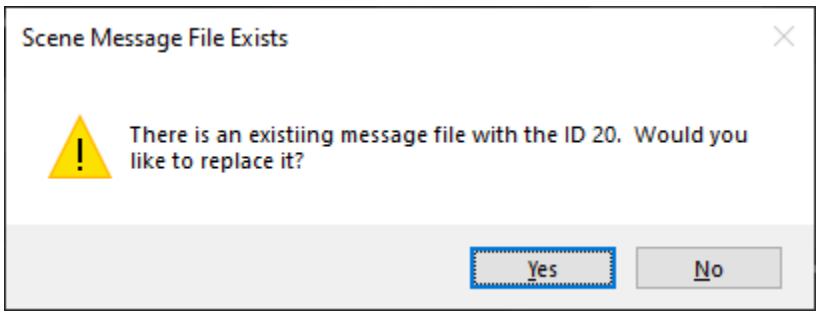
.

Create Messages

To create a set of messages:

1. In the **Scenes Browser**, right-click the thumbnail of the scene on which you would like to base the messages.
2. Each message that you create has a message ID number, which is used to recall the message for playout. As you create the list, assign the IDs in the order in which they will play.

   In the **ID** field, enter an ID number. If you enter an ID number of an existing message, then the following displays:

   Do one of the following:

   - Click **Yes** to replace the existing message.
   - Click **No** to save to a different ID number, and then enter a different message number in the **ID** field.

3. If there is a text field(s), then enter the text in the text field(s).

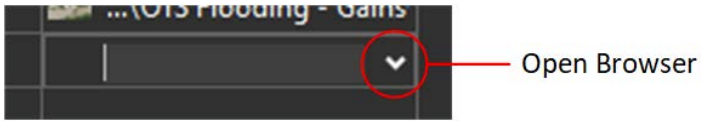
4. If there is a graphics or clip field(s), then select the file by either selecting from as **Assets Browser**, or typing the filename:

    - To select the file from an **Assets Browser**:

        1. Double-click the field. The **Assets Browser** configured for that field appears. The specific **Assets Browser** is configured in PRIME when creating the scene template. You can also browse to a different location.

        2. Select the desired file. The file name populates the field.

    You can also click the arrow (when visible) at the right of the field to display the **Assets Browser**.



    - To type the file name:

        1. Click the field to highlight it, then double-click the field. The entry field appears.

        2. Type the name of the file.

            - If the file is in the current project's folder for that asset, then only the filename is necessary.

            - If it is located outside of the project's designated folder, then you must type the file path.

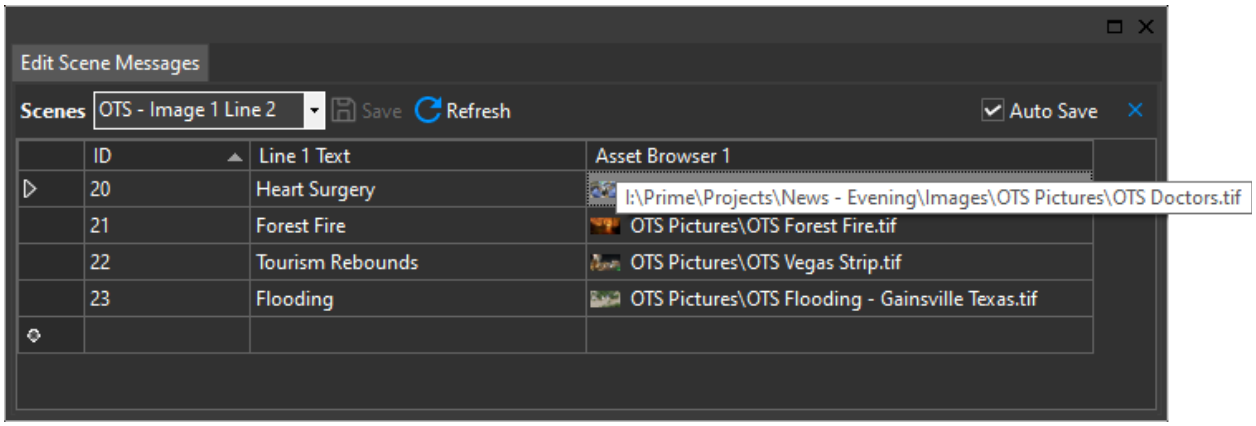
5. Repeat steps 2 through 4 to create additional messages on subsequent rows.

Edit Existing Message

You can edit existing messages, using steps 2, 3, and/or 4 in Create Messages.

View Asset File Path

To view the filepath of an asset, hover over the field that displays the name of the file.



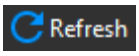
Sort Messages

You can sort the messages by any column:

- Click the column heading to toggle sorting in numerical/alphabetical or reverse numerical/alphabetical order.

Refresh View

To refresh the view and re-sort by ID:

- Click the **Refresh** icon 

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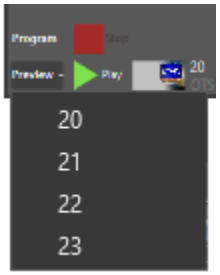
Play Messages

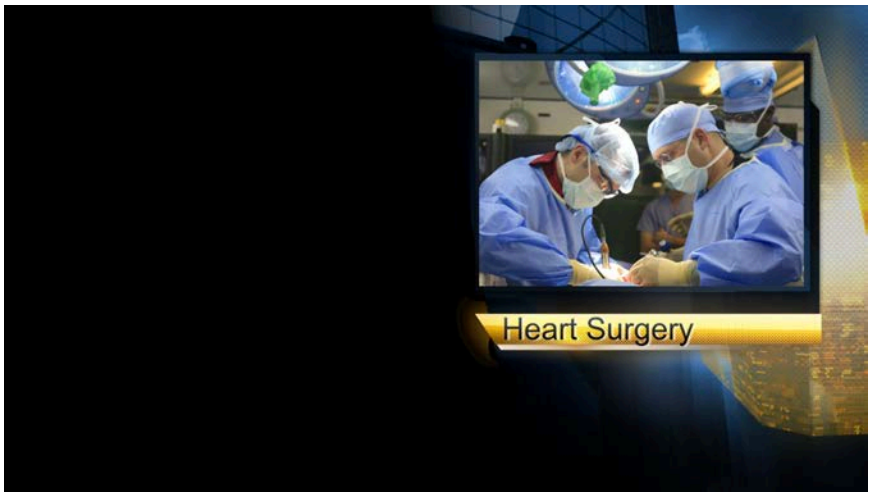
To play out the messages:

1. In the Recall Area or on the **Keypad**, click the **Graphics Player** button that corresponds to the **Graphics Player** on which to play the graphics.
2. In the **Recall Box**, enter the first number of the list of messages that you would like to play.
3. Press **Enter**. The message loads into the **Graphics Player Preview**.

4. Press **Enter** for each subsequent message to load into the **Graphics Player Preview**. To view the list of messages that are loaded in **Graphics Player Preview**, click the arrow directly to the right of "**Preview**."



5. When you have finished loading the messages, then in the **Graphics Player Preview**, click **Play** to play the first message in the list.



6. Click **Play** to play each subsequent message.


Forest Fire

Import Graphic(s)

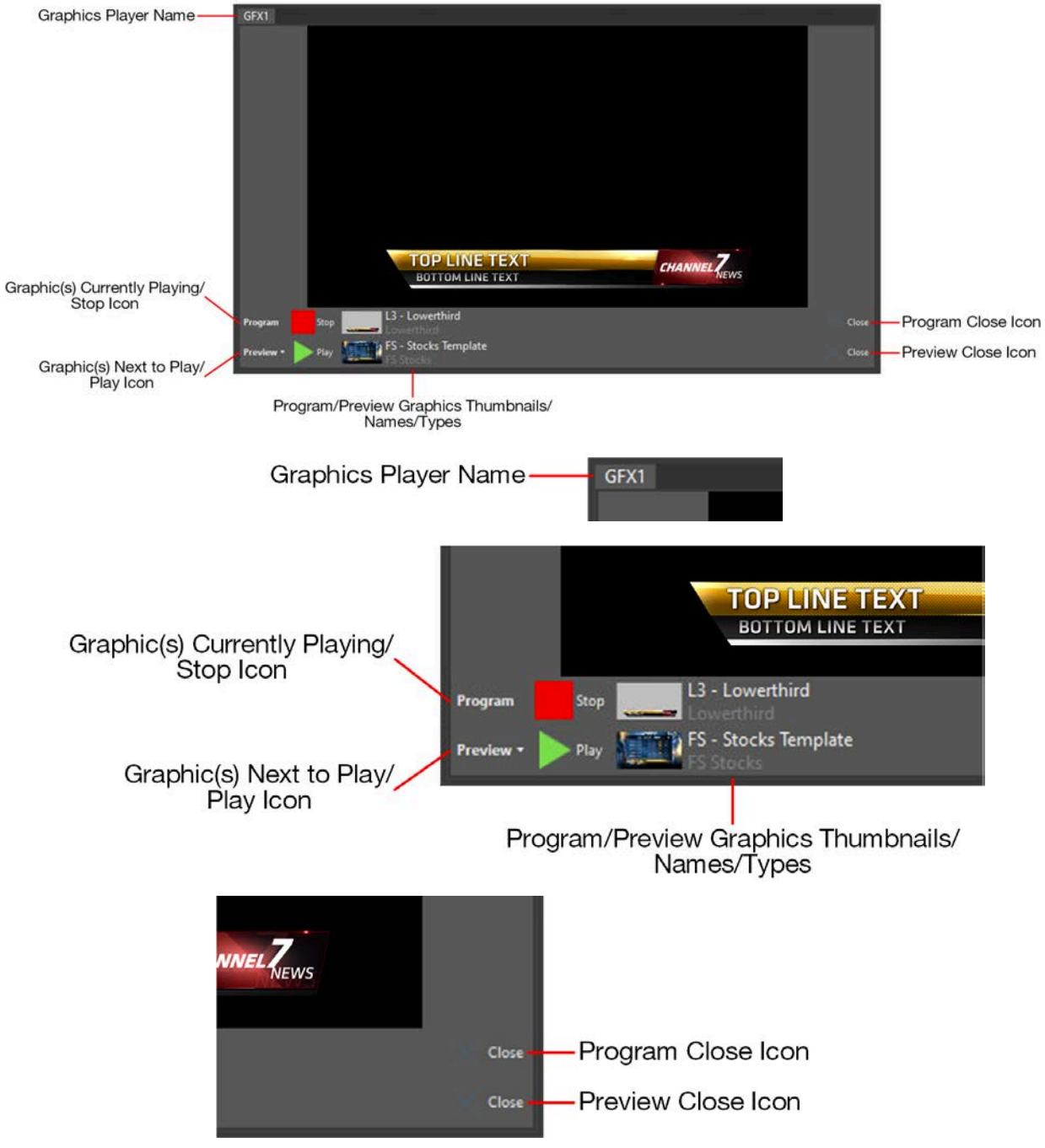
To import a graphic(s):

1. Click the **Import Graphic** icon. The file browser opens.
2. From the browser, select the desired graphic(s), and then click **Open**. The graphic(s) is added to the **Scenes Browser**.

Graphics Player

Graphics Player Overview

The **Graphics Player** plays scenes and messages created in PRIME, as well as images and clips.



Graphics Player Name
GFX1
Graphic(s) Currently Playing/ Stop Icon
TOP LINE TEXT
BOTTOM LINE TEXT
Program
Stop
L3 - Lowerthird
Lowerthird
Graphic(s) Next to Play/ Play Icon
Preview
Play
FS - Stocks Template
FS Stocks
Program/Preview Graphics Thumbnails/ Names/Types
NEWS
Close
Program Close Icon
Close
Preview Close Icon

Unless otherwise specified, references to graphics apply to both scenes and messages in the remainder of this chapter.

Graphics Player Preview and Program Channels vs. Switcher Preview and Program Channels

In the PRIME Switcher, the **Preview** and **Program** channels each contain background video, and clips and/or graphics.

- Contents of the **Preview** channel are “next up” for transition to **Program**.
- Contents of the **Program** channel are on **Program**.

The **Graphics Player Preview** and **Program** channels work differently.

- The **Graphics Player Preview** channel contains the graphics that are to be played to the **Graphics Player Program** channel.
- **The Graphics Player Program** channel displays the graphics that are playing on **Graphics Player**.

For the graphics in the **Graphics Player Program** channel and graphics playing from the **Graphics Player Preview** channel to the **Graphics Player Program** channel to display on the PRIME Switcher **Program** channel:

- The **Graphics Player** must be set as a switcher **Key** source; and,
- That **Key** source must be active (lit red) on the **Key Bus**.

Display Graphics Player Program and Preview Channels in Separate Monitors

A **Graphics Player** can display its **Program** channel and contain the contents of its **Preview** channels in the same monitor, or it can display them in separate monitors. The default is single monitor.

The following shows the **Graphics Player Program** and **Preview** channels in a single monitor. You cannot view the graphics in the **Preview** channel, although you can view the list of graphics in the **Preview** channel

The following shows the same set of graphics, with the **Graphics Player Program** and **Preview** channels each in their own monitor. The **Graphics Player Preview** monitor plays graphics to the **Graphics Player Program** monitor.

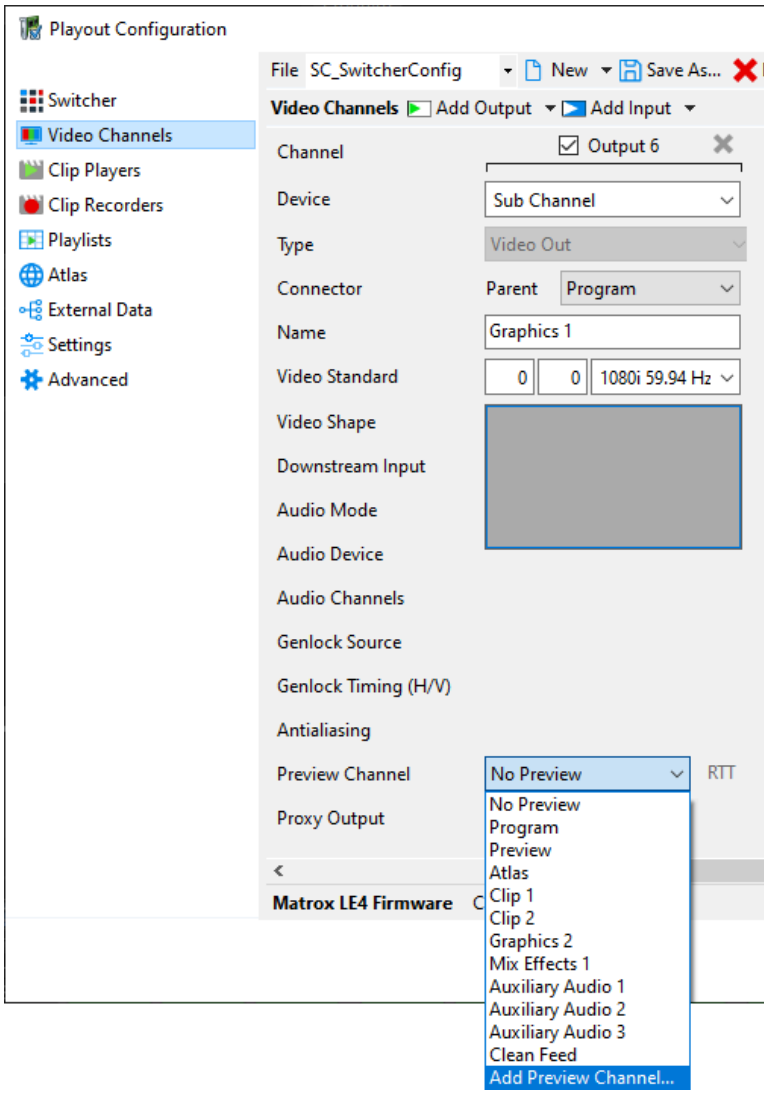
The **Preview** monitor displays the last graphic that was added to the **Preview** list.

When playing back graphics from the **Preview** channel in either configuration, they play in the order in which they were added to the **Preview** list. You can, however, select any graphic from the list to play, in any order. *See Select a Graphic in the Graphics Player Program or Preview Channel for additional information.*

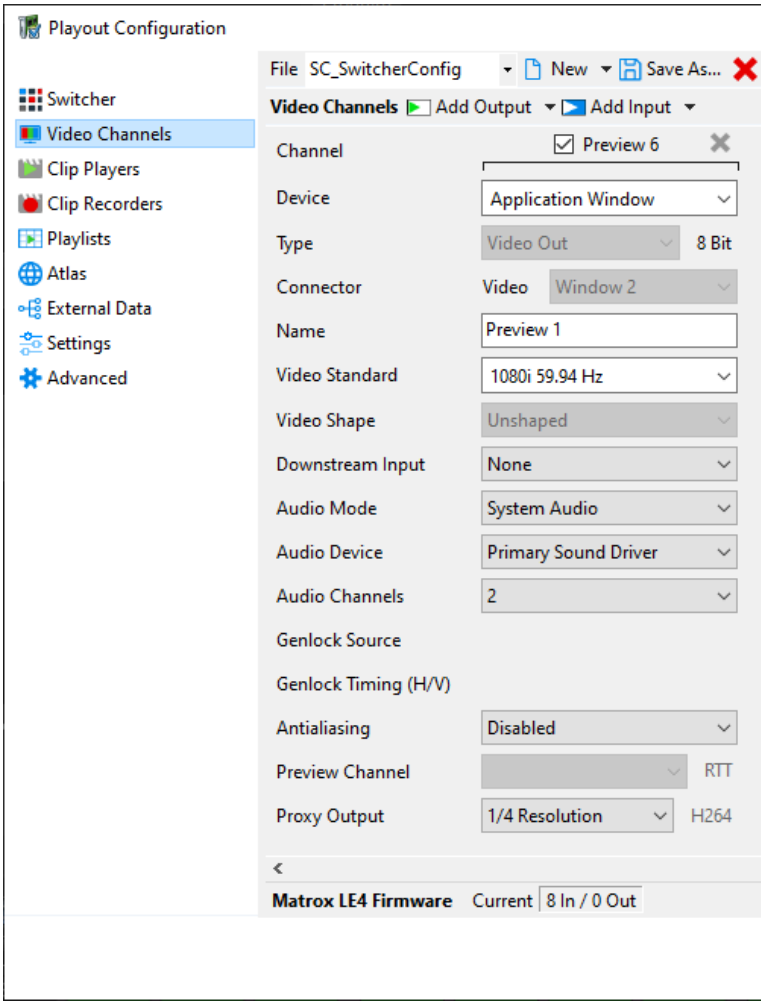
To configure a separate **Graphics Preview** monitor:

1. Go to **Config > Playout Configuration > Video Channels**, and then scroll to a **Graphics** channel. For this exercise use **Graphics 1**.

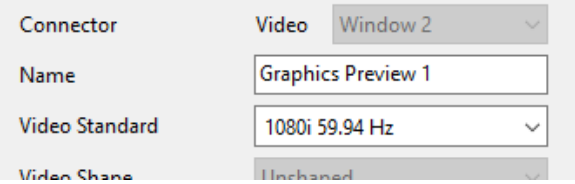
2. Click the **Preview Channel** drop-down, and then select **Add Preview Channel**.



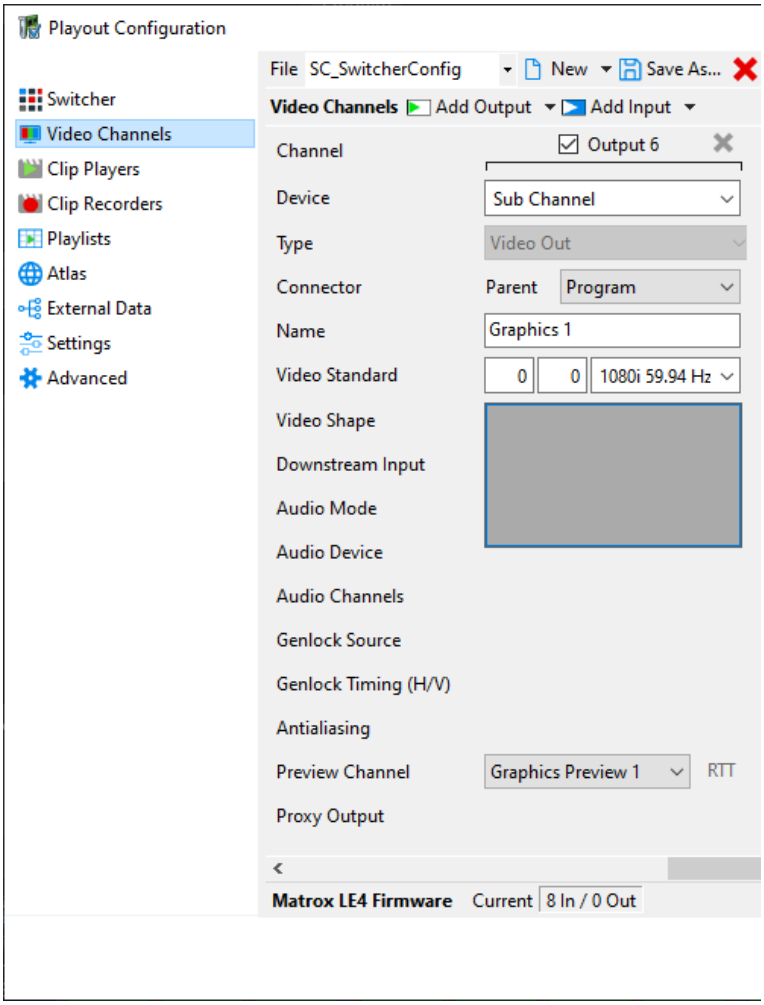
3. Scroll right until you reach the new **Preview Channel**.



4. In the **Name** field, rename **Preview 1** to **Graphics Preview 1**.



5. Scroll back to the **Graphics** channel. Note that the **Preview Channel** name is now **Graphics Preview 1**.

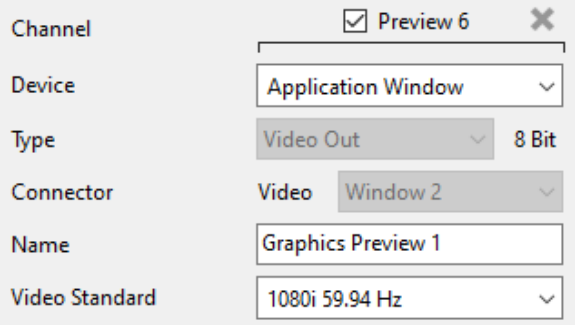


6. Click **OK**. Close and restart PRIME Switcher.

7. In the **View** menu, the **Graphics Player Preview** and **Program** now list as two separate components: **Graphics 1 Preview** and **Graphics 1 Program**. Go to the **View** menu and enable visibility for each.

To display **Graphics Preview** and **Program** channels in a single monitor:

1. Go to **Config > Playout Configuration > VIdeo Channels**, and then scroll to the **Graphics** channel.
2. From the **Preview Channel** drop-down, select **No Preview**.
3. Do one of the following:
    - If you would like to retain the **Graphics 1 Preview Channel** for future use, then proceed to step 4.
    - If you would like to delete the **Preview Channel**, then scroll to the **Graphics Preview 1** channel, and then click the **Remove** icon at the top right of the settings.



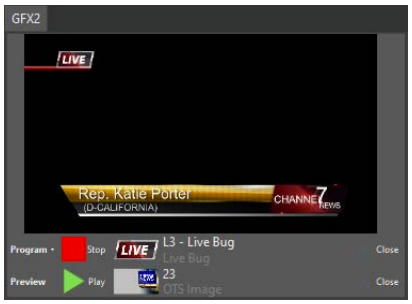
4. Click **OK**. Close and restart PRIME Switcher.
5. In the **View** menu, the **Graphics Player Preview** and **Program** now list as a single component: **Graphics 1**. Go to the **View** menu and enable visibility.

Graphics Operations

Graphics Player Selection

To perform most **Graphics Player** operations, you must first select the specific **Graphics Player**. To do so, use any of the following methods:

- Click the **Graphics Player**.



If the **Graphics Player Program** channel and the **Graphics Player Preview** channel are displayed in separate monitors, then click either to select the specific **Graphics Player**.

- Click the **Graphics Player** button on the **Keypad**.

- Click the **Graphics Player** button in the **Recall Area**.

Graphics Operations from the Graphics Player

Each **Graphics Player** provides two sets of **Transport Controls**.

- **Graphics Player Program Channel:** Provides controls for graphic(s) currently displayed in the **Graphics Player Program** channel.
    - **Stop:** Transitions the graphic displayed in the thumbnail from **Graphics Player Program** to **Graphics Player Preview**, applying the **Effect Out** set in the graphic.
    - **Clear Graphic:** Cuts the graphic displayed in the thumbnail off screen. The graphic is cleared from the **Graphics Player**.
- **Graphics Player Preview Channel:** Provides controls for graphic(s) loaded into the **Graphics Player Preview** channel.
    - **Play:** Plays the graphic specified in the thumbnail from **Preview** to **Program**, applying the **Effect In** set in the graphic. If a separate **Graphics Player Preview** monitor is configured, then the graphic displayed on the **Graphics Player Preview** monitor may be different from the thumbnail that indicates the next graphic to play.
    - **Clear Graphic:** Cuts the graphic displayed in the thumbnail off screen. The graphic is cleared from the **Graphics Player**.

Play and **Stop** are complementary operations:

- **Play** plays the graphic from the **Graphics Player Preview** channel to the **Graphics Player Program** channel.
- **Stop** transitions the graphic from the **Graphics Player Program** channel to the **Graphics Player Preview** channel.

NOTE: A graphic may behave differently depending upon the logic built into the graphic. Before going live on air, ensure that you become familiar with how each graphic behaves when transitioning on and off Program, and when interacting with other graphics.

To operate a transport control:

- Click the desired transport control button.

Graphics Operations from the Keypad

The **Keypad** provides the following graphics operations:

- Select **Graphics 1** or **Graphics 2 Graphics Player**.
- **ID Entry:** Numeric keypad to enter graphics **ID** numbers.
- **LOAD:** Loads a graphic into the **Graphics Player Preview** channel. Advances the **Recall Box** to the next **ID** listed in the **Browser**.
- **SAVE:** Not applicable to graphics. As such, the button is grayed out.
- **PLAY:** Plays the loaded graphic. Does not advance the graphics **ID** in the **Recall Box**. **Note that when a PLAY is performed from the Keypad, the graphic specified in the Recall Box overrides the graphic that is loaded in the Graphics Player Preview channel.**
- **PREV:** In the **Recall Box**, displays the **ID** of the previous graphic listed in the **Browser**.
- **NEXT:** In the **Recall Box**, displays the **ID** of the next graphic listed in the **Browser**.
- **CLEAR:** Clears (cuts) the graphic whose thumbnail is displayed in the **Graphics Player's Program** or **Preview** channel, whichever is active. A channel is considered active as follows:
    - When an operation is performed in the channel, e.g., a graphic plays in the **Graphics Player Program** channel or a graphics is loaded into the **Graphics Player Preview** channel, the channel becomes active; or,
    - When the **Graphics Player Program** and **Preview** channels are displayed in separate monitors, the monitor that you click becomes the active channel.
- **DEL:** Clears the **Recall Box**.

Graphics Operations from the Recall Area/Recall Box

The **Recall Box** provides the following functions:

- Select **Graphics 1** or **Graphics 2 Graphics Player**.
- **ID Entry:** Enter graphics **ID** numbers.
- **Load:** Press **Enter** to load a graphic. Each subsequent **Enter** press loads the next graphic listed in the **Browser**.

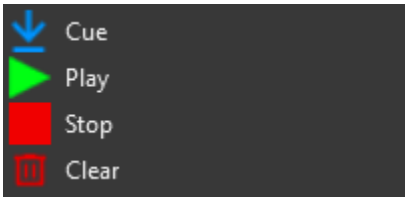
Graphics Operations from the Scenes and Messages Browsers

From the **Scenes** and **Messages Browsers**, you can drag and drop a graphic into a **Graphics Player Preview** or **Program** channel.

- If you drop the graphic into the **Graphics Player Preview** channel, then it loads into the **Graphics Player Preview** channel.
- If you drop the graphic into the **Graphics Player Program** channel, then it immediately plays in the **Graphics Player Program** channel.

You can also **Cue**, **Play**, **Stop** and **Clear** a graphic from the selected **Graphics Player** as follows:

1. In the **Scenes** or **Messages Browser**, right-click the graphic's thumbnail. The graphic's context menu appears:



2. Select the desired action.
    - **Cue:** Loads the graphic into the **Graphics Player Preview** channel.
    - **Play:** Plays the graphic.
    - **Stop:** Stops the graphic playout and transfers it to the **Graphics Player Preview** channel.
    - **Clear:** Clears the graphic from the **Graphics Player**.

Graphics Operations Summary

The following table summarizes the availability of graphics operations from the various PRIME Switcher UI components. See legend below table for abbreviations.

Operation ⇨ Component ⇩	Select Graphics Player	Enter Graphic ID	Play Graphic	Load Graphic	Stop Graphic	Close (Remove) Graphic	Clear Graphic	PREV/ NEXT/ DEL
Player	Click **GP**	NA	NA	NA	NA	NA	NA	NA
GP Pgm Ch	Click **GP**	NA	NA	NA	Click **Stop** icon. Transfers graphic to **GP Prev Ch**	Click **Close** icon	NA	NA
GP Prev Ch	Click **GP**	NA	Click **Play** icon	NA	NA	Click **Close** icon	NA	NA
GP Pgm Ch DD	NA	NA	NA	NA	Select graphic, then click **Stop** icon	NA	NA	NA
GP Prev Ch DD	NA	NA	Select graphic, then click **Play** icon	NA	NA	NA	NA	NA
Keypad	Click **GP** button	Click **ID** numbers	Click **PLAY** button	Click **ID** numbers, then click **LOAD** button	NA	NA	Click **CLEAR** button	Click **PREV/ NEXT/DEL** button
Recall Area	Click **GP** button	Enter (type) **ID**	NA	Enter **ID**, then press **Enter**	NA	NA	NA	**PREV:** NA **NEXT:** NA **DEL:** Erase **Recall Box**
Graphics/ Messages Browser D&D	NA	NA	D&D into **GP Pgm Ch**	D&D into **GP Prev Ch**	NA	NA	NA	NA
Graphics/ Messages Browser Item DD	NA	NA	Select item, then select **Play** icon. Plays in selected **GP Pgm** Ch.	Select item, then select **Cue** icon. Loads in selected **GP Prev** Ch.	Select item, then select **Stop** icon. Stops selected graphic, transfers it to **GP**	NA	Select item, then select **Clear** icon. Clears selected graphic.	NA

					Prev Ch.			

LEGEND

D&D: Drag and drop
DD: Drop-down
GP: Graphics Player
NA: Not applicable
Prev Ch: **Graphics Player Preview** channel
Pgm Ch: **Graphics Player Program** channel

Navigate the Graphics Browser

Set Active Scenes or Messages Browser

When you select a **Graphics Player** and enter an **ID** into the **Recall Box**, either directly or via the **Keypad** or external keypad or keyboard, PRIME Switcher automatically locates the graphic with that **ID** in the **Scenes** or the **Messages Browser**, depending on where the **ID** is located. Any **PREV**, **NEXT**, **LOAD** and **PLAY** operation from the **Keypad** then occurs in that **Browser**.

As such, scenes and messages should not have the same IDs.

For example, if the **Scenes Browser** contains scenes with **IDs 100**, **101**, **102**, and **103**, and the **Messages Browser** contains messages with **IDs 1**, **2**, **3**, and **4**.

- If you enter **ID 100**, then the focus switches to the **Scenes Browser**. If you subsequently perform a **PREV**, **NEXT**, **LOAD**, and **PLAY** operations, they will occur in the **Scenes Browser**.
- If you enter **ID 2**, then the focus switches to the **Messages Browser**. If you subsequently perform a **PREV**, **NEXT**, **LOAD**, and **PLAY** operations, they will occur in the **Messages Browser**.

You can also load and play a graphic using drag and drop, or play directly from the **Graphics Player**.

Display the ID of the Previous Graphic

Graphics in a **Browser** are ordered numerically, followed by alphabetically. To display the **ID** of the previous available graphic:

1. If the **Graphics Player** button is already selected in the **Recall Area** or the **Keypad**, then proceed to the next step. If the **Graphics Player** button is not already selected, then click the desired button.
2. Click **PREV**.

This operation does not load the graphic into the **Graphics Player Preview** channel. As such, you can click **PREV** multiple times to display the **ID** of the graphic that you would like to load, and then click **LOAD** to load the clip into the **Graphics Player Preview** channel.

Display the ID of the Next Graphic

Graphics in a **Browser** are ordered numerically, followed by alphabetically. To display the **ID** of the next available graphic:

1. If the **Graphics Player** button is already selected in the **Recall Area** or the **Keypad**, then proceed to the next step. If the **Graphics Player** button is not already selected, then click the desired button.
2. Click **NEXT**.

This operation does not load the graphic into the **Graphics Player Preview** channel. As such, you can click **NEXT** multiple times to display the **ID** of the graphic that you would like to load, and then click **LOAD** to load the clip into the **Graphics Player Preview** channel.

Load and Play Graphics

Graphics Load and Play Overview

To display a graphic in PRIME Switcher **Preview** or **Program**, the **Graphics Player** must be selected as a **Key** source, or if acting as a switcher source (as opposed to a key), then the **Graphics Player** must be selected as a switcher source. *See Set Transition Area, Set a Key Source, and Tying Together the Transition Area, Key Bus and Downstream Keyer, and The Graphic Plays, but Does Not Display in Switcher Program or Preview for additional information.*

Graphics playout can be a one or two-step process:

- **Play:** The graphic plays in the **Graphics Player Program** channel in one operation. The graphic's **Effect In** is applied.
- **Load, then Play:** The graphic loads into the **Graphics Player Preview** channel, and then a separate operation plays the clip in the **Graphics Player Program** channel. The graphic's **Effect In** is applied.

You can load or play a single graphic, or a sequence of ordered or unordered graphics:

- Ordered graphics are those that are arranged, in the **Scenes** or **Messages Browser**, in the numerical/alphabetical order in which they will load/play.
- Ordered graphics are those that are not necessarily arranged, in the **Scenes** or **Messages Browser**, in the numerical/alphabetical order in which they will load/play.

You can perform clip **Load** and **Play** operations using any of the following methods, and can mix and match them:

- Drag and drop from **Scenes** or **Message Browser** into **Graphics Player**
- **Graphics Player Transport Controls**
- **Keypad**
- **Recall Area/Recall Box**
- **Scenes or Messages Browser Transport Controls**

Note that **Keypad** operations are based on the **ID** that is displayed in the **Recall Box**, not on the graphic that is current in the **Graphics Player**.

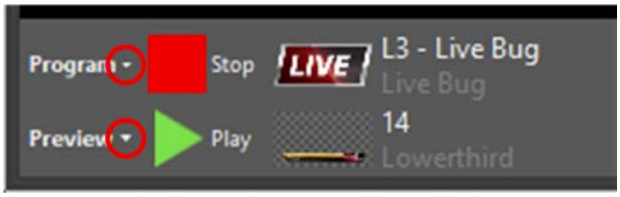
Select from Multiple Graphics in the Graphics Player Program or Preview Channel

When multiple graphics are present in the **Graphics Player Program** or **Preview** channel, you can select and play, stop, or close (remove) the graphic from the **Graphics Player**.

The currently selected graphic is displayed in the thumbnail, along with its name. The following shows that in the **Graphics Player Program** channel, **L3 - Live Bug** is selected, and in the **Graphics Player Preview** channel, **14** is selected. As such:

- In the **Graphics Player Program** channel, a **Stop** or **Close** operation performed from the **Graphics Player** is applied to the **L3 - Live Bug** graphic.
- In the **Graphics Player Preview** channel, a **Play** or **Close** operation performed from the **Graphics Player** is applied to the **14** graphic.

When multiple graphics are in the **Graphics Player Program** and/or **Preview** channel, a dropdown arrow appears next to **Preview** and/or **Program** in the **Graphics Player** interface.



Selecting a graphic does not change the state of the graphics in the **Graphics Player Program** or **Preview** channel. It changes the target of the next **Play**, **Stop** or **Close** operation, as performed directly from the **Graphics Player**.

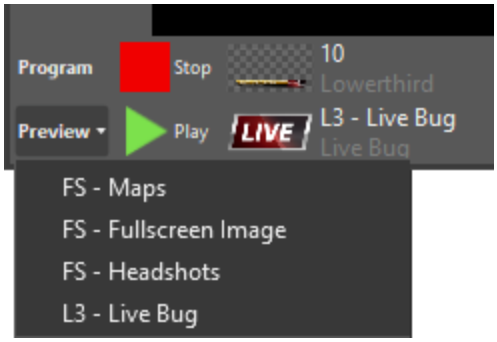
To select a different graphic:

1. In the **Graphics Player Preview** or **Program** channel, click "**Preview"** or **"Program**," respectively. The channel's drop-down displays. The following shows graphic **11** thumbnail in the the **Program** drop-down:

2. Select the desired graphic. In this exercise, select **L3 - Live Bug**.

The **Graphics Player Program** channel thumbnail now displays **L3 - Live Bug**.

Following is an example of a list of graphics in the **Graphics Player Preview** channel:

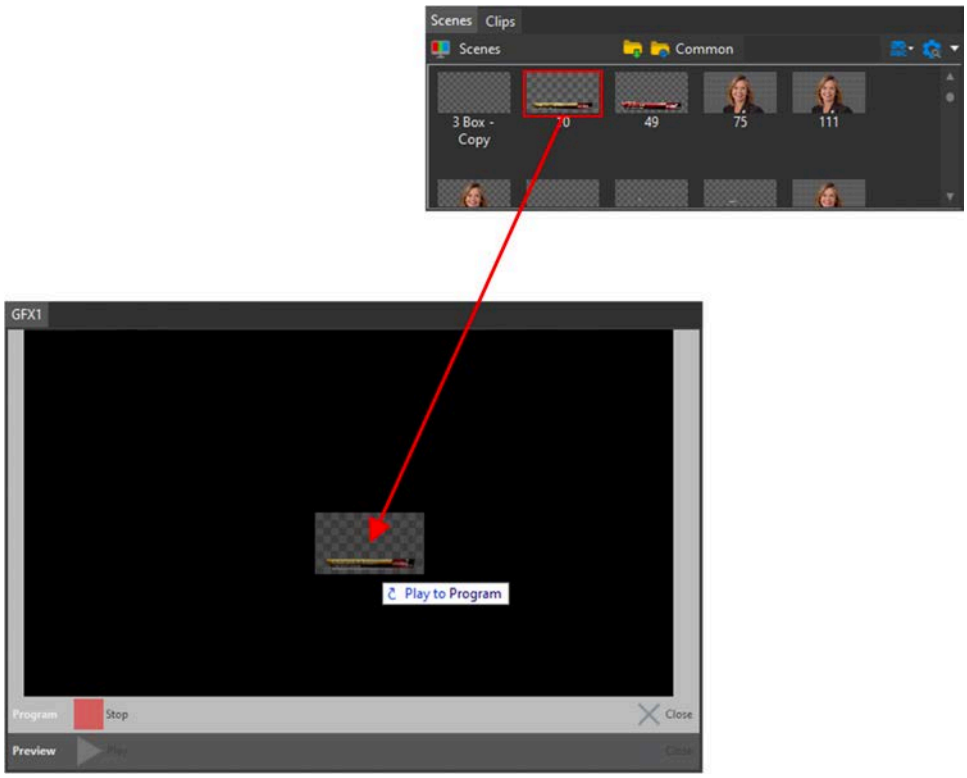


Play Graphics via Drag and Drop

You can play one or more graphics by dragging the graphics directly into the **Graphics Player Program** channel.

To play a graphic:

1. From the **Scenes Browser**, drag the desired graphic from the **Scenes Browser** to the **Graphics Player** monitor, until the **Graphics Player** monitor and the **Program** transport controls are highlighted.



If the **Graphics Program** channel and **Preview** channel monitors are separate, then drag the graphic into the **Program** channel monitor.

2. Release the mouse/touchpad select button. The graphic loads and immediately plays. The graphic's thumbnail appears to the right of the **Stop** button, along with the graphic's title and type.

3. To play additional graphics, repeat steps 1 and 2. Depending on the logic built into a graphic, playing a new graphic may transition one or more previous graphics off screen, or they may play simultaneously.

Load Graphics Using Drag and Drop

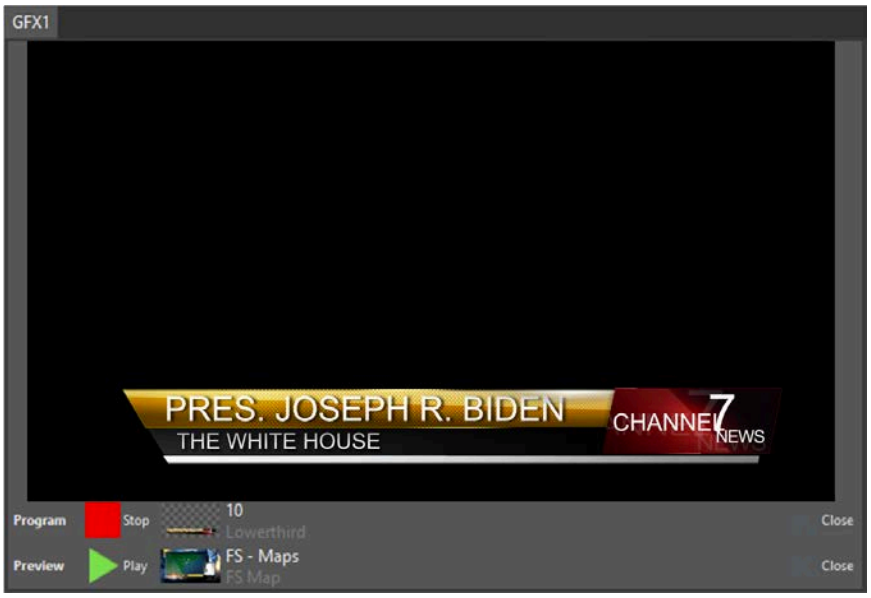
You can load one or more graphics into the **Graphics Player Preview** channel, and can then trigger the graphic to play to the **Graphics Player Program** channel.

To load a graphic to **Preview from the Scenes** or **Messages Browser**:

1. From the **Scenes** or **Messages Browser**, do one of the following:
    - Drag the desired graphic into the **Preview** channel row until the **Preview** channel row is highlighted.

    - If the **Graphics Program** channel and **Preview** channel monitors are separate, then drag the graphic into the **Preview** channel monitor.

2. Release the mouse/touchpad select button. The graphic is cued. The graphic's thumbnail appears next to "**Preview**."



To load additional graphics, repeat steps 1 and 2.

Load Graphics Using the Keypad/Recall Area

To load a graphic using the **Keypad**:

1. If the **Graphics Player** button is already selected in the **Recall Area** or the **Keypad**, then proceed to the next step. If the **Graphics Player** button is not already selected, then click the desired button. The **Recall Area** reflects the selection. The following figures show **Graphics 1** selected on the **Keypad** and in the **Recall Area**:

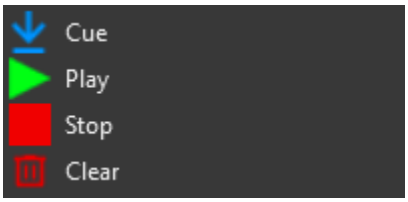
2. Do one of the following:
    - On the **Keypad**, enter the **ID** of the graphic to be displayed. This method works only for numeric **IDs**.
    - Click **NEXT** or **PREV** until the **ID** clip to be displayed appears in the **Recall Box**. This method works for both numeric and alphanumeric **IDs**.
    - Enter the **ID** from a physical keypad or keyboard by clicking the **Recall Box**, and then entering the **ID**.
3. Do one of the following:
    - Press **Enter**.
    - On the **Keypad**, click **LOAD**.

    The graphic loads into the **Graphics Player Preview** channel, and the **ID** in the **Recall Box** advances to the next available **ID**.
4. To load additional graphics, do one of the following:
    - If you are loading a graphic that is out of numerical/alphabetical order in the **Scenes** or **Messages Browser**, then repeat steps 2 and 3.
    - If you are loading graphics in numerical/alphabetical order in the **Scenes** or **Messages Browser**, then repeat step 3.

Load Graphics via the Scenes or Messages Browser Context Menu

To load a graphic into the selected **Graphics Player** from the **Scenes** or **Messages Browser** context menu:

1. In the **Scenes** or **Messages Browser**, right-click the graphic's thumbnail. The graphic's context menu appears:



2. Click the **Cue** icon.
3. To load additional graphics, repeat steps 1 and 2.

Play Graphics from the Graphics Player Preview Channel

To play a graphic that is in the **Graphics Player Preview** channel:

1. Do one of the following:
    - If the thumbnail of the graphic that you would like to play is displayed in the **Graphics Player Preview** channel, then proceed to step 2.
    - If the graphic that you would like to play is not displayed in the **Graphics Player Preview** channel, then in the **Graphics Player Preview** dropdown list, select the graphic to be stopped.
2. Click the **Play** icon 

in the **Graphics Player Preview** transport controls. The graphic immediately transitions to **Graphics Player Program** applying the **Effect In** set in the graphic and starts to play.
3. To play additional graphics, repeat steps 1 and 2. Depending on the logic built into a graphic, playing a new graphic may transition one or more current graphics off screen, or they may play simultaneously.

Play Graphics Using the Keypad

To play a graphic using the **Keypad**:

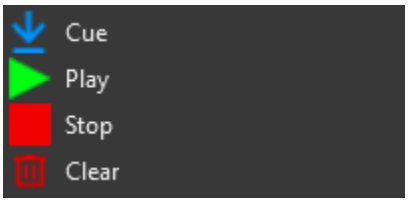
1. If the **Graphics Player** button is already selected in the **Recall Area** or the **Keypad**, then proceed to the next step. If the **Graphics Player** button is not already selected, then click the desired button. The **Recall Area** reflects the selection. The following figures show **Graphics 1** selected on the **Keypad** and in the **Recall Area**:

2. If the **Recall Box** already displays the **ID** of the graphic to play, then proceed to step 3. If not, then do one of the following:
    - On the **Keypad**, enter the **ID** of the graphic to be displayed. This method works only for numeric **IDs**.
    - Click **NEXT** or **PREV** until the **ID** clip to be displayed appears in the **Recall Box**. This method works for both numeric and alphanumeric **IDs**.
    - Enter the **ID** from a physical keypad or keyboard by clicking the **Recall Box**, and then entering the **ID**.
3. On the **Keypad**, click **PLAY**. The graphic plays.
4. To play additional graphics, repeat steps 2 and 3. Depending on the logic built into a graphic, playing a new graphic may transition one or more current graphics off screen, or they may play simultaneously.

Play a Graphic via the Scenes or Messages Browser Context Menu

To play a graphic from the selected **Scenes** or **Messages Browser** context menu:

1. In the **Scenes** or **Messages Browser**, right-click the graphic's thumbnail. The graphic's context menu appears:



2. Click the **Play** icon.
3. To play additional graphics, repeat steps 1 and 2. Depending on the logic built into a graphic, playing a new graphic may transition one or more current graphics off screen, or they may play simultaneously.

Play Graphics from the Keypad/Recall Area without Loading Graphics

You can play a graphic or an unordered or ordered sequence of graphics from the **Keypad/Recall Area** without loading the graphics into **Graphics Player Preview**. An ordered sequence is based on the numerical/alphabetical order of the graphics in the **Browser**.

1. In the **Keypad** or **Recall Area**, click the **Graphics 1** or **Graphics 2** button.
2. Press **DEL** to clear the **Recall Box**.
3. Do one of the following:
    - On the **Keypad**, enter the **ID** of the first graphic to be displayed. This method works only for numeric **IDs**.
    - Click **NEXT** or **PREV** until the **ID** clip to be displayed appears in the **Recall Box**. This method works for both numeric and alphanumeric **IDs**.
    - Click the **Recall Box** and enter the **ID**.
4. Click **PLAY**. The graphic whose **ID** is displayed in the **Recall Box** plays.
5. Click **NEXT**, then **PLAY**. The next graphic in the sequence plays.
6. To play each subsequent graphic in the sequence, repeat step 5.

Note the following:

- Try this method prior to going on air. Depending upon the logic built into the graphics, they may behave differently from described above, e.g., playing a new graphic may transition one or more current graphics off screen, or they may play simultaneously.
- When playing messages in this manner:
    - No new thumbnail displays in the **Graphics Player Preview** channel.
    - The thumbnail already in the **Graphics Player Program** channel does not update as each message is played.
- When playing scenes in this manner:
    - No new thumbnail displays in the **Graphics Player Preview** channel.
    - The thumbnail in the **Graphics Player Program** channel updates as each scene is played.

Stop: Apply Effect Out and Transfer to Graphics Player Preview

Stop Overview

The **Stop** operation transitions the graphic off the **Graphics Player Program** channel using the graphic's **Effect Out** and transfers it to the **Graphics Player Preview** channel. It can then be played again to the **Graphics Player Program** channel.

Stop a Graphic from the Graphics Player

To stop a graphic from the **Graphic Player's Program Channel**:

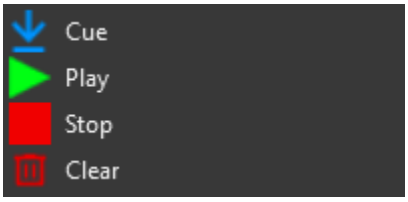
- Do one of the following:
    - If the thumbnail of the graphic that you would like to stop is displayed in the **Graphics Player Program** channel, then proceed to step 2.
    - If the thumbnail of the graphic that you would like to stop is not displayed in the **Graphics Player Program** channel, then in the **Graphics Player Preview** dropdown list, select the graphic to be stopped.
- In the **Graphics Player**, click the **Stop** icon 

. The graphic transitions to **Preview**, applying the **Effect Out** set in the graphic.

Stop a Graphic via the Scenes or Messages Browser Context Menu

To stop a graphic in the selected **Graphics Player**, from the **Scenes** or **Messages Browser** context menu:

3. In the **Scenes** or **Messages Browser**, right-click the graphic's thumbnail. The graphic's context menu appears:



4. Click the **Stop** icon.

Close: Apply Effect Out, Do Not Transfer to Preview Channel

The **Close** operation removes a graphic from either the **Graphics Player Program** or **Preview** channel, depending upon the channel in which the **Close** operation is performed:

- If performed in the **Graphics Player Program** channel, transitions the graphic whose thumbnail is displayed off the **Graphics Player Program** channel, applying the graphic's **Effect Out**. Unlike the **Stop** operation, the **Close** operation does not transfer the graphic to the **Graphics Player Preview** channel.
- If performed in the **Graphics Player Preview** channel, removes the graphic whose thumbnail is displayed from the **Graphics Player Preview** channel.

To transition a graphic off the **Graphics Player Program** channel or remove the graphic from the **Graphics Player Preview** channel:

1. Do one of the following:
    - If the thumbnail of the graphic that you would like to transition off (**Graphics Player Program** channel) or remove (**Graphics Player Preview** channel) is displayed in the respective channel control, then proceed to step 2.
    - If the thumbnail of the graphic that you would like to transition off/remove is not displayed in the **Graphics Player Program** or **Preview** channel control, then from the channel's dropdown list, select the graphic to be closed.
2. Click the **Close** icon in the channel. The following shows the **Close** icon unhighlighted and highlighted when the mouse hovers over the icon.

The graphic is removed.

Clear: Remove Graphic Using a Cut

Clear Graphic Overview

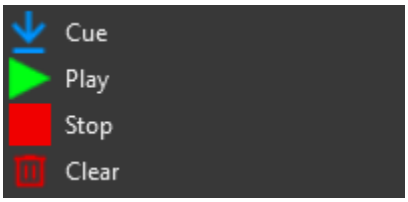
The **Clear** operation removes a graphic from either the **Graphics Player Program** or **Preview** channel, depending upon the channel in which the **Close** operation is performed:

- If performed in the **Graphics Player Program** channel, removes the graphic whose thumbnail is displayed off the **Graphics Player Program** channel. The graphic's transition is not applied and cuts off of the **Graphics Player Program** channel.
- If performed in the **Graphics Player Preview** channel, removes the graphic whose thumbnail is displayed from the **Graphics Player Preview** channel.

Clear a Graphic via the Scenes or Messages Browser

To clear a graphic from the selected **Graphics Player**, from the **Scenes** or **Messages Browser** context menu:

1. In the **Scenes** or **Messages Browser**, right-click the graphic's thumbnail. The graphic's context menu appears:



2. Click the **Clear** icon.

Clear a Graphic Using the Keypad

To clear a graphic from a **Graphics Player** using the **Keypad**:

1. Click the **Graphics Player** from which you would like to clear a graphic, click the **Graphics Player** button. If the button is already selected, then proceed to the next step.
2. Click **CLEAR**. The following occurs, depending upon the **Graphics Player** configuration:
    - If the **Graphics Player Preview Channel** and **Graphics Player Program Channel** display on their own **Graphics Player** monitors, then with each **CLEAR** click, the a scene clears from the last selected channel as follows:
        - If the last selected **Graphics Player** channel is **Graphic Player Preview**, then the most recently loaded scene clears.

        - If the last selected **Graphics Player** channel is **Graphic Player Program**, then the currently active scene clears.

    - If the **Graphics Player Preview Channel** and **Graphics Player Program Channel** share the same **Graphics Player** monitor, then:

        - If there are one or more graphics in the **Graphics Player Preview** channel, then with each **CLEAR** click, the most recently loaded scene clears from the **Graphics Player Preview** channel.

        - Once all graphics are cleared from the **Graphics Player Preview** channel, then with each **CLEAR** button click, the currently active scene clears from the **Graphics Player Program** channel.

Delete Graphics ID from the Recall Box

To clear the **Recall Box** in the **Recall Area**, do one of the following:

- In the **Recall Box**, erase the **ID**.
- On the **Keypad**, click **DEL**.

The Graphic Plays, but Does Not Display in Switcher Program or Preview

For a graphic to appear on the switcher **Preview** or **Program** channel, you must do one of the following:

- Select the **Graphics Player** as a **KEY** source for the **Main Bank Preset** or **Program** bus, respectively.
- Select the **Graphics Player** as a **KEY** source for the **ME1 Bank Program** bus, and select **ME1** as a source for the **Main Bank Preset** or **Program** bus, respectively.
- Select the **Graphics Player** as a source for the **Main Bank Preset** or **Program** bus, respectively.
- Select the **Graphics Player** as a source for the **ME1 Bank Program** bus, and select **ME1** as a source for the **Main Bank Preset** or **Program** bus, respectively.

Otherwise, the graphic plays only in the **Graphics Player**.

The Graphic Plays, but Does Not Display in Switcher Program or Preview

If a graphic(s) is playing, and does not transition to switcher **Program**, then ensure that the **Graphics Player** is associated with a **Key**, and that the **Key** is active in the **Transitions Area**, i.e., the **Key** button is lit.

For example, if you would like **Graphics 1** to transition as a source for **Key 1**, then you must associate it with **Key 1**. To specify that it should transition, then you must activate the **Key 1** button in the **Transition Area**.

See Set Transition Area, Set a Key Source, and Tying Together the Transition Area, Key Bus and Downstream Keyer for additional details.

Graphics Playback via PRIME Playlist and PRIME Commander

In addition to direct playout from the **Graphics Player(s)**, **Keypad**, **Recall Area**, and **Scenes/Message Browsers**:

3. The PRIME Playlist can trigger graphics playback from within PRIME Switcher.

4. Chyron PRIME Commander, an optional PRIME Live Platform control interface, can trigger graphics playback. *See the PRIME Commander User Guide for additional information.*

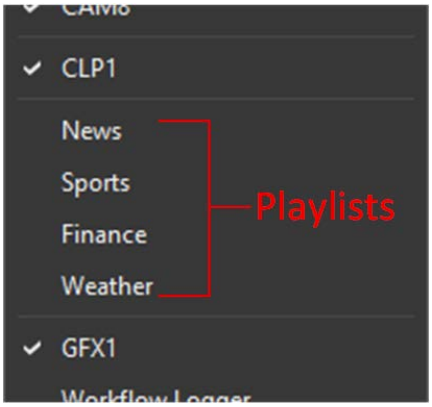
Chapter 17: PRIME Playlist Graphics and Clip Playback within PRIME Switcher

Overview

PRIME Switcher can play back scenes, messages, images, and clips from a PRIME **Playlist**. The PRIME playlist plays within the PRIME **Playlist Player**.

Playlist Players are configured in the **Config Menu > Playout Configuration > Playlists**. You can add **Playlist Players**, and specify if they should auto-advance to the next playlist item after an item is played. The name of any **Playlist Player** that is configured in the currently active PRIME configuration displays in the **View** menu. *See Configure Playlist Players for additional information.*

The playlists display in the **View** menu, between the **CLP (Clips) and GFX (Graphics) Players**:



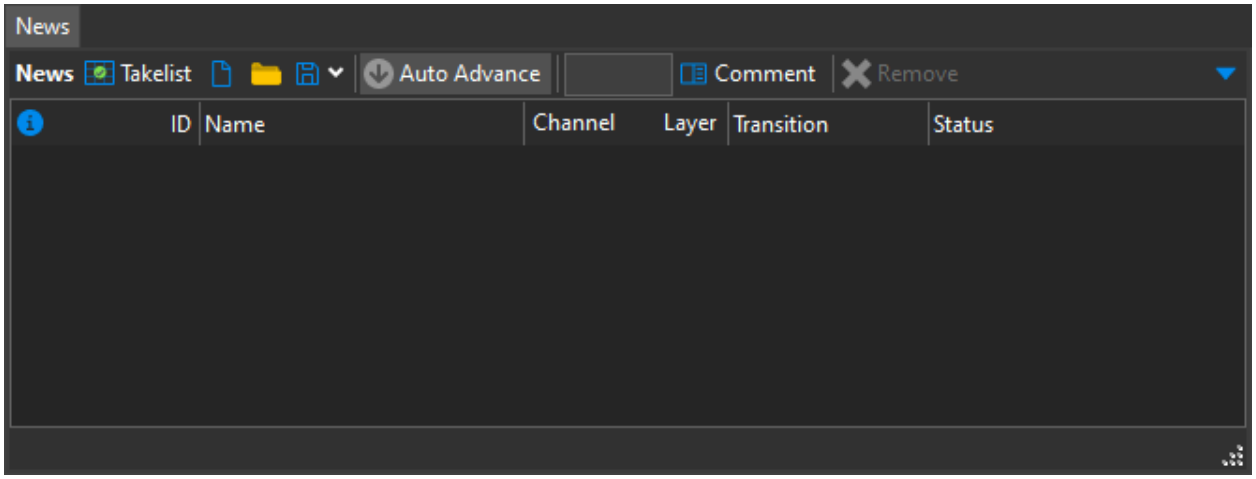
Display Playlist Player

To display a **Playlist Player**:

- From the **View menu**, check the desired playlist. The **Playlist Player** opens. The **Playlist Player** may initially display along the bottom of the PRIME Switcher UI.

You can simultaneously display multiple playlists. This could be advantageous for displaying different playlists by program segment, or for displaying separate playlists for different types of graphics and clips.

The following figure shows a blank **Playlist Player**. Note that if you would like to see more of the playlist, then you can move it to a different location and resize it for easier viewing.



Playout Modes

Each **Playlist Player** provides two playout modes:

- **Take List Mode:** You can add/delete/modify playlist items at any time, and play the playlist in any order.
- **Sequence Mode:** The playlist operates as sequencer. Items can have pauses and play in a linear fashion. You can set a pause for one or more playlist items.

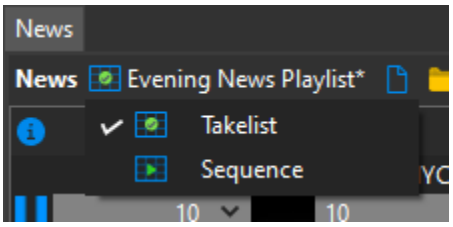
The icon to the left of the **Playlist Name** specifies the currently active mode.

Take List Mode

Sequence Mode

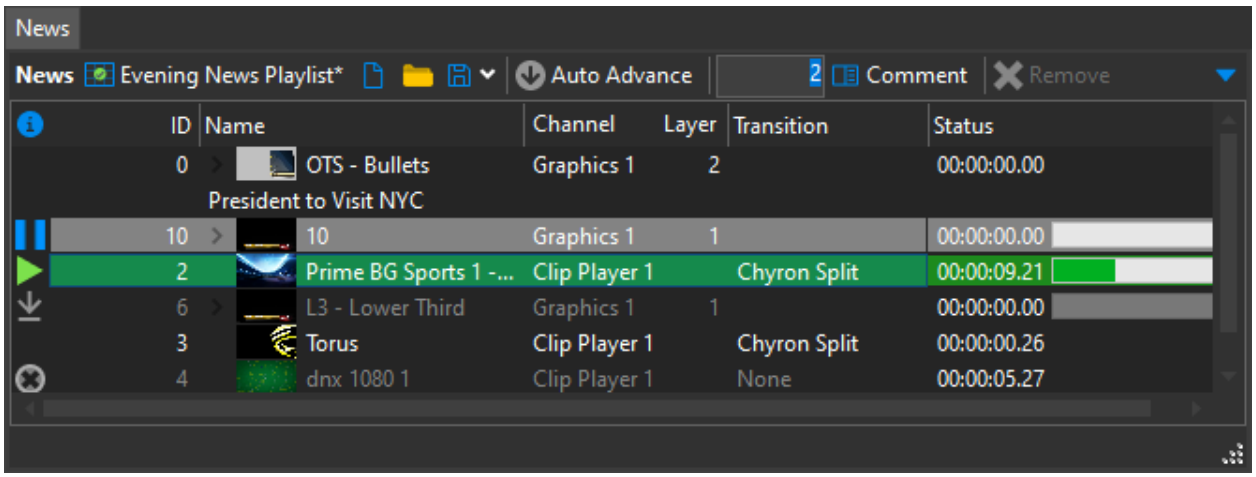
To select a playout mode:

1. In the **Playlist Player** toolbar, click the playlist **Name**. The **Playout Mode** dropdown appears:

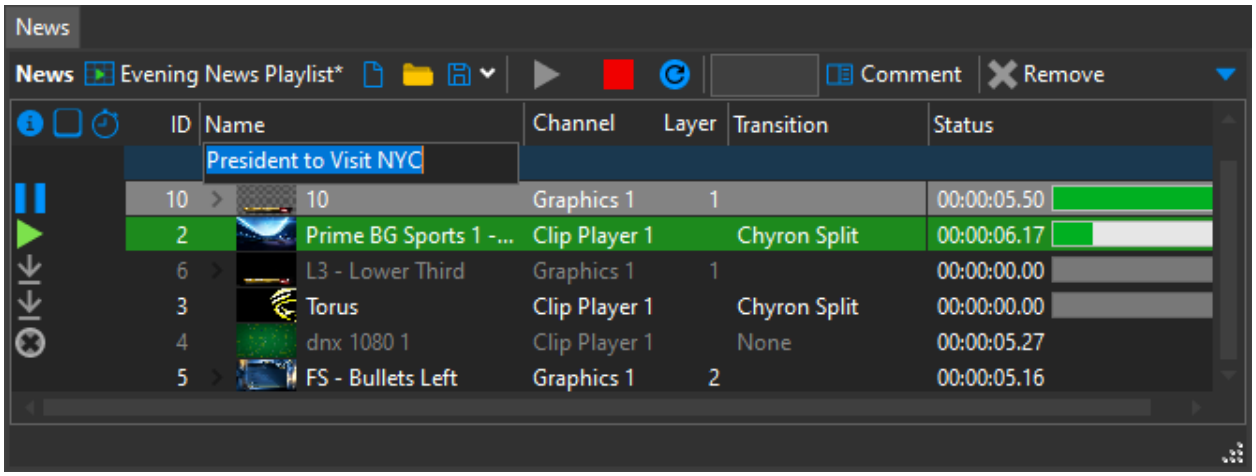


2. Select the playout mode.

The following figure shows an example of a playlist in **Take List Mode**. Note the **Take List Mode** icon  to the left of the **Playlist Name**.



The following figure shows an example of a playlist in **Sequence Mode**. Note the **Sequence Mode** icon to the left of the **Playlist Name**.

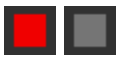
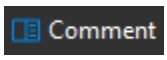


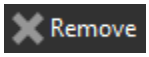
Playlist Player in Detail

The **Playlist Player** provides many tools with which to customize playout. The **Take List Mode** and **Sequence Mode** interfaces feature most of the same tools, with a few differences, noted as follows:

Playlist Player toolbar:

- **Playlist Player Name:** Name of the **Playlist Player**.
- **Mode:**
  - **Take List Mode:** Indicates **Take List Mode**.
  - **Sequence Mode:** Indicates **Sequence Mode**.
- **Playlist Name:** Name of the playlist.
- **New Playlist:** Creates new playlist.
- **Open Playlist:** Displays browser, from which you can select and open a playlist.
- **Save/Save As:**
  - **Save** saves changes to the currently loaded playlist.
  - **Save As** saves current playlist to a different/new playlist file.
- Auto Advance **Auto Advance (Take List Mode Only):** Automatically advances to the next item in the playlist, after the current item has been triggered.

-  **Play (Sequence Mode Only):** Starts sequence playout. Is grayed out while the playlist is playing.
-  **Trigger (Sequence Mode Only):** Triggers the next item in the playlist. This may be an effect within a scene or message, or the next item in the list. When active, the **Trigger** icon displays in the same space on the toolbar as the **Play** icon.
-  **Stop (Sequence Mode Only):** Stops sequence playout, transitioning the graphic(s)/clips off air. Is grayed out while inactive.
-  **Loop: (Sequence Mode Only):** Loops sequence playout. Displays gray background when active, black background when inactive..
-  **Recall Box:** Provides the ability to enter an ID number to recall and load an item into the **Playlist Player**.
- 

Comment: Inserts a text line above the currently selected item in the playlist, in which you can enter a comment. The comment is strictly informational, and does not play.
- 

Remove: Removes the item from the playlist.
-  **Dropdown Arrow:** Accesses Playlist Appearance settings, and provides the ability to close the **Playlist Player**.

Playlist Player columns:

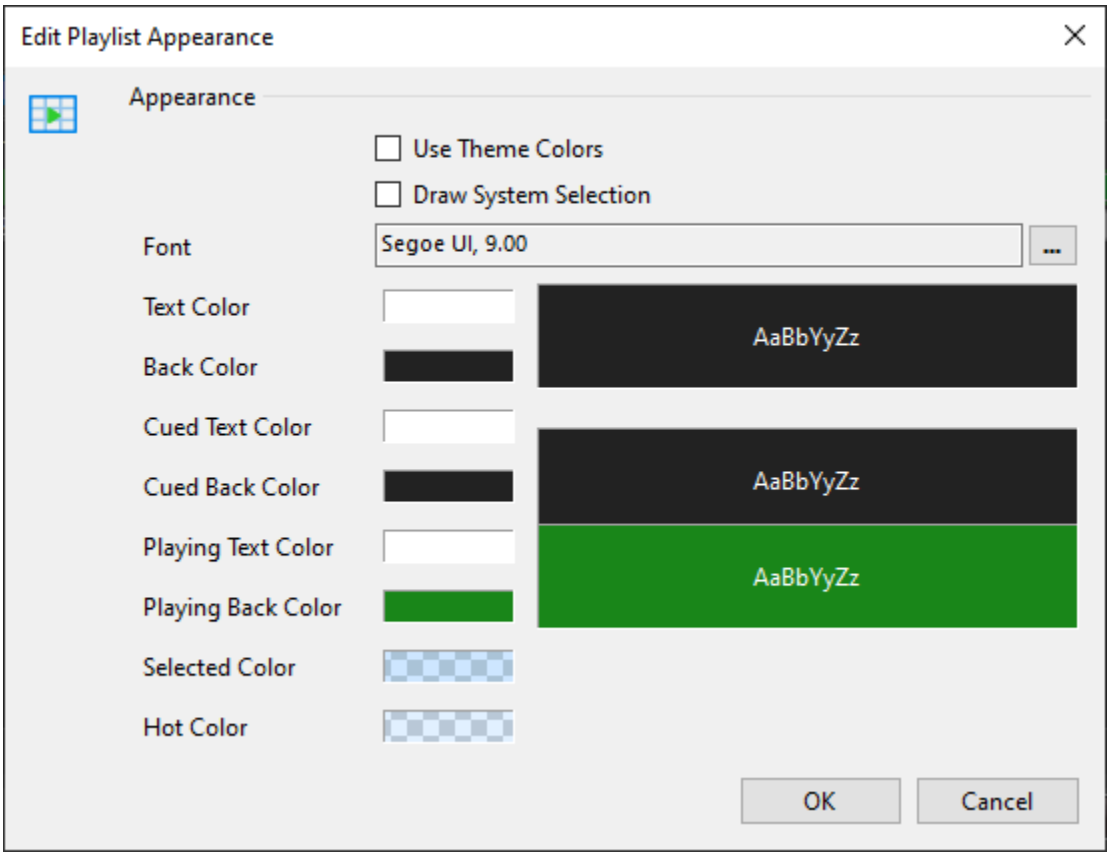
-  **Information:** Indicates the status of the playlist items, e.g., loaded in **Graphics Player Preview**.
    -  **Pause:** Displays when waiting for a trigger, and when the item has completed playout.
    -  **Play:** Item currently playing.
    -  **Cued:** Playlist item is in **Graphics Player Preview** or **Clip Player Cued**.
    -  **Disabled:** Skip item in playlist.
-  **Pause before Play (Sequence Only):** A playlist item marked with a **Pause before Play** icon waits for a trigger  prior to playing.
-  **Duration (Sequence Only):** The duration of an item marked with a **Duration** icon can be modified.

- **ID:** The number that is used to play the item to air. If the scene, message, image, or clip does not have a **Message ID** associated with it, then the playlist assigns the next available ID. IDs are assigned from the PRIME **Scene Property Editor**, or from **Edit Message**, available from the PRIME Switcher **Assets Browser**.
- **Name:** Name of the playlist item.
- **Channel:** Channel to which the item plays out. You can change the playout **Channel**.
- **Layer:** Layer within the **Channel** to which the item plays out. You can change the playout **Layer**.
- **Transition (Clips/Images Only): Transition Effect** (if any) to be applied to the clip or image as it transitions on screen. You can change or remove the **Transition Effect**.
- **Status:** Displays the duration of the current effect in a scene or message, e.g., an **Effect In**, and the progress bar of the playout of the current item.

Edit Playlist Appearance

You can control how the playlist displays the various states of the playlist items. To access the settings:

- In the playlist toolbar, click the dropdown arrow at the far right  . The **Edit Playlist Appearance** dialog displays.



- Set the fonts and colors as desired.
    - To set colors that are different from the **Theme Colors** and/or **Draw System Selection** colors, disable their respective checkboxes, and then set font and colors as desired.
    - The **Theme** colors include all settings except **Selected Color** and **Hot Color**. To set to **Theme** colors, select (check) the **Use Theme Colors** checkbox.
    - The **Draw System Selection** settings include **Selected Color** and **Hot Color**. To set to **Draw System Selection** colors, select (check) the **Use Theme Colors** checkbox.

Note that if a playlist item is selected, or the cursor is hovered over a playlist item, then the playlist item displays the selection color. As the **Selected Color** and **Hot Color** are transparent, the underlying color also shows through.

Create New Playlist

To create a new playlist:

1. In the toolbar, click the **New Playlist** icon  . A blank **Playlist Player** appears.
2. From the PRIME Switcher **Scenes**, **Messages**, **Images** and **Clips** browsers, drag the item's thumbnail from the browser into the playlist.
3. Repeat step 2 to build the playlist.

Load Existing Playlist

To load an existing playlist into a **Playlist Player**, do one of the following:

- Open the **Playlists Browser**, and then drag the desired playlist to the **Playlist Player**.
- Click the **Open Playlist** icon  , and then browse to and select the desired playlist file.

The playlist loads into the **Playlist Player**.

You can drag items from the PRIME Switcher **Assets Browser** into an existing playlist.

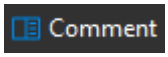
Reposition a Playlist Item

To reposition a playlist item, i.e., move it up or down in the playlist:

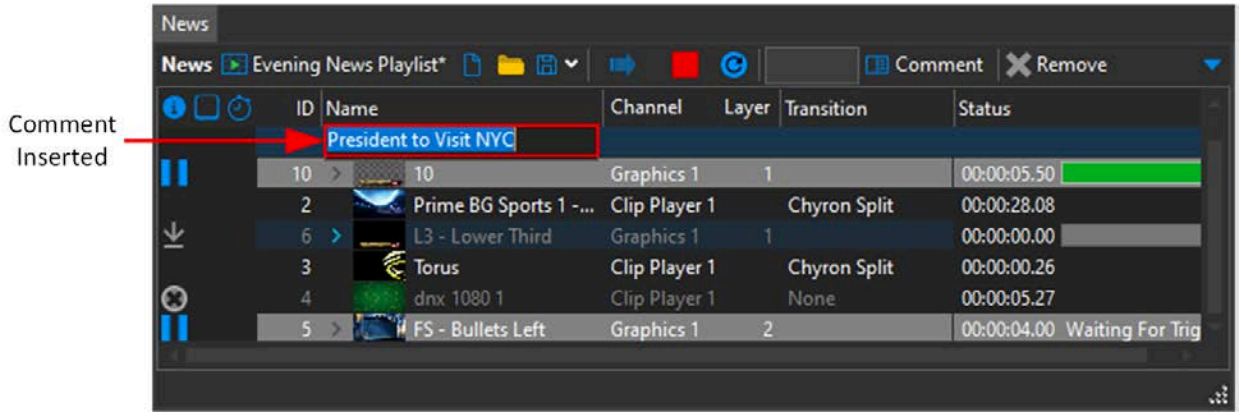
- Drag and drop it to the new position.

Add Comment to Playlist

You may like to add a comment, e.g., a description, to an upcoming item on the playlist. The comment is strictly informational, and does not play. To add:

1. Select the playlist item to which you would like to add the comment.
2. In the playlist toolbar, click the **Comment** icon 

. A row appears above the selected item.
3. Type the text in the comment field, and then press **Enter**.

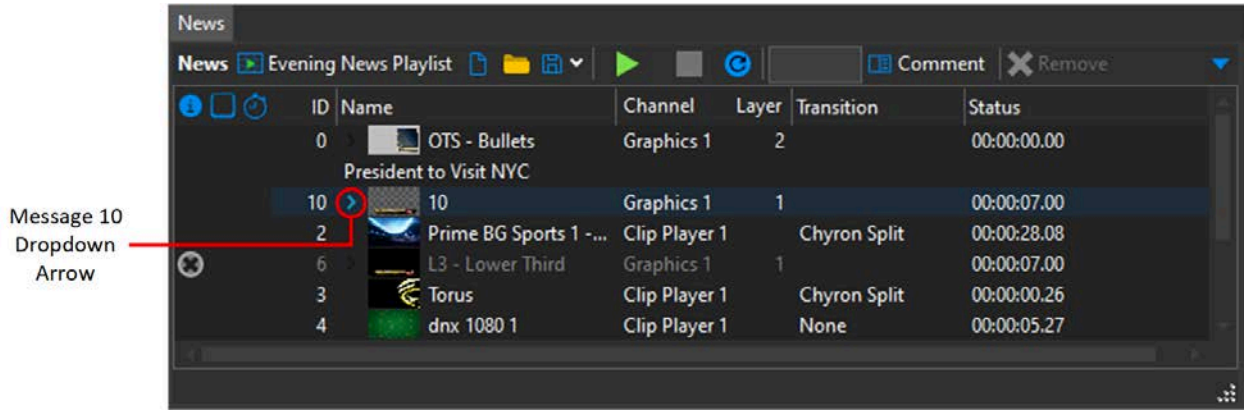


Override Scene/Message Replaceables and Play Transitions

You can view and edit a scene or message that has replaceable text, image, and clip fields, and specify transitions. For example, you can change the text in a field, or transition in/out a graphic element.

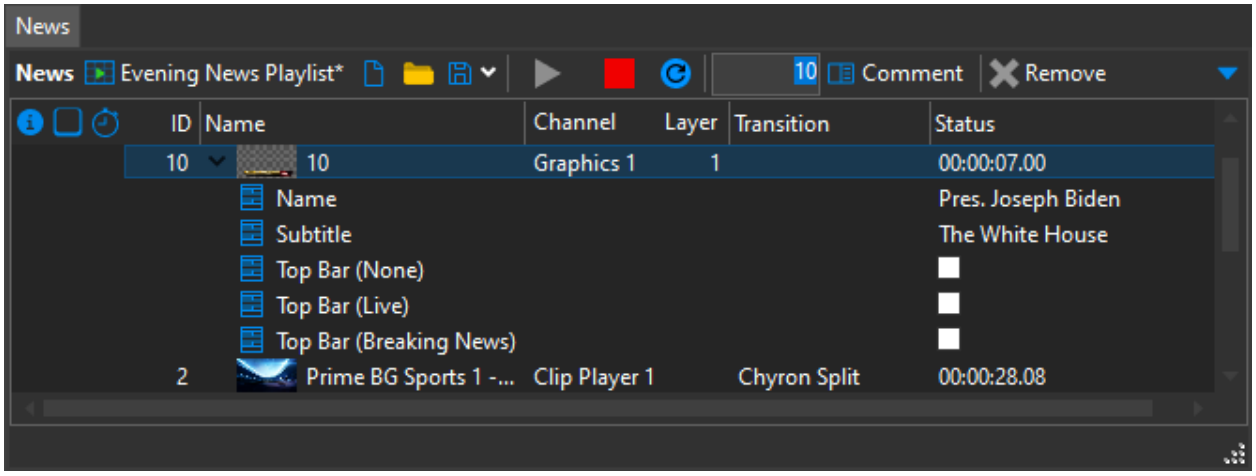
To modify a scene or message:

- Select the scene/message, and then click the arrow directly to the left of its **Name**.



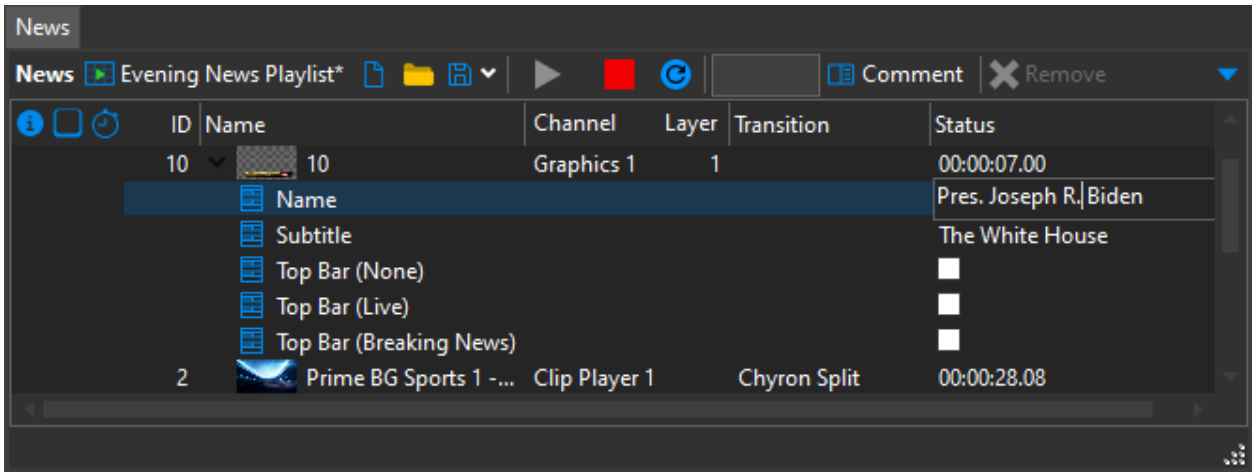
The modifiable elements display.

The following figures display message 10 in the playlist, expanded to display the elements, and the same message on screen:



Suppose that you would like to add a middle initial to Joseph Biden's name. To edit the text field:

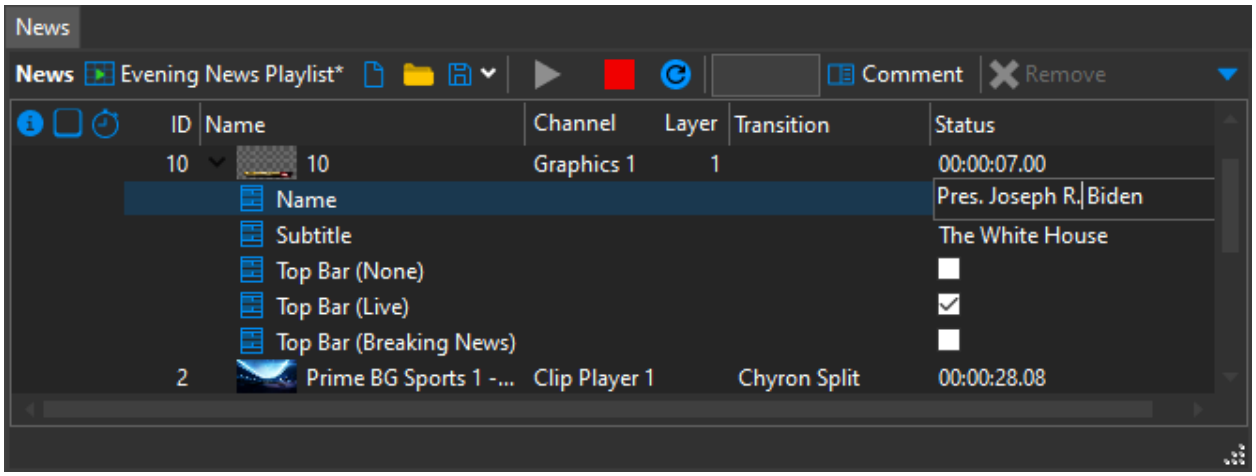
- Click the **Status** field, and then edit the name.



The change is reflected in the graphic upon playout:

The checkboxes in the playlist indicate available transitions. To enable the transition:

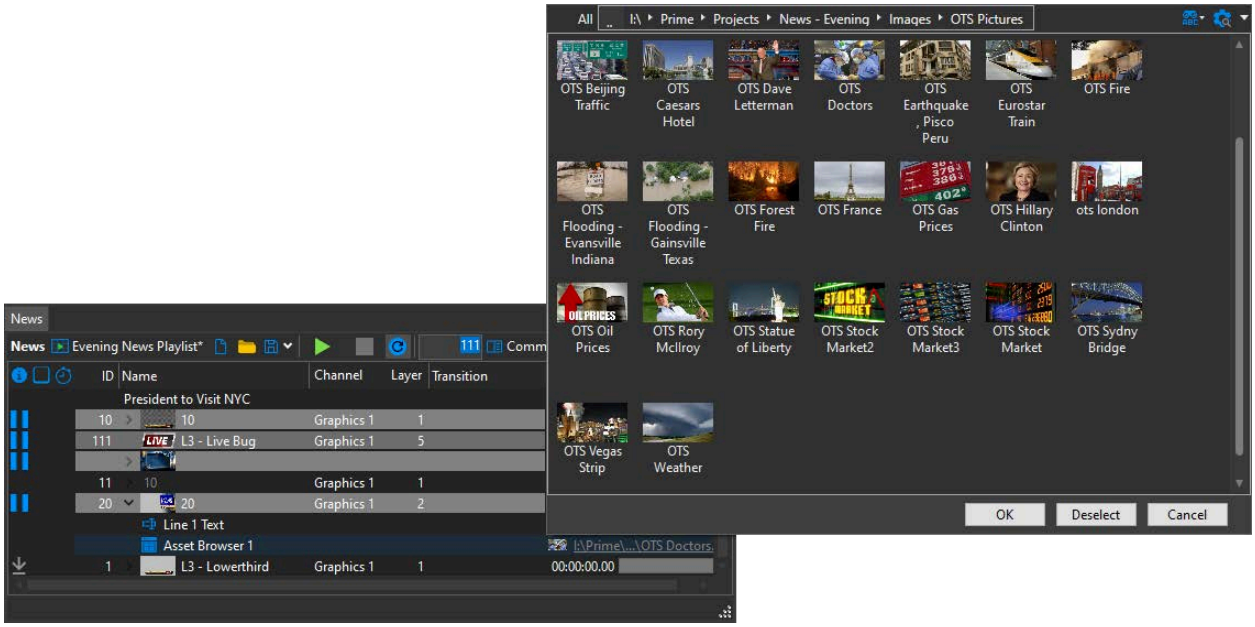
- Check the transition's checkbox. The following playlist shows the **Top Bar (Live)** transition activated.

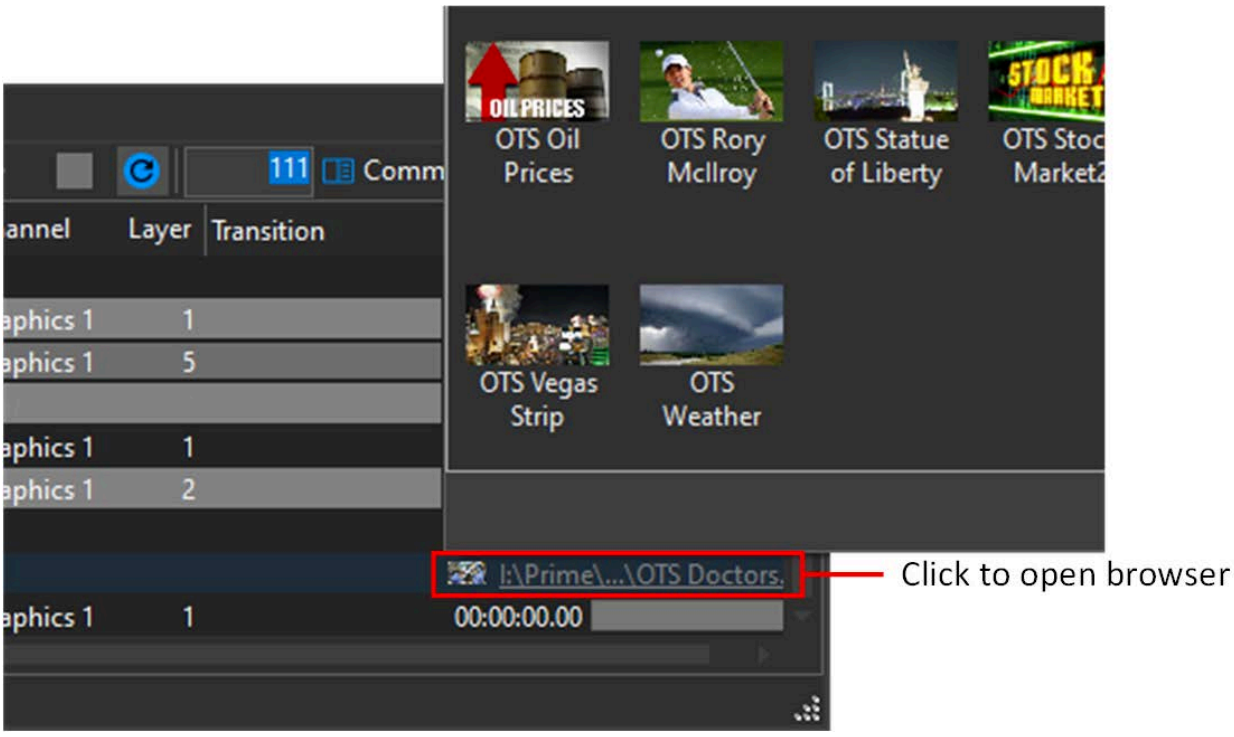


The **Top Bar (Live)** transitions on screen:

In scenes and messages that have replaceable images and/or movies, you can modify them, as well. For example to override an image:

1. Click on the link to the image to open the browser.





2. Select the desired image, and then click **OK**.

Disable/Enable Playlist Item

You can disable an item in the playlist, without removing it. When an item is disabled, it is grayed out. To disable playout of an item:

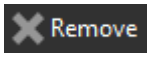
- Select the item, and then click the **Information** field  for the item. Make sure that you click within the **Information** field, and not in the fields to the right of the **Information** field.
    - If the **Information** field is blank, then the **Disabled** icon  appears, and the playlist item grays out.
    - If the **Information** field already displays a **Cued** icon  , then the **Disabled** icon does not appear. The playlist item grays out.

To re-enable playout:

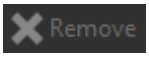
- Select the item, and then click the **Information** field  for the item. Make sure that you click within the **Information** field, and not in the fields to the right of the **Information** field.
    - If the **Information** field displayed the **Disabled** icon  , then it disappears, and the playlist item is no longer grayed out.
    - If the **Information** field displayed a **Cued** icon  , then the **Cued** icon continues to display, and the playlist item is no longer grayed out.

Delete Item from the Playlist

To delete an item from a playlist, do one of the following:

- Select the item, and then press **Delete**.
- Select the item, and then click 

. The item is removed from the playlist.

Note that if **Remove** is grayed out in the toolbar 

, it indicates that the selected item cannot be removed at that time. The item may be in a **Play** or **Pause** mode.

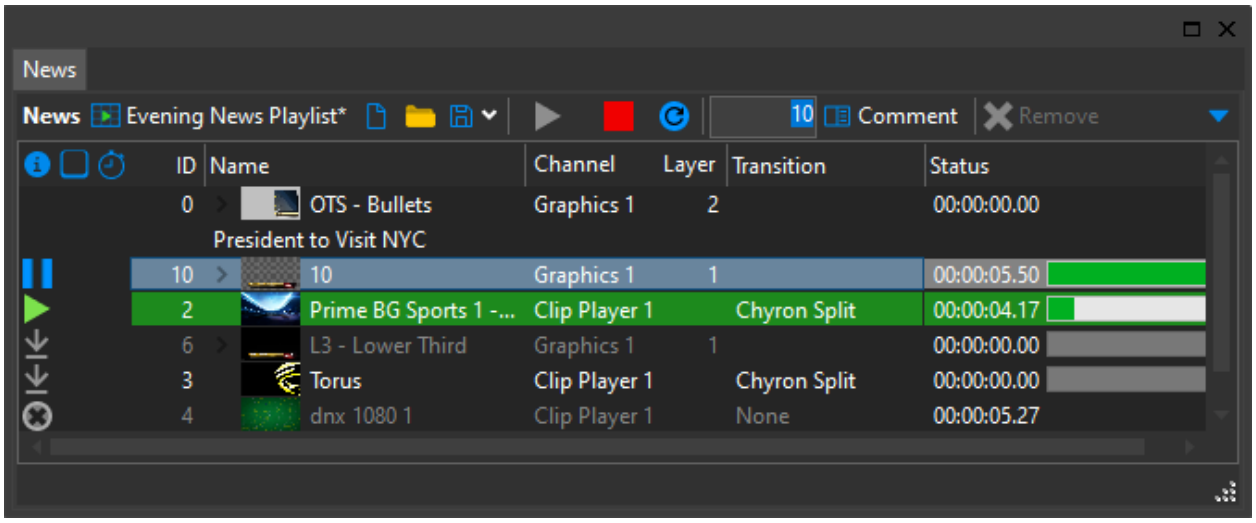
Play the Playlist

You can play the playlist in either **Take List Mode** or **Sequence Mode**. Multiple messages can play simultaneously.

Sequence Mode

If in **Sequence Mode**:

1. In the playlist toolbar, click the **Play** icon or press **Enter** to start playlist playout. The playlist automatically plays through the items in the list. Notice that the **Play** icon becomes gray, and the **Stop** icon becomes red.



2. When the **Trigger** icon appears in the **Playlist Player** toolbar, it indicates that the **Playlist Player** is waiting for an item or an effect within an item trigger. Click the **Trigger** icon to play. The item plays and the playlist displays a green highlight.

If the item is a scene that has multiple transitions, e.g., bullet reveals, then the playlist item flashes, and displays a message **Waiting for Trigger**.

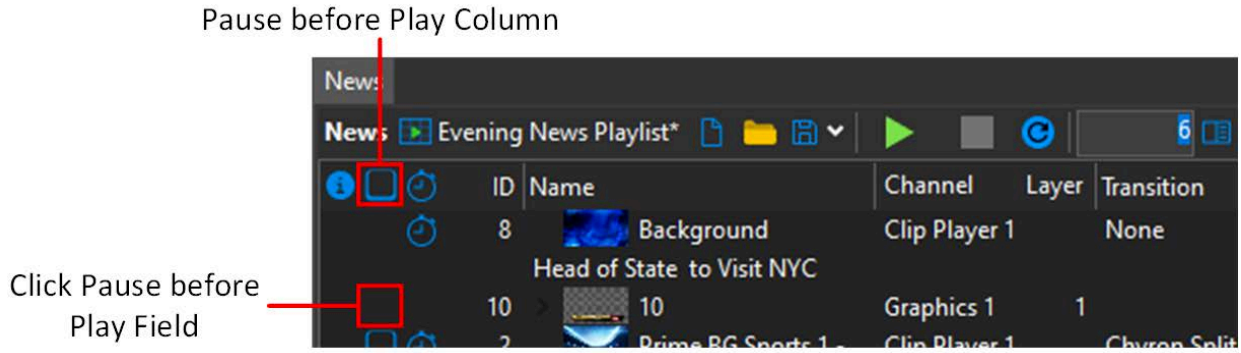
- In the playlist toolbar, click the **Trigger** icon or press **Enter** to trigger each transition.

You can set items to pause before playing. *See* *Set Pause before Play for an Item*.

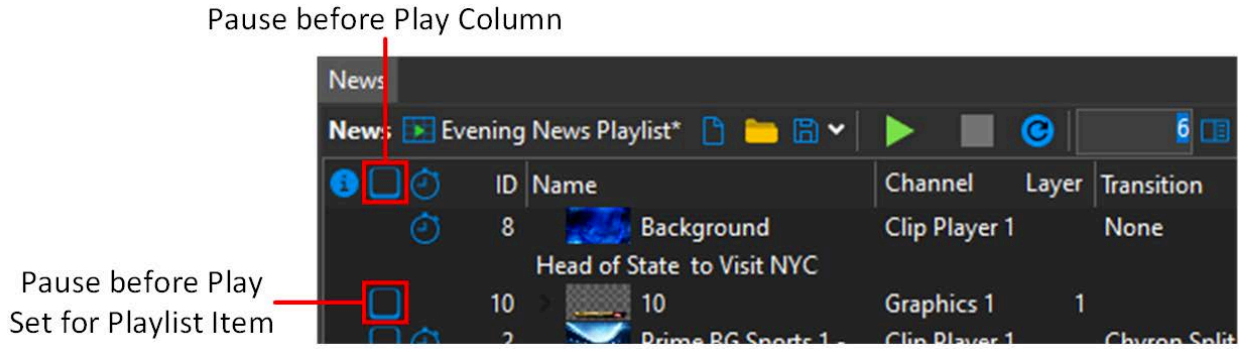
Set Pause before Play for an Item

In **Sequence Mode**, the playlist automatically advances and plays each item. To require a trigger to play and item:

- Click the **Playlist Pause before Play** field for the item.



The **Pause before Play** icon appears.



When playlist playout reaches this item, the playlist will pause until you trigger the item.

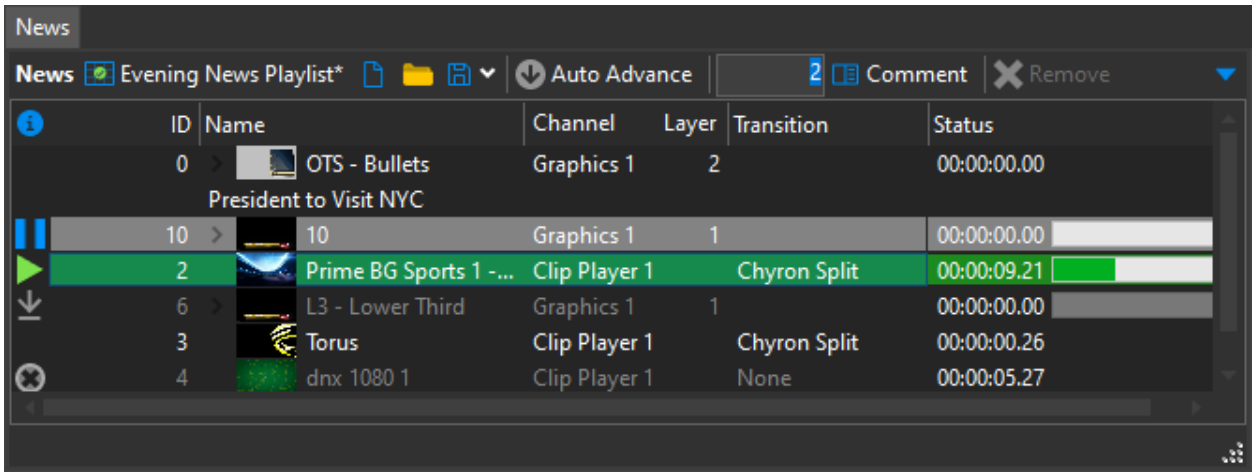
To disable **Pause before Play**:

- Click the **Playlist Pause before Play** icon for the item. The **Pause before Play** icon disappears, and when playlist playout reaches the item, the item plays automatically.

Take List Mode

If in **Take List Mode:**

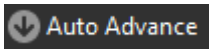
- Click the item that you would like to play, end then press **Enter**.

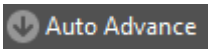


If the item is a scene that has multiple transitions, e.g., bullet reveals, then the playlist item flashes.

- Press **Enter** to trigger each transition, and to trigger subsequent playlist items.

In **Take List Mode**, you can set a playlist to automatically advance to the next item in the list, as the current item plays. The next item is then ready to trigger. To set:

- In the **Playlist Player** toolbar, click **Auto Advance** 

. The **Auto Advance** tool displays a gray background when active 

.

To disable **Auto Advance**:

- In the **Playlist Player** toolbar, click **Auto Advance**.

Playlist Playout State

The playlist highlights items based on their playout status, in the colors as set in the Edit Playlist Appearance dialog. As the playlist plays, the **Information** column also displays icons that specify playout status.

- **Currently Playing:** The item is currently playing. Note that if the scene/message has multiple effects, then the progress bar shows the status of the current effect. If the playlist item is flashing, then it is waiting for a trigger.
- **Cued:** Playlist item is in **Graphics Player Preview** or **Clip Player Cued**.
- **Paused:** Displays when waiting for a trigger, and when the item has completed playout. If the playlist item is flashing, then it is waiting for a trigger.
- **Disabled:** The item is disabled, and is skipped during playlist playout.

The **Status** displays the duration of the current effect in a scene or message, e.g., an **Effect In**, and the progress bar of the playout of the entire scene/message.

The left side of the **Status** column displays the duration of the current effect in a scene or message, e.g., an **Effect In**.

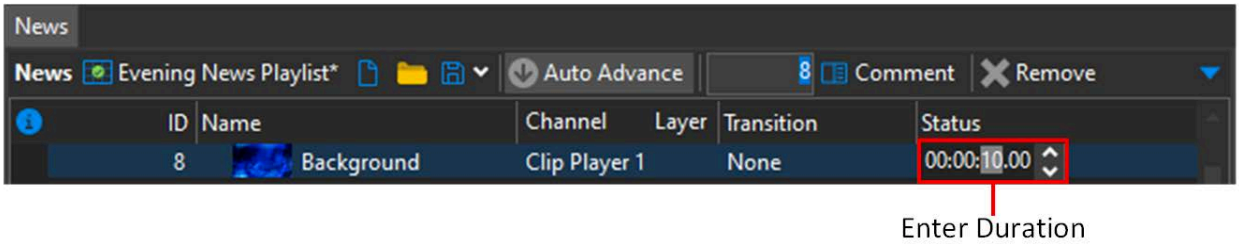
The right side of the **Status** column displays one of the following:

- The progress bar of the playout of the entire scene/message.
- **Loading** message.
- **Waiting for Trigger** message.

Set Duration

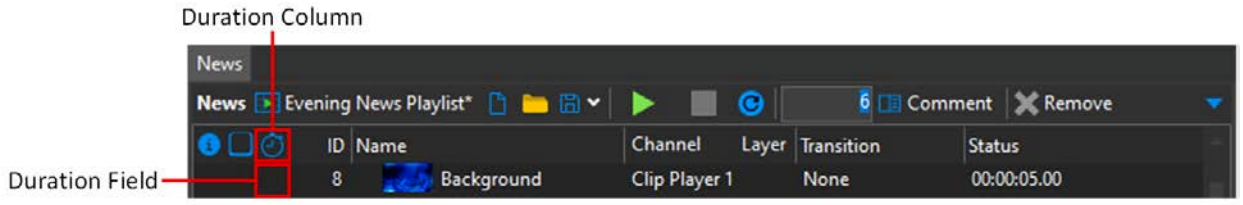
To modify the duration of an item:

- If in **Take List Mode**, then in the **Status** field for the item, enter the duration or use the spin box to set the duration.

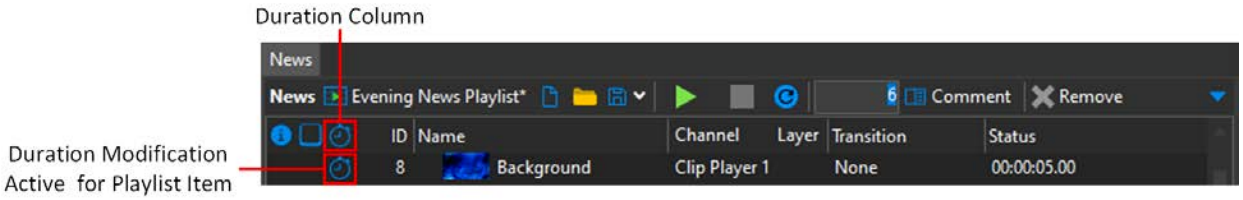


- If in **Sequence Mode**:

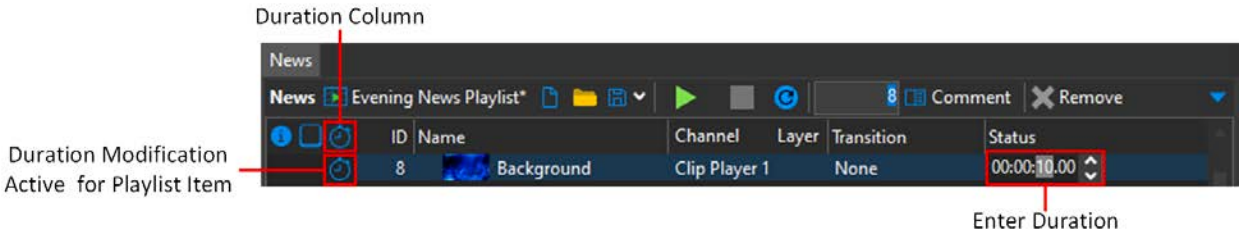
    1. Directly to the left of the item name, click the **Duration** field.



    2. The **Duration** icon appears.



    3. In the **Status** field for the item, enter the duration, then press **Enter** or click outside of the field.



When the **Duration** icon is present, you can edit the image duration. When the **Duration** icon is not present, then you cannot edit the duration.

Stop a Playlist (Sequence Mode Only)

To stop **Sequence Mode** playlist playout:

- In the playlist toolbar, click the **Stop**  icon.

Loop the Playlist (Sequence Mode Only)

A playlist in **Sequence Mode** can loop. To loop a playlist:

- In the playlist toolbar, click the **Loop** icon  .

When active, the **Loop** icon displays a gray background  . After the last transition in the last item in the playlist starts to play, then the playlist cursor moves to the first item in the playlist.

Change Playout Channel

To change the playout **Channel** of a playlist item:

- Click the item in the playlist, and then from the dropdown menu, select the desired **Channel**.

Change Playout Layer

To change the playout **Layer** of a playlist item:

- Click the item in the playlist, and then do one of the following:
    - Enter the **Layer** number in the **Layer** field.
    - Use the **Layer** spin box to set the **Layer** number.

Change Clip/Image Transition Effect

To change the **Transition Effect** of a clip or image in the playlist:

- Click the item's **Transition** field in the playlist, and then from the **Clip Transitions \ Common** dialog, select the desired **Transition Effect**.

To change the **Transition Effect** to **None**:

- Click the item's **Transition** field in the playlist, and then from the **Clip Transitions \ Common** dialog, click **Deselect**.

Clear Playlist

To clear the playlist of all items:

- In the toolbar, click the **New** icon  .

Close Playlist Player

To close the **Playlist Player**, do one of the following:

- Click the **Playlist Player** window **Close** icon (**x**) at the upper right corner.
- In the **Playlist Player** toolbar, click the dropdown arrow  at the far right of the **Playlist Player**, and then select **Close**. The **Playlist Player** closes.

Closing the **Playlist Player** does not remove it from current PRIME Switcher configuration. To reopen the **Playlist Player**:

- From the PRIME Switcher **View** menu, select (check) the **Playlist Player** to enable visibility.

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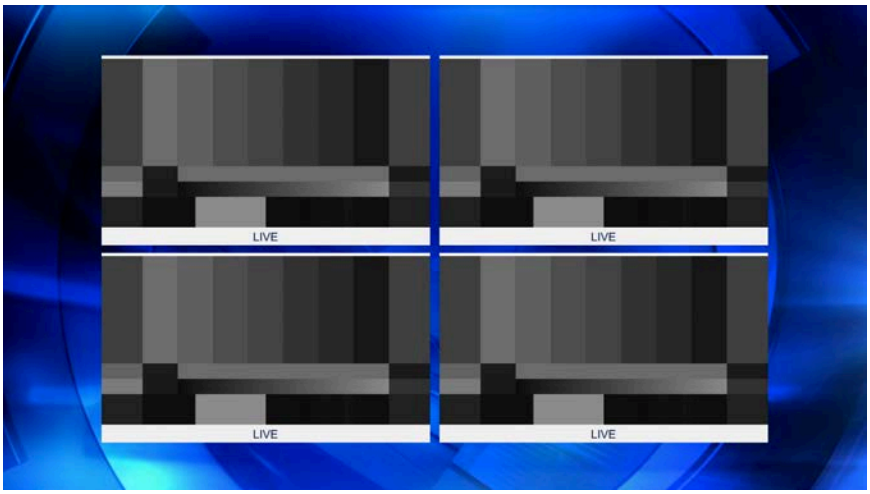
Chapter 18: Create a PRIME DVE Scene

In addition to the DVEs provided within PRIME Switcher, you can create complex DVEs in PRIME Designer, enabling the flexibility to display complex effects that are not possible via a switcher.

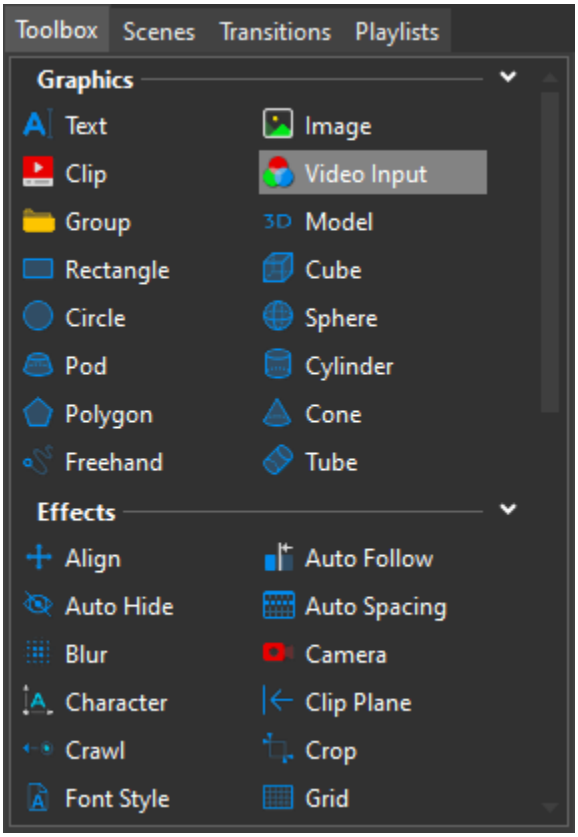
One of the most common DVEs is a multi-box (2-box, 3-box, 4-box, etc.), in which two or more people, e.g., an interviewer and guest(s), are each displayed in their own box. The following figure shows a 2-box DVE with input video.

The following figure shows a 4-box DVE as it appears without input video.

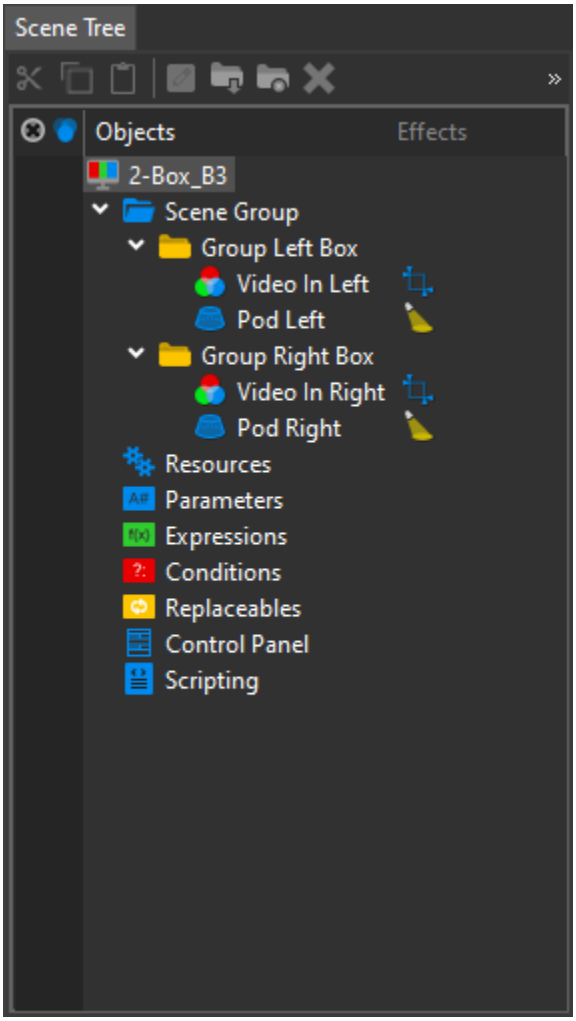


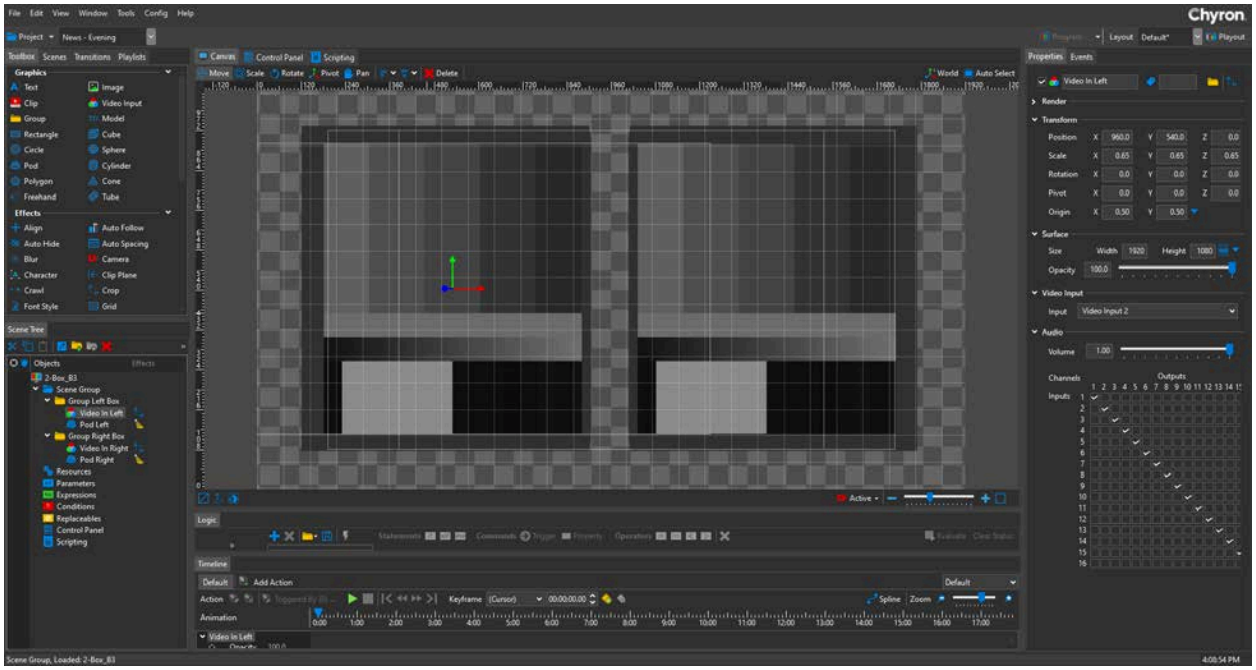
Following is the general process for creating a multi-box graphic, and making it accessible to PRIME Switcher. It is assumed that the PRIME user has been trained prior to creating DVE graphics. For each video input region in the scene:

1. In PRIME Designer, select **Video Input** in the **Graphics Area** of the **Toolbox**.



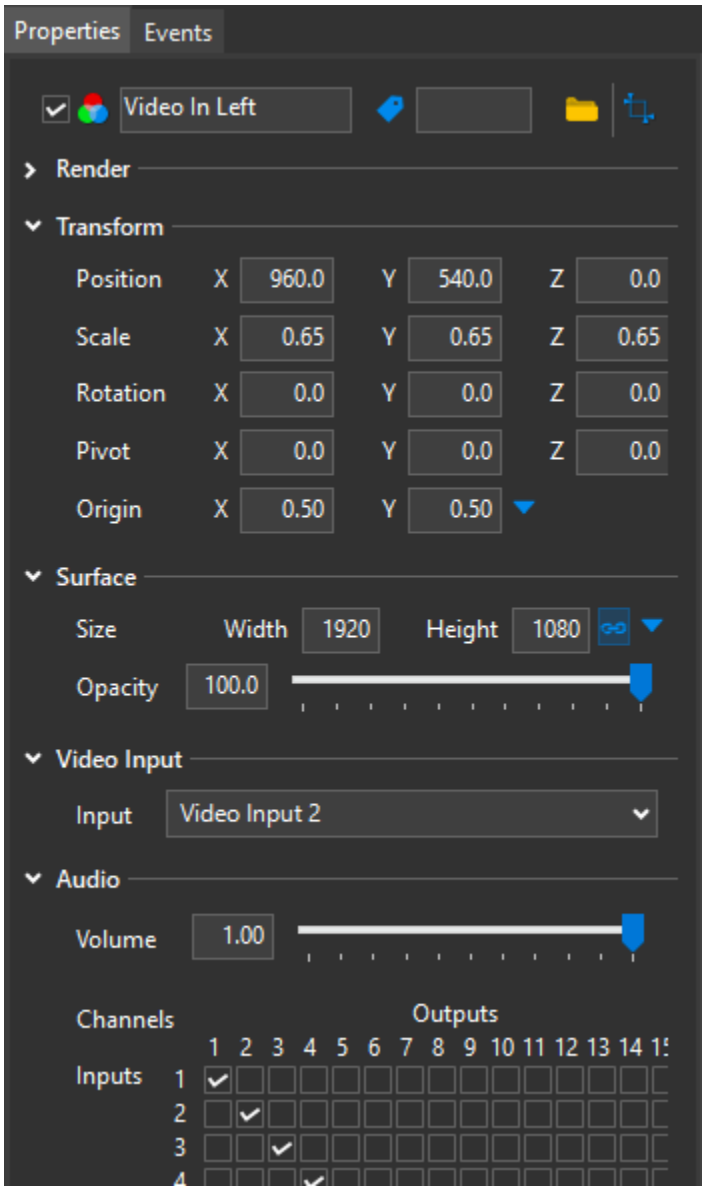
2. Add a **Crop Effect** to the **Video Input** region, and scale and position the **Video Input**.





Note that this scene shows two video input regions, with a pod behind each video input to act as a frame. The pod serves only an aesthetic purpose, and is not necessary to create a DVE scene.

3. Select the **Video Input** in the **Objects Scene Tree**, then in the **Properties** panel, select the desired **Video Input** from the **Input** list.



4. After all video input regions have been configured, save the PRIME Scene (***.pbx*** file) to the **Scenes** folder that PRIME Switcher will access. The scene thumbnail should be visible in the **Scenes** folder of the PRIME Switcher **Scenes Browser**.

5. Ensure that the specified input settings saved to the **Scene** file are configured in PRIME Switcher. For example, if the leftmost box in a 2-box is set to display **Video Input 2** in **Video In Left**, then make sure that the correct source is feeding **Video Input 2** of the PRIME Switcher.

To verify that a video source(s) is correct:

- In PRIME Switcher UI, drag the scene from the **Scenes Browser** into a PRIME Switcher graphics player. The source(s) display in the **Video Input** region(s).

A typical switcher configuration employs the **ME1** bank. Through replaceables, scripting and conditions, the video feed can be linked to **ME1**.

The following PRIME Switcher UI shows the following **Mix Effects** setup:

- **DVE 2-Box** scene is in **ME1 Bank GFX1**.
- **CAM2** is the input to the left box.
- **CAM4** is the input to the right box.
- **ME1 Bank Program Bus** is set to **CLP1**.
- **ME1** Bank **Key Bus** is set to **GFX1**.
- **Main Bank Program Bus** is set to **ME1**.
- **Main Bank Preset Bus** is set to **CAM1**.

If a live video region in a graphic either displays no video or the incorrect video source, then ensure that the PRIME Switcher source(s) is the **Video Input(s)** intended for the **Video Input(s)** specified in the PRIME DVE scene. If they are not, then you can change the **Video Input(s)** in the PRIME Scene, via the **Scene Editor**. *See **Scenes Browser** and Scene Edit Functions for additional information.*

Chapter 19: Work with Audio

Overview

PRIME Switcher's audio mixer provides the ability to mix embedded audio from video sources. Audio sources are configured in the **Switcher Configuration Audio Panel**. *See Configure Audio Channels for details on how to configure audio.*

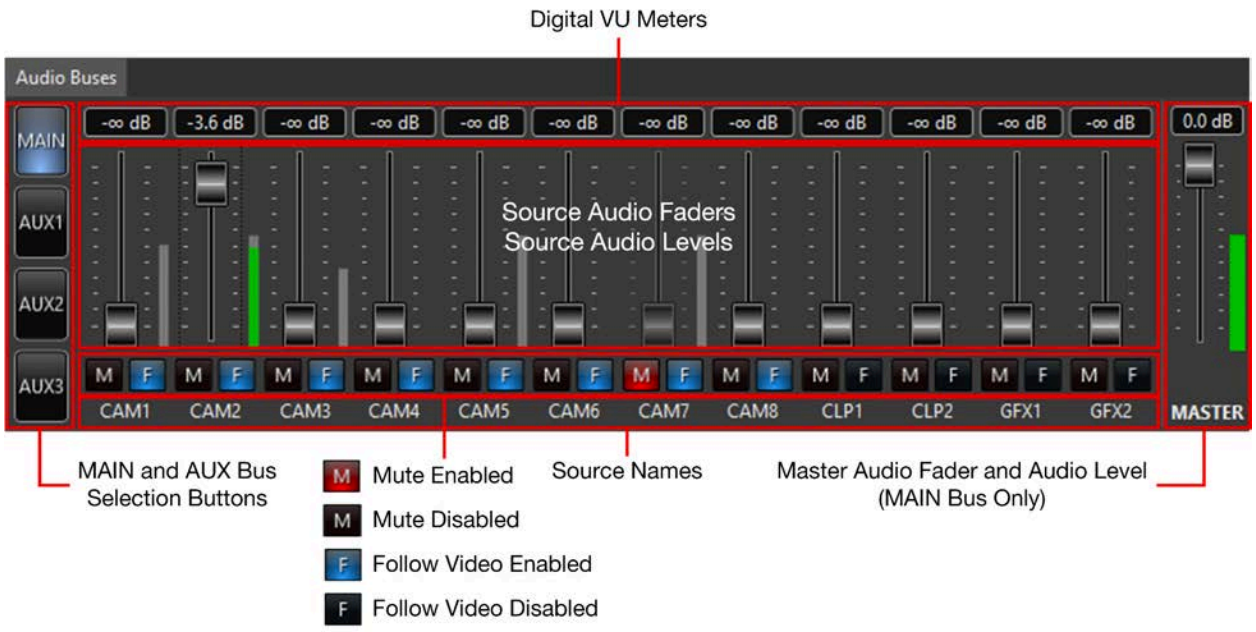
All inputs that have embedded audio are supported.

Audio Controls

Overview

As in a hardware audio mixer, PRIME Switcher **Audio Mixer's Audio Faders** control the audio source levels, as well as the **Master** audio level for the entire **Audio Mixer**. You can mute/unmute an audio channel, and set an audio channel to follow one or more video sources.

PRIME Switcher provides the ability to create **Auxiliary Audio Buses**, enabling the creation of custom **Mix Minus** outputs. An **Audio Mixer** with **Auxiliary Audio Buses** displays an additional column of buttons at the left of the **Audio Faders**, as shown in the following figure. If no **Auxiliary Audio Buses are** configured, then these buttons do not appear. Only the **Main Bus** appears, with no **MAIN Bus** button at the left.



The **Follow Video** button associated with each **Audio Fader** is replaced by a **PRE** button PRE that is not yet operational.

See Configure Audio Buses - Mix Minus, Pre Fade Listen for additional information about ***Auxiliary Audio Bus*** *configuration.*

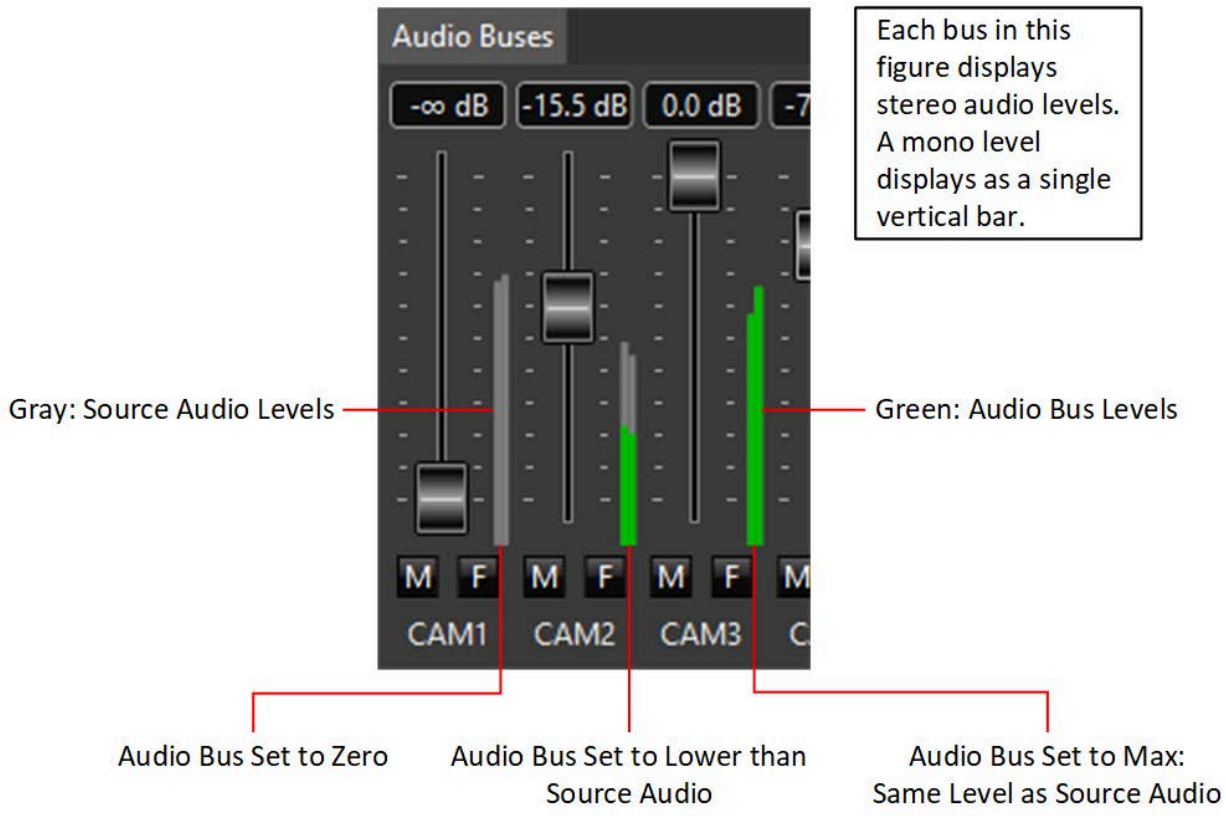
Change Audio Level

The audio level for each source can be individually set and dynamically changed. An audio bus displays two sets of levels:

- **Source Level (displays in gray): Source Audio** level.
- **Audio Bus Level (displays in green):** Audio level as set in the **Audio Bus**. When the **Audio Bus** is set to the maximum level, it matches the **Source Audio** level, and only the green is visible.

If source audio is:

- **Mono**, then the bus displays one audio level.
- **Stereo**, then the bus displays two levels.



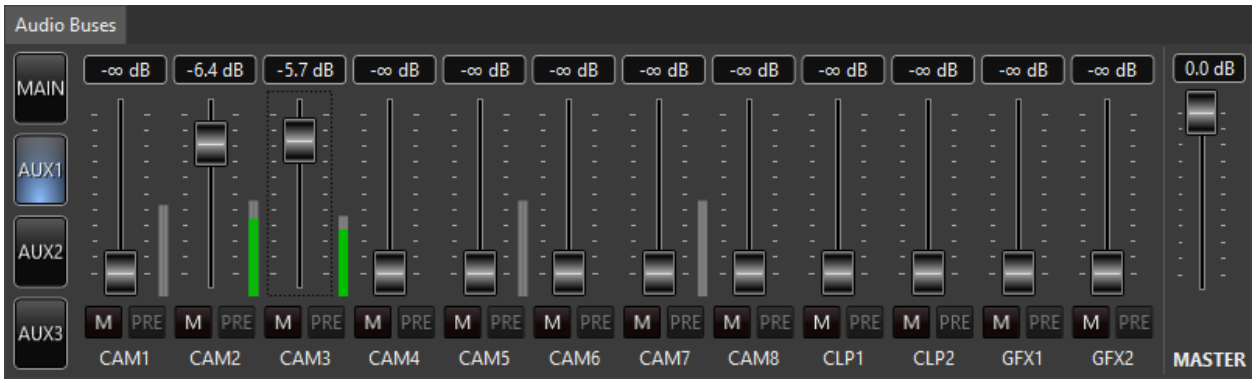
To set/adjust audio level:

- Drag the fader to the desired level. The level can be adjusted live while the video is in **Program**. The **Digital VU Meter** reflects the fader setting, in decibels (**dB**). If the channel is muted, then the **Digital VU Meter** continues to display the source level (in gray), although the channel is muted.

Display Audio Bus and Set Level(s)

In an **Audio Mixer** that has one or more **Auxiliary Buses**, you can set custom mixes, i.e., **Mix Minus**. To display and set a specific **Audio Bus**:

1. Click the button of the **Audio Bus** that you would like to display.
2. Adjust the audio fader(s) to the desired level(s).



You can change **Auxiliary Bus** fader levels at any time.

Set Mute

A muted channel does not output audio, regardless of the fader setting. You can set a level for a channel, and mute the channel until needed.

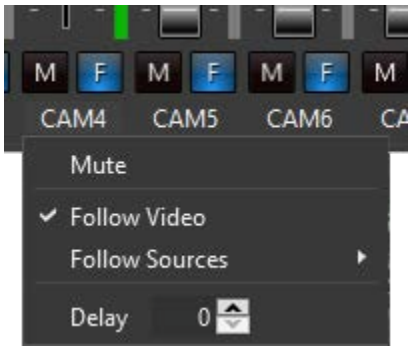
To mute/unmute a channel:

- Click the **Mute** button for the channel M. When **Mute** is active, then the **Mute** button is red M.

Set Delay

If the audio output must be delayed in order to synchronize with the Program video output, then:

- Click the **Source Name**, and then in the drop-down, then enter the value or use the spin box to set the appropriate **Dela**y, in **ms**; otherwise, leave at **0**. **Range: 0 - 192 ms**.



Set Follow Video (MAIN Audio Bus Only)

Follow Video vs. Follow Audio

PRIME Switcher provides the ability to set audio to follow video, i.e., when a video source transitions to **Program**, then the audio input(s) set to follow that video source outputs at a preset level(s).

PRIME Audio Director is a separate application that is included with PRIME Switcher, and that provides the ability to set video to follow audio input levels. You can create rules based on audio input levels, and, for example, automatically trigger a transition to the anchor camera, when the anchor speaks, or trigger a transition to a guest camera when the guest speaks, etc. Audio Director requires an ASIO-compatible audio card. *See the PRIME Switcher Audio Director User Guide for information.*

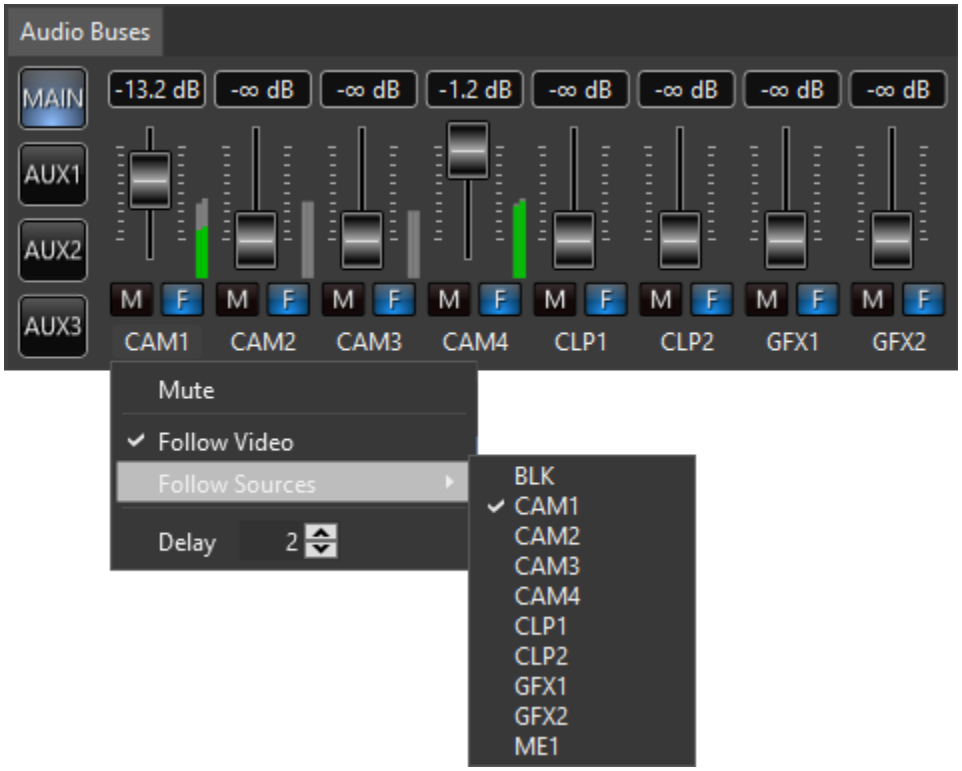
Set Follow Video

Follow Video enables one or more audio sources to automatically output at the level(s) set in the **Audio Mixer's Main Audio Bus** when a source set as a **Follow Source** transitions to **Program**. Once the source transitions off **Program**, then the audio input automatically mutes. The same applies to multiple sources with **Follow Video** enabled, that display simultaneously in **Program** (e.g., a 2-Box).

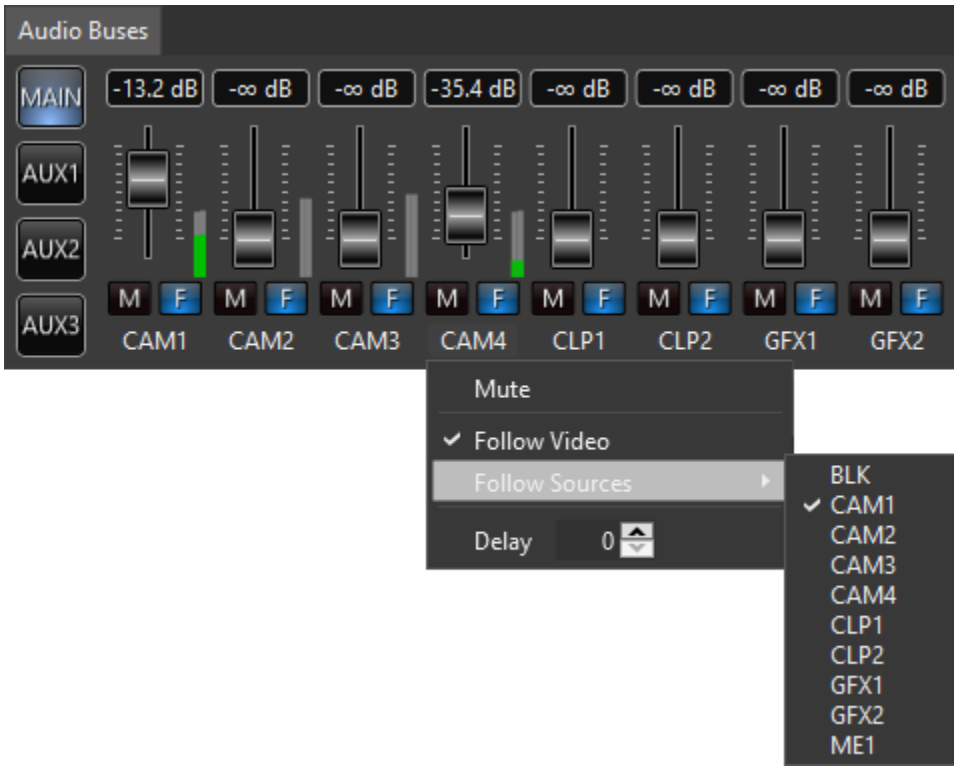
For example, if **CAM1** transitions to **Program**, then any audio input that has **CAM1** specified as **Follow Sources** outputs at its preset level. For example:

The following shows **CAM1** in **Program**.

CAM1 is set to follow **CAM1**. Note that the **Master Fader** is not shown in this and the following images in this section.



CAM4 is set to follow **CAM1**. As **CAM1** is **Program**, then as shown in the following, **CAM1** and **CAM4** output audio at their preset levels.

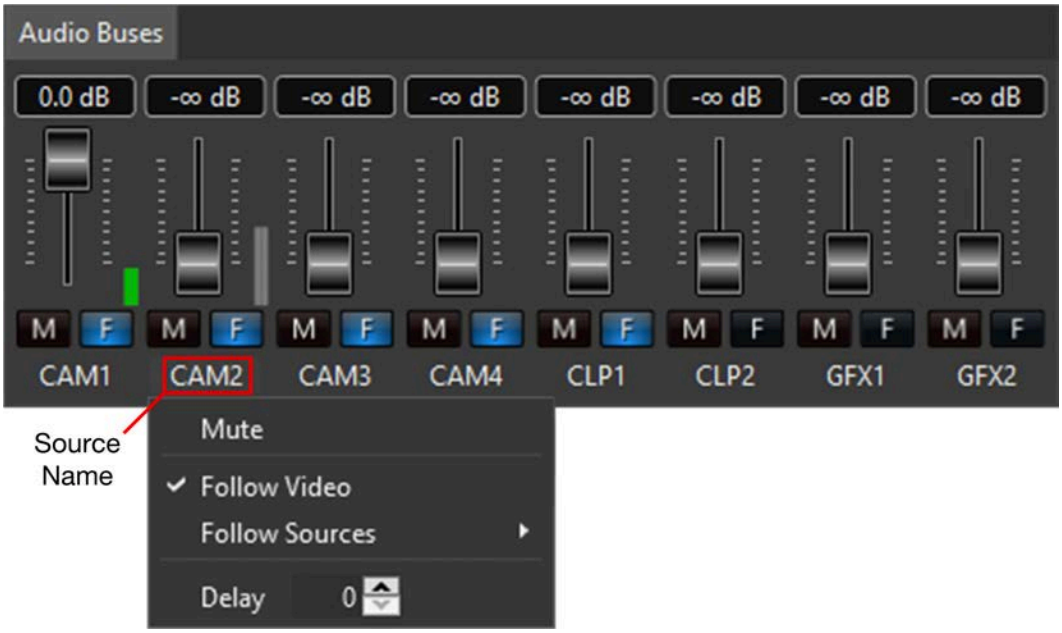


Note that as **CAM4** is not set to follow itself, then if **CAM4** transitions to **Program**, **CAM4's** audio is not automatically raised, and must be manually raised.

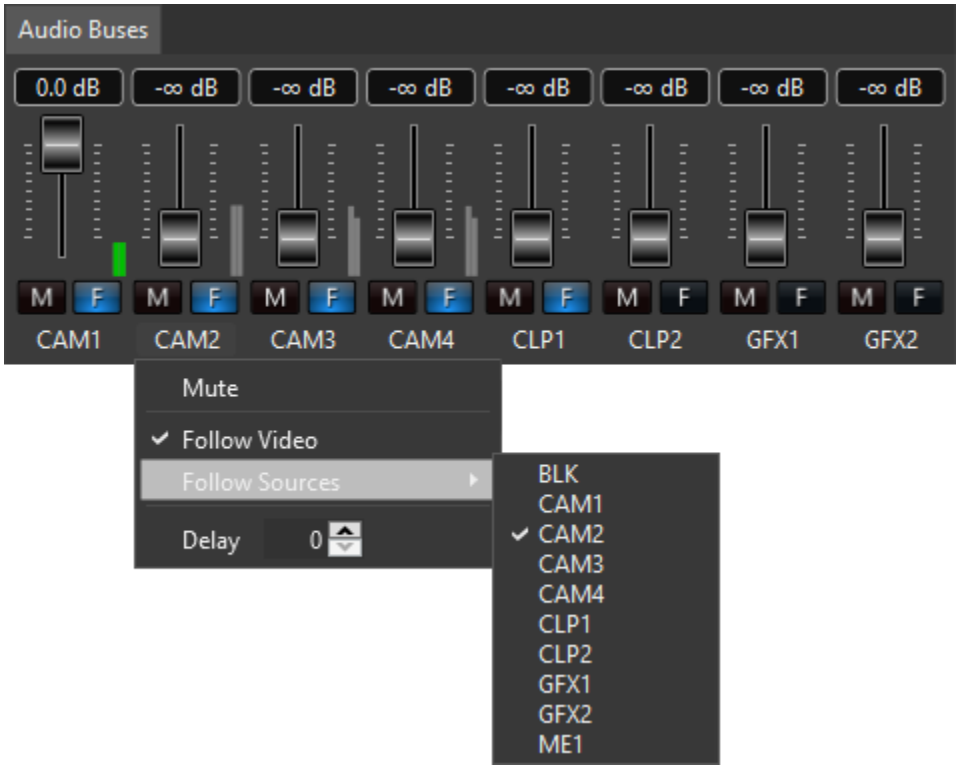
To set the audio for a **Source** to follow the video that is in **Program**:

- Set the audio input to the level that will be used during the show.
- Do one of the following:
    - Click the **Follow Video** button F for the audio input. When **Follow Video** is enabled, then the **Follow Video** button is blue F.
    - Click the **Source Name**, and then select **Follow Video** from the menu.

The **Follow Video** item displays a checkmark.



- Click **Follow Sources**, and then select the source(s) that you would like the **Audio Input** to follow. In this example, the **Source** follows itself.



You can select multiple **Follow Video** sources. For example, if you set:

- **CAM1's Follow Source** to **CAM1**, **CAM3**, and **CAM4**;
- **CAM3's Follow Source** to **CAM3**; and
- **CAM4's Follow Source** to **CAM4**;

then:

- Whenever **CAM1** transitions to **Program**, **CAM1's** audio outputs at the preset level.
- Whenever **CAM3** transitions to **Program**, then **CAM1's** and **CAM3's** audio outputs at the preset levels.
- Whenever **CAM4** transitions to **Program**, then **CAM1's** and **CAM4's** audio outputs at the preset levels.

Remove a Follow Video Source

To remove a **Follow Video** source:

1. Click the source name of the fader of the source that you would like to set, then click **Follow Sources**. The sources are listed in the submenu.
2. Select the source that you would like to remove. The check no longer appears next to the source name.
3. Repeat steps 1 and 2 to remove each additional source.

Disable Follow Video

- Do one of the following:
  - Click the **Follow Video** button  for the audio input. When **Follow Video** is disabled, then the **Follow Video** button is gray  .
  - Click the **Source Name**, and then select **Follow Video** from the menu. The **Follow Video** item no longer displays a checkmark.

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Chapter 20: Keyboard Shortcut Manager

Overview

You can operate PRIME Switcher using the mouse, touchpad, keyboard, or a combination of all three. PRIME Switcher provides the ability to set, add, load, and save **Keyboard Shortcuts**. keyboard shortcuts.

To access **Keyboard Shortcuts** configuration:

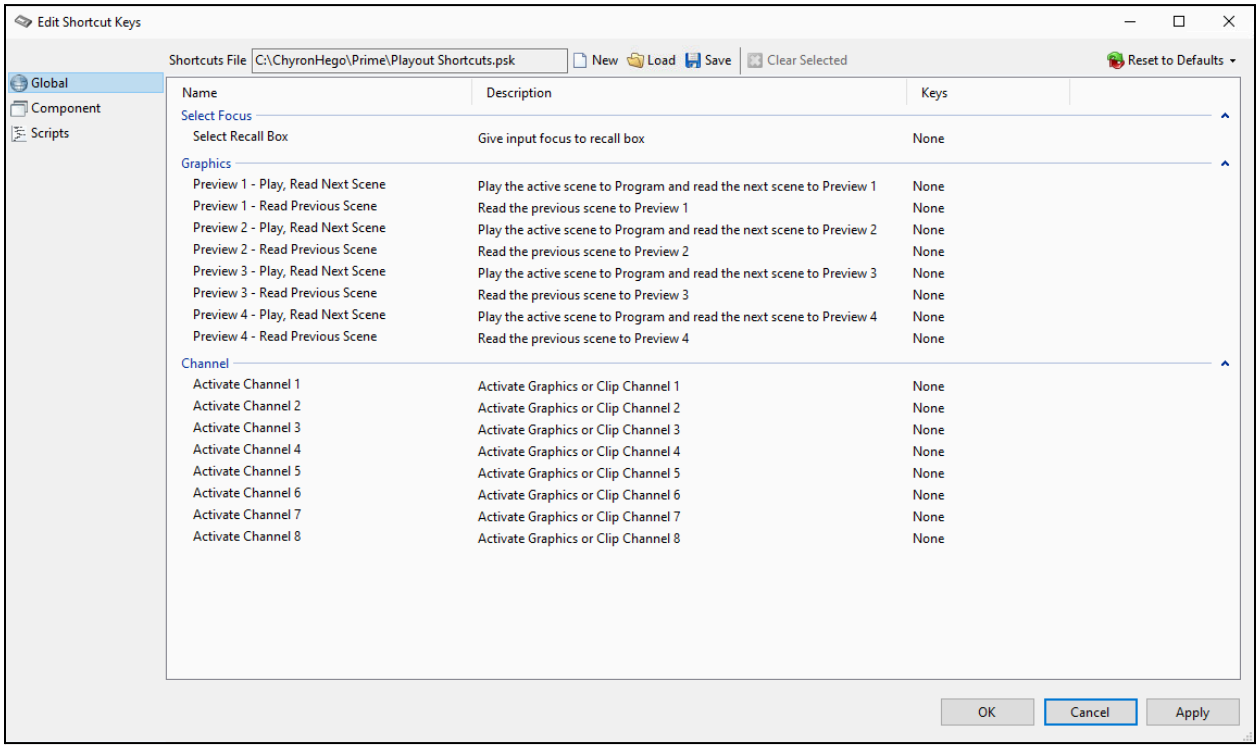
- Go to **Config Menu > Keyboard Shortcut Manager**. The **Edit Shortcut Keys Global** settings dialog appears. From this dialog, you can also edit the **Component** and **Scripts** shortcut keys.

WARNING: If you have created keyboard shortcuts, then prior to going on air, test operation to ensure that there are no inadvertent keystroke conflicts! Also note that numeric keypad numbers may be interpreted differently from the numbers in the top row of your keyboard.

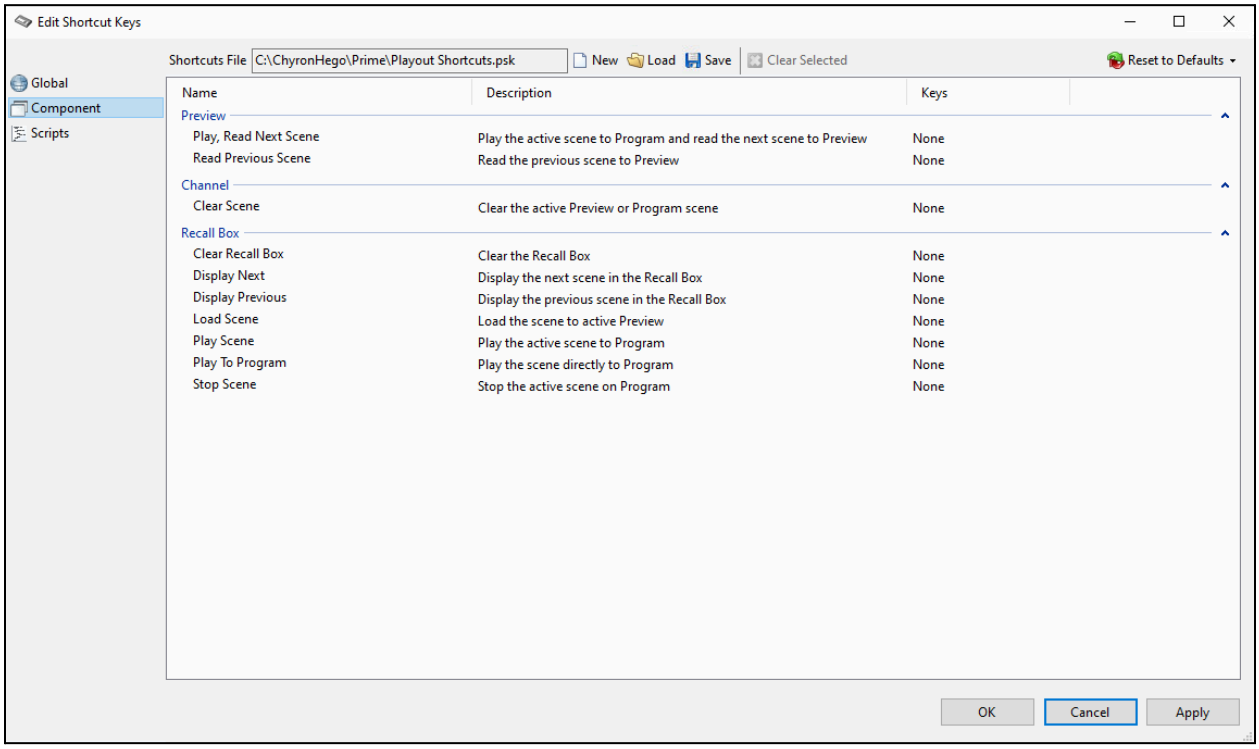
There are three categories of functions:

- **Global**
- **Component**
- **Scripts**

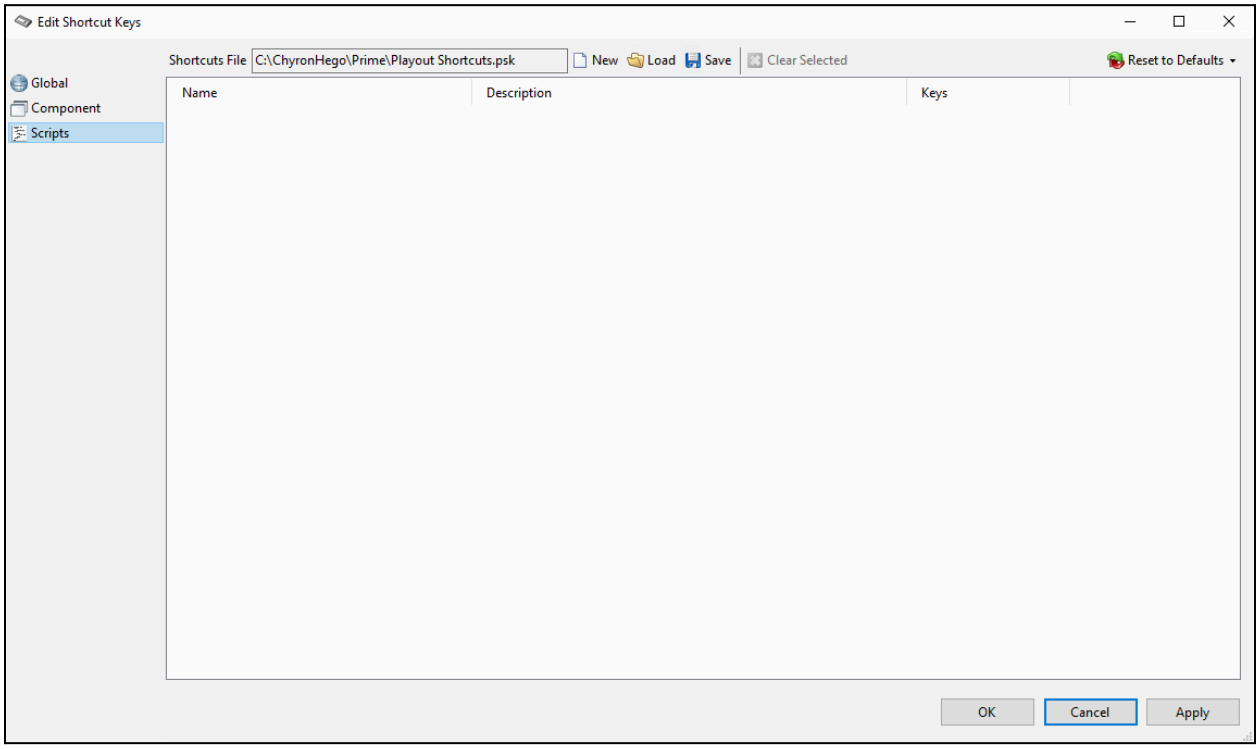
Global Keyboard Shortcuts can change the focus (active component), play, and read graphics, and activate clips.



Component Keyboard Shortcuts can play and **Read Next Scene**, **Play Previous Scene**, **Clear Scene**, and set shortcuts for **Recall Box** operations. Note that **Select Recall Box** selects the **Graphics/Clips/Mix Effects Recall Box**, not the **Layout Recall** dropdown.



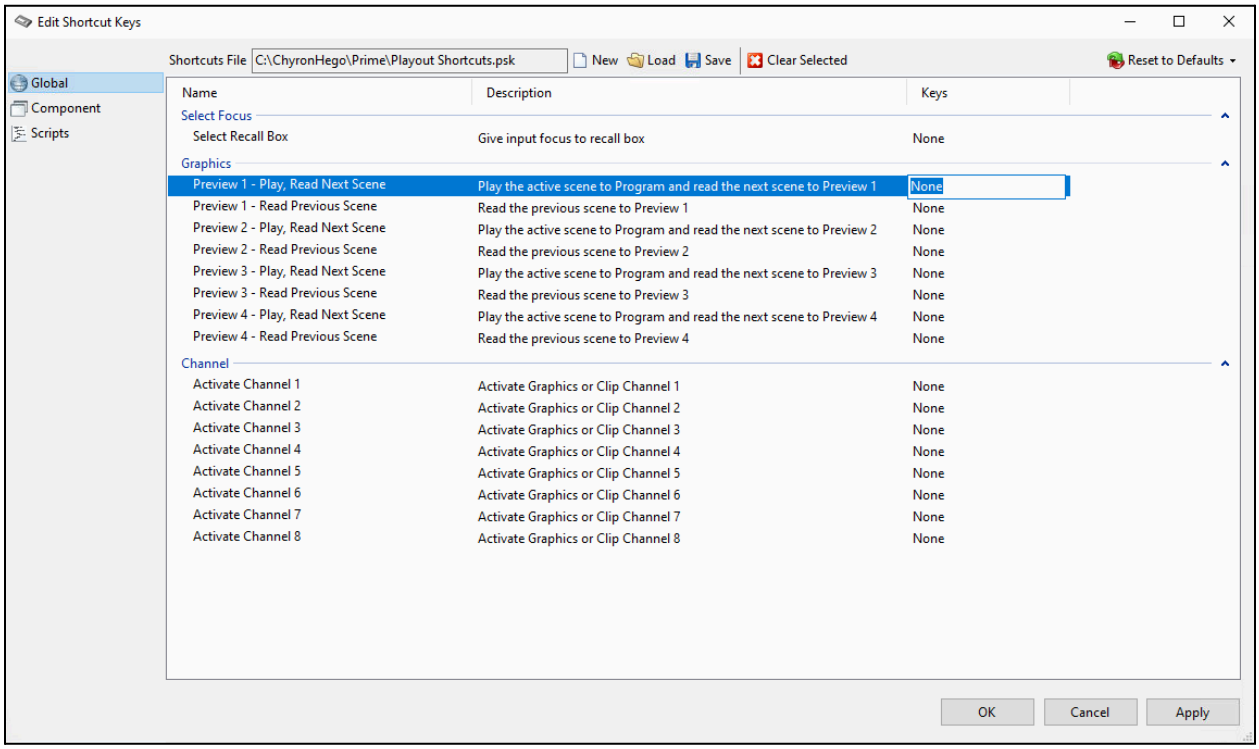
Scripts Keyboard Shortcuts can invoke scripts.



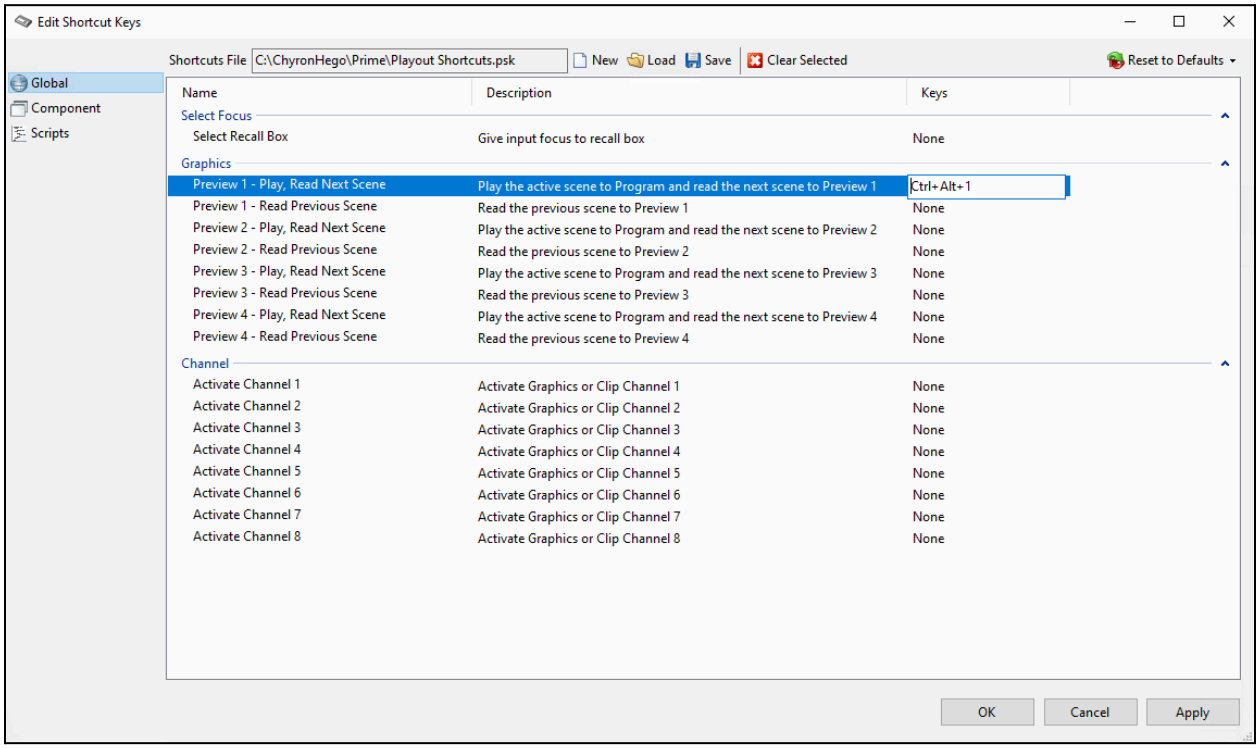
Set a Keyboard Shortcut to an Existing Function

To set a **Keyboard Shortcut**:

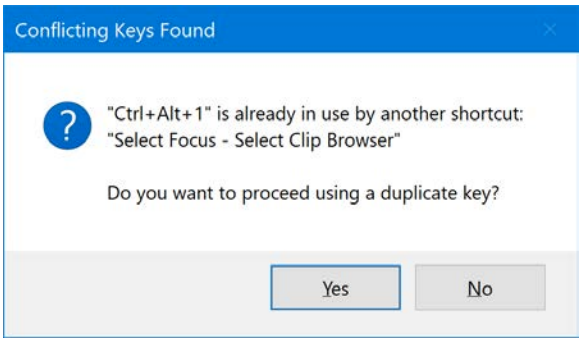
1. Click the name of the category of functions for which you would like to set a **Keyboard Shortcut**:
    - **Global**
    - **Component**
    - **Scripts**
2. Click the **Keys** field of the shortcut that you would like to set.



3. Press the key combination that you would like to assign to the function.



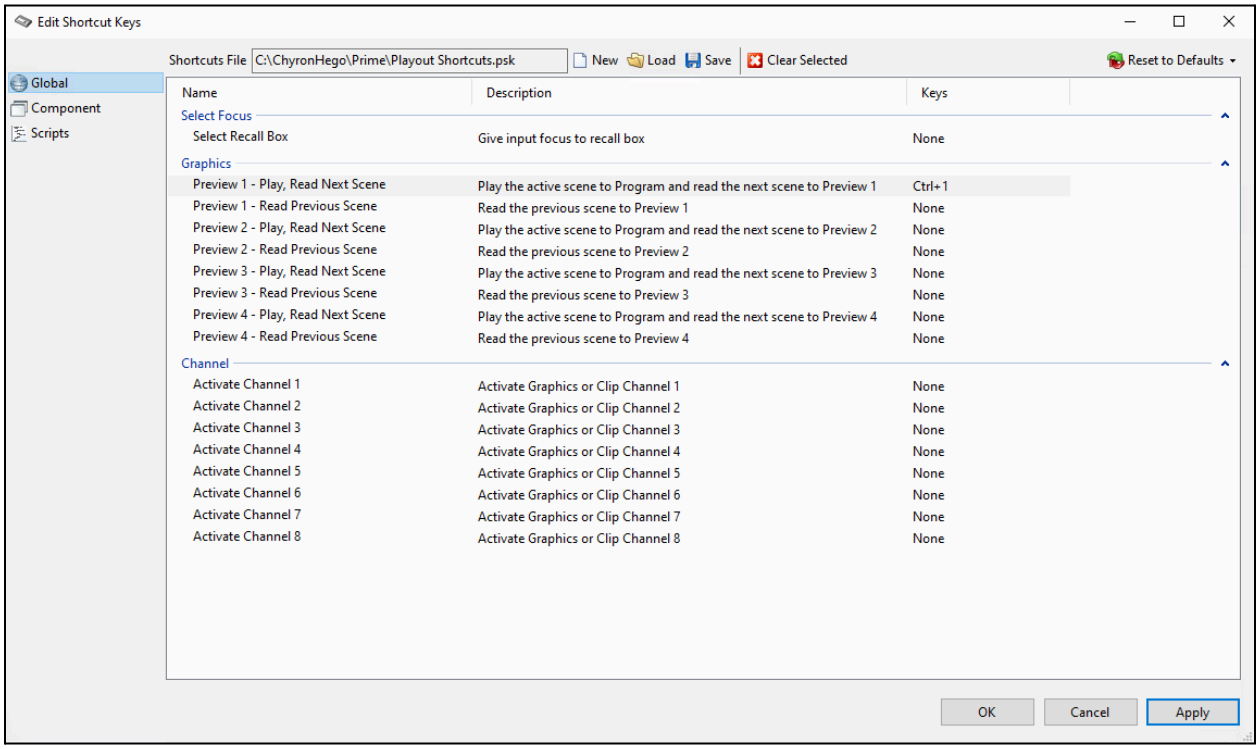
If you attempt to assign a **Shortcut Key** that is already assigned, then an alert similar to the following appears:



Select **Yes** to set a duplicate **Shortcut Key**, or **No** to close the alert and enter a different **Keyboard Shortcut**.

CAUTION: If you set the same Keyboard Shortcut for more than one function, then make sure that they do not conflict with each other.

4. Press the **Tab** key or select **Apply**.



5. If you would like to set additional **Keyboard Shortcuts**, then repeat steps 2 through 4. You can switch among **Global**, **Component** and **Scripts** categories.
6. When **Keyboard Shortcut** assignment(s) is complete, click **OK**.

Save a Set of Keyboard Shortcuts

You can save and recall currently configured **Keyboard Shortcuts** for future use.

To save the currently configured **Keyboard Shortcuts**:

1. Click the **Save** icon at the top of the **Edit Shortcut Keys** panel.
2. Browse to the desired folder, enter a filename, and then click **Save**. The file is saved to a ****.psk*** **PRIME Keyboard Shortcuts** file. It is recommended that the **Keyboard Shortcut** file be saved to **Common > Keyboard Shortcuts**.

Load Set of Keyboard Shortcuts

To load a **Keyboard Shortcuts** file:

1. Click the **Load** icon at the top of the **Edit Shortcut Keys** panel.
2. Browse to the desired file, and then click **Open**.

Add a New Keyboard Shortcut File

To create a new **Keyboard Shortcut** file in which to store settings.

1. Click the **New** icon at the top of the **Edit Shortcut Keys** panel.
2. Browse to the desired folder, enter a filename, and then click **Save**. The new ***.psk*** **PRIME Keyboard Shortcuts** file is created. It is recommended that the **Keyboard Shortcut** file be saved to **Common > Keyboard Shortcuts**.
3. Edit the file as desired.

Clear Selected Keyboard Shortcut(s)

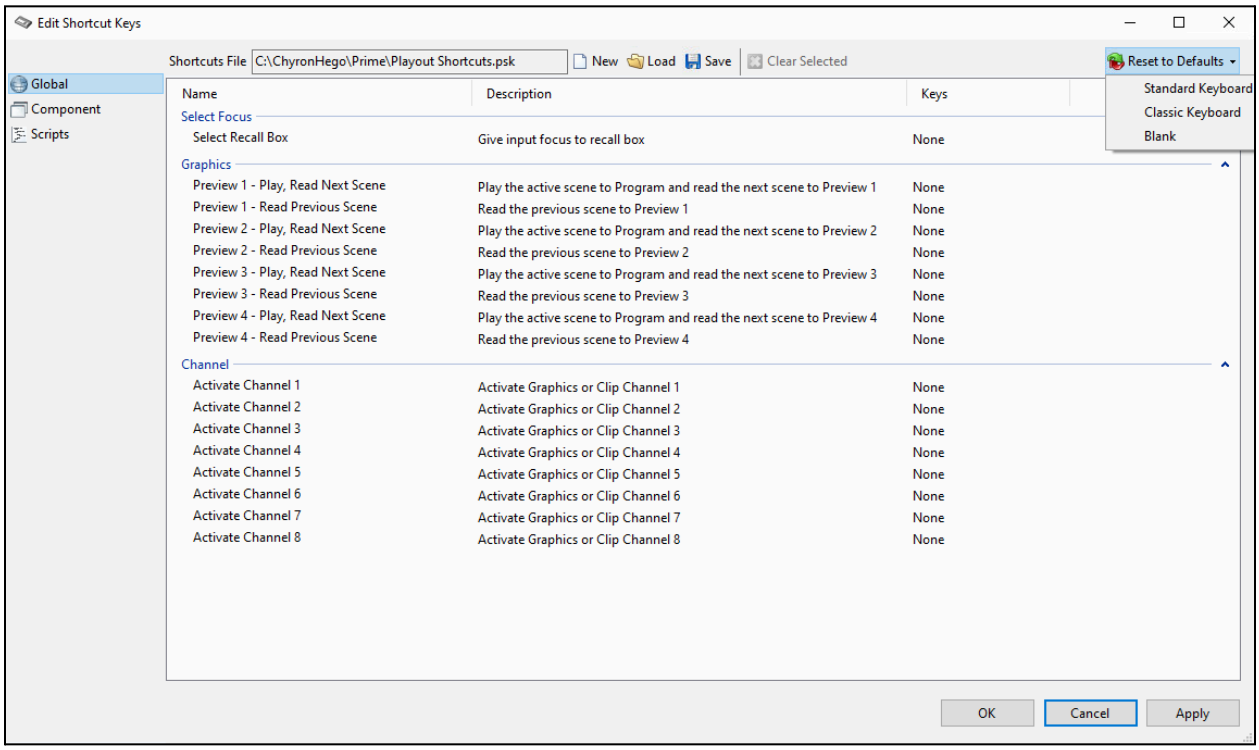
To clear selected **Keyboard Shortcuts**, without affecting other **Keyboard Shortcuts**:

1. In a **Global**, **Component** or **Keyboard Shortcut List**, select the **Keyboard Shortcuts** using one or more of the following methods:
    - **Select Single Item:** Click the item that you would like to clear.
    - **Select Range:** While holding down the **Shift** key, click the first item in the list that you would like to clear, then click the last item in the list that you would like to clear. You can also click the last item in the list that you would like to clear, and then the first item.
    - **Select Non-adjacent Items:** While holding the **Ctrl** key, select the items in the list that you would like to clear.
2. Click the **Clear Selected** icon. The selected item(s) display **None**.

Reset Keyboard Shortcuts to Default

To reset all **Keyboard Shortcuts**:

- From the **Reset to Defaults** dropdown menu, select the desired keyboard:
    - **Standard:** QWERTY keyboard.
    - **Classic:** Chyron Black Keyboard.
    - **Blank:** All **Keyboard Shortcuts** are set to **None**.



Keyboard Shortcut Troubleshooting

If a keyboard shortcut does not work or performs an unexpected action, then:

- Ensure that you correctly assigned the keyboard shortcut.
- Ensure that it does not conflict with an existing keyboard shortcut.
- Ensure that you are typing the correct keyboard shortcut. It must be typed exactly as it was entered when creating the keyboard shortcut.

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PRIME Switcher Interface

Video Inputs, Clips and Graphics Are Frozen

Upon startup, if the **Video Inputs**, **Clips** and **Graphics** are frozen, then you may have accidentally closed the **PRIME Engine** window. This window does not usually appear upon startup. If, however, a user had configured the **Clean Feed** to display in a **Desktop Window** for testing, then it will appear when the PRIME Switcher interface opens.

If the PRIME Engine window appears on top of the PRIME Switcher interface when it opens, then do not close the window. To hide the PRIME Engine window while operating PRIME Switcher, do one of the following:

- Click the PRIME Switcher interface outside of the **PRIME Engine** window; or,
- Click the **PRIME** icon in the taskbar at the bottom of the screen.

If you closed the PRIME Engine window, and the Video Input, Clips and Graphics displays have frozen, then close and reopen PRIME Switcher, making sure not to close the PRIME Engine window.

You can reconfigure the **Clean Feed** to a different output (typically SDI), or use PRIME Switcher as is.

If the production is not using the **Clean Feed**, then disable or delete it.

Components Are Missing from the Switcher Interface

If components are missing from the interface, and they are not present in the **View** menu, then ensure that the components are properly configured for use in PRIME Switcher:

- Configure PRIME Video and Audio
- Configure PRIME Switcher
- Configure Sources
- Configure Atlas
- Configure Clip Players
- Configure Transitions
- Configure Playlist Players
- Configure Audio Channels

Also see Enable/Disable Component Display and Troubleshoot Configuration for additional details.

A Component Tab Had Displayed, but Is Now Missing

If a component tab had displayed, but is now not visible, then *see How Do I Locate a Hidden Tab?*

The Interface Displays Multiple Tabs with the Same Name

If the interface displays multiple tabs labeled with the same name, e.g., CAM2, then you may have assigned the same video channel to multiple **PRIME Switcher Sources in Config > Playout Configuration > Switcher > Sources**.

Ensure that you do not assign the same **Video Channel** to more than one **Source**.

Example: Do not assign **Video Input 2** to **CAM2** and to **CAM3**.

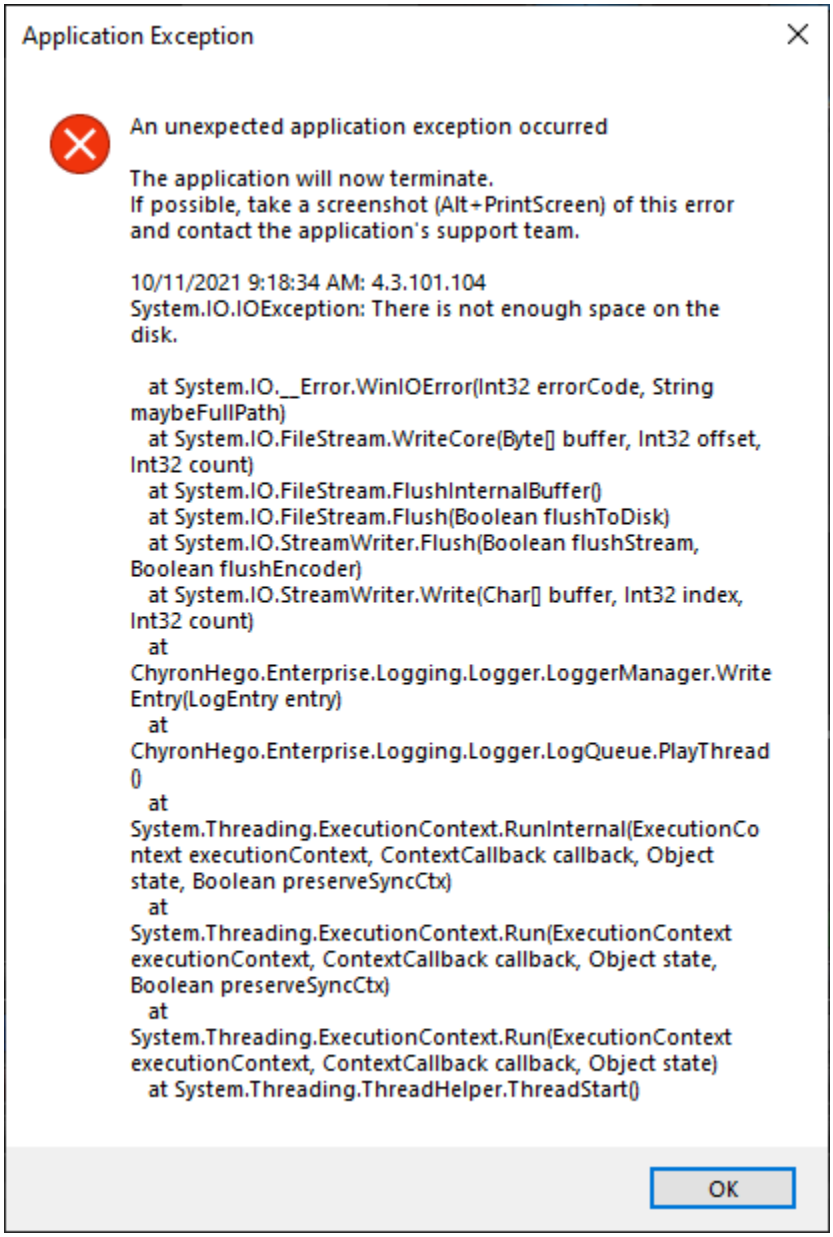
I Need to Reset the Layout

If you need to reset the layout, then *see Reset Layout to Default*.

PRIME Switcher Application Message

Exception - Not Enough Space on the Disk

While operating PRIME Switcher, the following message may appear:



This message indicates that the disk is too full to run PRIME Switcher. There are a wide variety of reasons that the disk could be full.

One possible cause could be an accumulation of PRIME Engine or PRIME log files. If this is the case, then to remedy:

1. Click **OK** or click the **Close (x)** icon. PRIME Switcher halts, and then closes.
2. Via **File Explorer**, manually delete the log files:
    - PRIME log files are typically located at C:\Chyron\Prime\Logs.
    - PRIME Engine log files are typically located at C:\log\ChyronHego.
3. Restart PRIME Switcher.

To avoid future PRIME log file accumulation, you can set PRIME to limit log file size and to delete log files after a specified duration. *See the PRIME User Guide for additional information.*

There is currently no method to specify maximum PRIME Engine log file size or to delete them after a specified duration.

Search

I Performed a Search, but There were No Results

If there are no results after performing a search, then the browser displays as empty. If search results were expected, then confirm that the search parameters were correctly entered.

See Search Assets Browser for additional details.

Transitions

Preview Video Does Not Transition to Program

In the **Transition Area**, **BKGD** is not active (unlit).

- Click **BKGD** to activate (lit).

Preview Video Transitions to Program, When It Should Not

In the **Transition Area**, **BKGD** is active (lit).

- Click **BKGD** to deactivate (unlit).

Key Video Does Not Transition to Program

In the **Transition Area**, the desired **KEY** is not active (unlit).

- Click the desired **KEY** to activate (lit).

Key Video Transitions to Program, When It Should Not

In the **Transition Area**, the desired **KEY** is active (lit).

- Click the desired **KEY** to deactivate (unlit).

Graphics 1 and Graphics 2 Both Display in Program, or Both Display in Preview, When They Should Alternate

Graphics 1 and **Graphics 2** are not properly set up to alternate.

- *See Set up Graphics 1 on Program, and Graphics 2 on Preview.*

ME1 (Mix Effect) Output Does Not Display in Program or Preview

ME1 is not selected as a **PROGRAM** or **PREVIEW** source in the **Main Switcher Bank**.

- Select **ME1** in the **PROGRAM** or **PRESET** bus.

Graphics

The Graphic(s) Plays, but Does Not Transition to Switcher Program or Preview

If a graphic(s) is playing, and does not transition to switcher **Program**, then ensure that the **Graphics Player** is associated with a **Key**, and that the **Key** is active in the **Transitions Area**, i.e., the **Key** button is lit.

For example, if you would like **Graphics 1** to transition as a source for **Key 1**, then you must associate it with **Key 1**. To specify that it should transition, then you must activate the **Key 1** button in the **Transition Area**.

See Set Transition Area, Set a Key Source, and Tying Together the Transition Area, Key Bus and Downstream Keyer for additional details.

Clips

The Clip Plays at the Incorrect Speed and/or Aspect Ratio

The clip is not configured to match the resolution and frame rate at which PRIME Switcher is configured.

Ensure that clips have the same resolution and frame rate as PRIME Switcher configuration; otherwise, they may not play correctly.

The Clip Plays, but Does Not Display in Switcher Program or Preview

If a clip is playing but does not display as intended in the switcher **Program** or **Preview**, *see The Clip Plays, but Does Not Display in Switcher Program or Preview.*

DVE

The DVE Graphic Displays, but the Video Input(s) Is Missing or Incorrect

If a live video region in a graphic either displays no video or the incorrect video source, then ensure that the PRIME Switcher source(s) is the **Video Input(s)** intended for the **Video Input(s)** specified in the PRIME DVE scene. If they are not, then you can change the **Video Input(s)** in the PRIME Scene, via the **Scene Editor**.

See Create a Digital Video Effect for additional details.

Keyboard Shortcuts

Note about Keyboard Shortcuts

If you have created keyboard shortcuts, then prior to going on air, test operation to ensure that there are no inadvertent keystroke conflicts! Also note that numeric keypad numbers may be interpreted differently from the numbers in the top row of your keyboard.

See Keyboard Shortcut Manager for additional information on setting and using keyboard shortcuts.

Keyboard Shortcut Does Not Work

If a keyboard shortcut does not work, then:

- Ensure that you correctly assigned the keyboard shortcut.
- Ensure that you are typing the correct keyboard shortcut. It must be typed exactly as it was entered when creating the keyboard shortcut.

Keyboard Shortcut Performs an Unexpected Action

If a keyboard shortcut performs an unexpected action, then:

- Ensure that it does not conflict with an existing keyboard shortcut.

- Ensure that you are typing the correct keyboard shortcut. It must be typed exactly as it was entered when creating the keyboard shortcut.

Glossary

Overview

Switcher terminology is, for the most part, universal, although some terms may be specific to geographical area or even facility.

Active Transition

In the **Transition Area**, the transition that is currently selected; the transition that is performed when you click **AUTO** or **PRESET BLACK**.

Air

Video and audio that the viewer sees and hears on their television or mobile device.

Atlas (Specific to PRIME)

Server application that streams the PRIME Switcher interface, including the multiviewer. *See Configure Atlas for additional information.*

Background (BKGD)

Video input in any mix effect, that can be overlaid by clips and graphics. In the following figure, the anchor is the **BKGD** (video input), and the surgical scene and the accompanying text are overlays of other sources applied via keying.

See Work with Work with Main and Mix Effect (ME) Banks and Transitions.

Bank - Main Bank

Controls used to set a video mix effect, including a video source as the background for the video mix, the sources to be keyed over the background, and the transition effect performed as the video mix is transitioned to output. The output of the **Main Bank** is displayed in the **Program** monitor. A bank may be referred to as an ME Bank, or simply, an ME.

See Work with Work with Main and Mix Effect (ME) Banks and Transitions.

Bank - Mix Effect Bank (ME1)

Controls used to create, save, and load a mix, which includes a video source as the background for the video mix, the sources to be keyed over the background, and the transition effect performed as the video mix is transitioned to output. You can select the output of ME1 as a source for the **Main Switcher Bank**. The output of the **ME1 Bank** is displayed in the **Mix Effects** monitor.

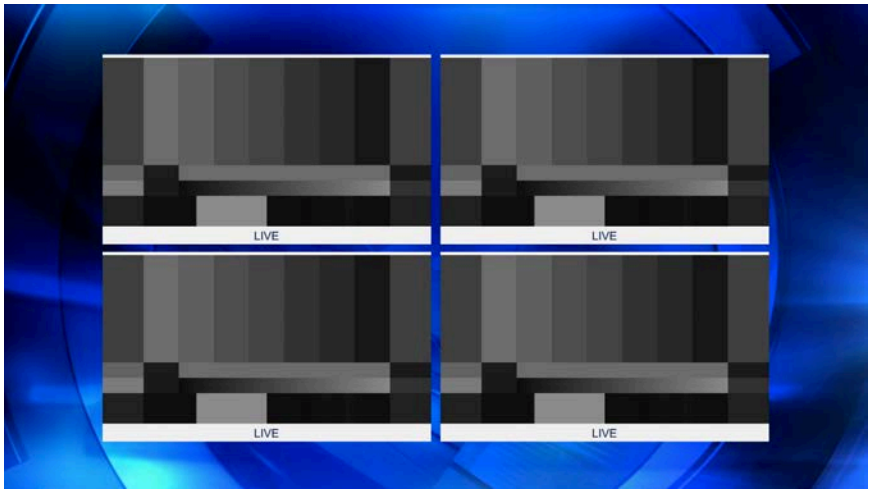
See Work with Work with Main and Mix Effect (ME) Banks and Transitions.

Black (BLK)

Reference (sync) signal. Also known as **Genlock**.

Box, 2-Box, 3-Box, 4-Box, Etc.

Video layered over the background, scaled, and positioned to allow simultaneous display of multiple video sources. A common example is that of an anchor interviewing one or more remote interviewees.



See Create a Digital Video Effect for information on how to create a simple DVE.

Bug

Small graphic, usually displayed at a corner of the screen. There are many types of bugs, e.g., station logo, sponsor logo, “Live” graphic, sports scores.

Bus

Row of buttons, with each button accessing an input source - such as camera or external graphics device - or an internal source, such as PRIME CG graphics or the output of another ME Bank. When a **Bus** button is active, it displays as lit. Each PRIME Switcher ME Bank includes three **Buses**:

- **Program:** Selected source displays a red light when active.
- **Preset:** Selected source displays a white light when active.
- **Key:** Selected source displays a red light if active on **Program**, or a white light if active on **Preview**.

The following figure shows the **Main** and **ME1Bank Buses**:

See Work with Work with Main and Mix Effect (ME) Banks and Transitions.

Chroma Key

Chroma: Composites video based on a specified **Key Color**, also known as a **Target Color**. The specified chrominance (**Target Color**) is removed, and is replaced by other video. **Chroma Key** is commonly used for weather reports and virtual sets. The meteorologists/anchors present in front of a green screen, and the weather or virtual set graphics are keyed in any area that is the color specified as the **Key Color**.

Clean Feed

Only the video that is in **Main Bank Program**, with no key video. A typical **Clean Feed** setting in a studio outputting SDI would be **Matrox SDI**. Note that a **Clean Feed** displays only on the **Device** specified **Config > Playout Config > Video Channels**, e.g., SDI, NDI, etc. It does not display in the PRIME Switcher interface.

Clip

Video recorded to a file. You can use clips as the background or an element of a graphic, as the background source for a switcher mix effect or as a switcher key source. *See Work with Clips and Clip Player for information on working with clips.*

Clip Player

PRIME Switcher interface component used to play a clip. The **Clip Player** can also play an image. *See Work with Clips and Clip Player for information on working with clips.*

Crosspoint

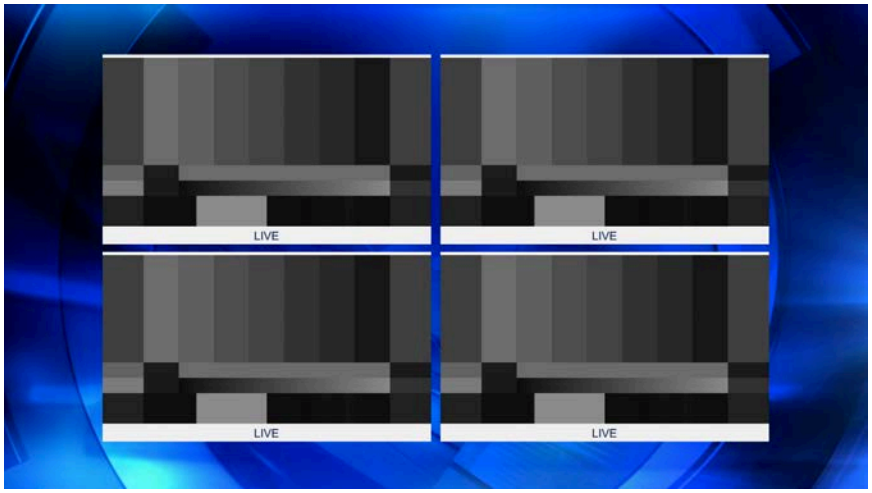
In a hardware-based switcher, a switch that enables video to be routed from a specific input to any output. In PRIME Switcher, this is achieved via software.

Digital Video Effect (DVE) - PRIME Scene

The application of sizing, rotation, positioning, croppings, or other manipulation to video within a PRIME Scene. In addition to the DVEs provided in PRIME Switcher, you can create complex DVEs with PRIME Designer. They are prepared in advance for use as keys in the PRIME Switcher. Examples include multi-boxes and complex transition effects.

The following figure shows a 2-box DVE with input video.

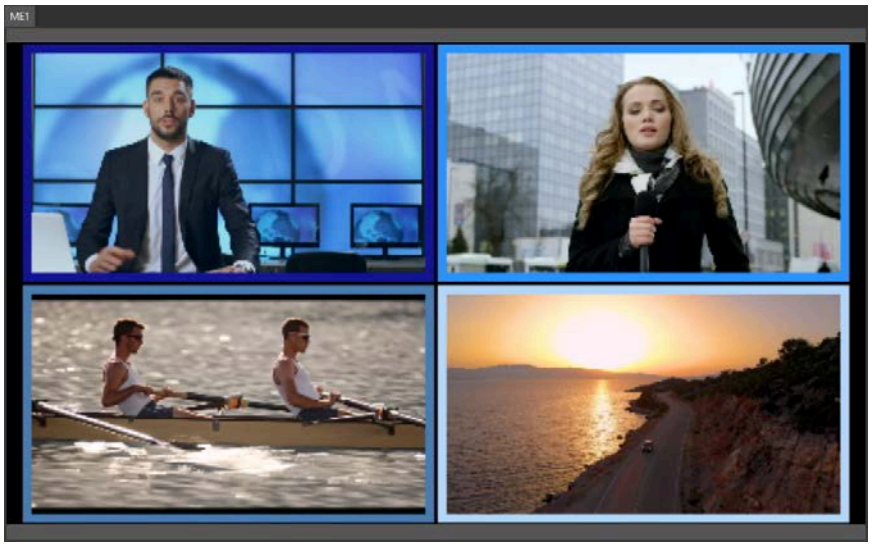
The following shows a 4-box DVE as it appears without input video.



See Create a Digital Video Effect for information on how to create a simple DVE in PRIME Designer.

Digital Video Effect - PRIME Switcher

The application of sizing, positioning, cropping, and/or a border to a **Key** channel from within PRIME Switcher. *See PRIME Switcher DVE (Digital Video Effect).*



Downstream Keyer (DSK)

Switcher function that transitions the selected **Key** On/Off. PRIME Switcher also provides the ability to set **Key** sources from the **Downstream Keyer**. *See Work with Work with Main and Mix Effect (ME) Banks and Transitions*.

Graphic, Scene

Image or animation that can overlay video or that can occupy the full screen, typically used as a person/place identifier, information/statistics display, logo display, score display, etc. In PRIME, a graphic is referred to as a **Scene**. "**Graphic**" and "**Scene**" are used interchangeably in this *User Guide*. A message is a type of scene that references assets, and is therefore smaller in file size than its corresponding scene. *See Bug, Lower Third, Over-the-Shoulder (OTS) for examples. See Work with Graphics and Graphics Player for information on working with graphics.*

Graphics Player

PRIME Switcher Interface component used to play a scene or message. The Graphics Player can also play an image or clip. *See Work with Graphics and Graphics Player for information on working with graphics.*

Key

Video signal that is used to "cut a hole" in another video signal, allowing the insertion of other video elements (text, graphics, other video). **Key** video can have varying levels of transparency, enabling underlying video to show through. A **Key** can be set to a PRIME graphic or other source. *See What is a Key?.*

Keypad

A UI representation of a physical keypad that provides keypad functions, including clip, graphic, and **Mix Effects Preset ID** entry, plus **Load**, **Play**, **Save**, **Delete** and **Clear**.

Keyer

Button that inserts a **Key** in either **Preview** or **Program**. *See Work with Work with Main and Mix Effect (ME) Banks and Transitions.*

Linear Key

Key in which the video is composited with other video. **Linear Key** is typically used to overlay graphics over video.

Lower Third, Lower 3rd

Graphic that occupies the lower part of a screen. Typically, the graphic identifies a person, place, or event.

Mix Effect (ME)

Mix Effect(s) is used in the following contexts in this PRIME Switcher:

- The mixed video, which includes:
    - Selection of a source as the background.
    - Selection of the source(s) to be keyed over the background.
    - How the **ME** transitions.
- **Mix Effect Bank (ME1):** When referencing the **Preset**, **Program** and **Key Buses**, **Transition Area** and **Downstream Keyer** associated with the **Mix Effect Bank**.
- **Mix Effect Preset: Mix Effect Bank** settings that you can save, load, and modify.

See Work with Work with Main and Mix Effect (ME) Banks and Transitions.

Over-the-Shoulder (OTS)

Graphic displayed to the upper left or right, i.e., over the shoulder of an anchor.

Message

A graphic, based on a scene template, that references replaceable text and/or replaceable scene assets. As such, a message file is smaller than its corresponding scene file. *See Edit Message and the PRIME User Guide for additional information. See Work with Graphics and Graphics Player for information on working with messages.*

Multiviewer

Software/hardware that enables multiple video sources to be displayed on a single screen. The PRIME Switcher UI features a multiviewer.

Physical Keypad

A hardware-based external keypad that provides the ability to enter ID number, and depending upon type, may also include clip, graphic, and **Mix Effects Load**, **Play**, **Save**, **Delete** and **Clear** functions. A physical keypad may be free-standing, or incorporated into a larger keyboard, including the Chyron Advanced Keyboard, or a PC keyboard.

Playlist

A list of PRIME graphics and/or clips that can be played in or out of order through the **Graphics Players** and **Clip Players**. *See Configure Playlist Players and PRIME Playlist Graphics and Clip Playback within PRIME Switcher.*

Preview

Preview is used in the following contexts in PRIME Switcher:

- **Switcher:** Video/clips/graphics/**Mix Effects** to be transitioned to **Program**. *See Work with Work with Main and Mix Effect (ME) Banks and Transitions.*
- **Graphics Player:** Graphics mix to be transitioned to **Graphics Player Program**. *See Work with Graphics.*

Program

Program is used in the following contexts in PRIME Switcher:

- **Switcher Program Output:** Video/clips/graphics mix that is output from the switcher. *See Work with Work with Main and Mix Effect (ME) Banks and Transitions.*
- **Main Program Bus:** The video input that is selected for the video mix to be sent to **Program** output. The display of the video input selected in the **Program Bus** depends upon the **Transition Area BKGD** setting. *See Next Transition Selection.*
- **ME1 Program Bus:** The video input that is selected for the video mix to be sent to **Mix Effects** output, which can, in turn, be sent to the **Main Bank ME1** input. The display of the video input selected in the **ME1 Program Bus** depends upon the **Transition Area BKGD** setting. *See Next Transition Selection.*

- **Graphics Player:** Graphics mix that is output from the Graphics Player. In order for the contents of **Graphics Player Program** to route to switcher **Program**, the graphics channel (e.g., **GFX1**) associated with the **Graphics Player** (e.g., **Graphics 1**) must be selected as a graphics input on the Downstream Keyer.

Project

The main PRIME "container" that holds all of the assets associated with a specific show, production, look, etc. Assets include scenes, images, clips, playlists, scripts, and more.

Scene, Graphic

See Graphic, Scene, Work with Graphics and Graphics Player for information on working with graphics.

Sub Channel

In PRIME, defined areas of an output channel. Each **Sub Channel**, e.g., scene or clip, is defined by its resolution and its "X" and "Y" position within the output channel. Each PRIME **Sub Channel** can have its own preview and output in the main UI.

Each **Graphics** and **Clips Sub Channel** can have an associated browser that shows, e.g., only scenes with the exact same resolution as the **Sub Channel** itself, to ensure that only scenes designed for that resolution are available.

In PRIME Switcher, you can set a **Sub Channel** to **Preview**, **Graphics**, **Clips** or **Mix Effects**. "**X**" and "**Y**" are set to **0**, **0**, respectively, i.e., the entire screen area.

See Configure PRIME Video and Audio and the PRIME Playout Configuration Guide.

Swap

Exchange of the contents of the **Program** channel and **Preview** channel when a transition is performed. *See Work with Work with Main and Mix Effect (ME) Banks and Transitions.*

Switcher/Video Mixer/Vision Mixer

Software application or hardware device that receives inputs from cameras, routers, video servers, graphics and clip systems, web, and other sources, and provides the controls to mix and output video for a production.

Throughout this document, the term “Switcher” is interchangeable with the terms “Video Mixer” and “Vision Mixer.” PRIME Switcher also provides audio mixing.

Switcher/Technical Director (TD)

Person who operates the switcher.

Take

Command given by the Director to the TD, to perform a specific action. Example: “Take 1” specifies that the TD transition Camera 1 to Program.

Transition

Change of state in which the contents of **Preview** are swapped with the contents of **Program**. “**Transition**” is used as both a noun and a verb. *See Configure Transitions and Work with Main and Mix Effect (ME) Banks and Transitions.*

Transition Type, Transition Effect, Transition

Effect that is applied as video transitions from **Preview** to **Program**. PRIME provides four built-in **Transition Types: Cut**, **Dissolve**, **Wipe**, and **Preset Black**. You can set **Dissolve** and **Wipe** parameters directly within the PRIME interface, and build more complex, custom transitions within PRIME that you can add to PRIME Switcher. *See Configure Transitions and Work with Main and Mix Effect (ME) Banks and Transitions.*

PRIME Switcher File Formats

Overview

PRIME and PRIME Switcher use many proprietary file formats. File formats employed by or specific to PRIME Switcher are as follows.

*.config Configuration File

PRIME configuration file.

*.mep Mix Effect Preset

Mix Effect Preset file.

*.gtc PRIME Clip File

PRIME Clip file format that can be incorporated into individual PRIME scenes.

*.pbm PRIME Message File

PRIME **Message** file, created within PRIME, and used as graphic overlays in PRIME Switcher.

*.pbx PRIME Scene File

PRIME **Scene** file, created within PRIME, and used as graphic overlays in PRIME Switcher.

*.pct Clip Transition File

PRIME **Clip Transition** file, created within PRIME, and that can be applied when transitioning between clips in the PRIME Switcher **Clip Player**, or when performing a PRIME Switcher transition. *See Clip Transitions.*

*.ppc PRIME Power Clip File

PRIME Clip file format that is not part of an individual PRIME scene, but that can play from an independent **Clip Player** created within PRIME configuration. You can edit a clip as a PRIME **Power Clip**.

*.psk PRIME Keyboard Shortcut File

PRIME **Keyboard Shortcut** file, created within PRIME Switcher (also available to PRIME), that stores a set of **Keyboard Shortcuts**. *See Keyboard Shortcut Manager.*

*.ppl PRIME Playlist File

PRIME Playlist file, which contains the scene/message/clip rundown. *See Play Back Graphics/Messages/Images/Clips from the PRIME Playlist.*

*.pst PRIME Switcher Transition File

PRIME custom Switcher **Transition** file, created within PRIME and that is applied when performing a PRIME Switcher **Transition**. Examples include **Slide**, **Split**, **Mask**. A ***.pst*** file cannot be set as a PRIME Switcher Clip Player transition. *See Configure Transitions.*

*.swxpl PRIME Switcher Layout

PRIME Switcher **Layout** file, saved within PRIME Switcher, that stores a PRIME Switcher UI layout. *See UI Layout.*

ABOUT US

Chyron is ushering in the next generation of storytelling in the digital age. Founded in 1966, the company pioneered broadcast titling and graphics systems. With a strong foundation built on over 50 years of innovation and efficiency, the name Chyron is synonymous with broadcast graphics. Chyron continues that legacy as a global leader focused on customer-centric broadcast solutions. Today, the company offers production professionals the industry's most comprehensive software portfolio for designing, sharing, and playing live graphics to air with ease. Chyron products are increasingly deployed to empower OTA & OTT workflows and deliver richer, more immersive experiences for audiences and sports fans in the arena, at home, or on the go.

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