

GRAPHITE™

GRAPHITE TRAINING: MASTERING BASIC OPERATIONS



Smart Training. Smart Production.

December 2017

ROSS®
Production Technology Experts

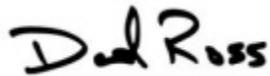
Thank You for Choosing Ross

You've made a great choice. We expect you will be very happy with your purchase of Ross Technology.

Our mission is to:

1. Provide a Superior Customer Experience
 - offer the best product quality and support
2. Make Cool Practical Technology
 - develop great products that customers love

Ross has become well known for the Ross Video Code of Ethics. It guides our interactions and empowers our employees. I hope you enjoy reading it below. If anything at all with your Ross experience does not live up to your expectations, be sure to reach out to us at solutions@rossvideo.com.



David Ross
CEO, Ross Video
dross@rossvideo.com

Ross Video Code of Ethics

Any company is the sum total of the people that make things happen. At Ross, our employees are a special group. Our employees truly care about doing a great job and delivering a high-quality customer experience every day. This code of ethics hangs on the wall of all Ross Video locations to guide our behavior:

1. We will always act in our customers' best interest.
2. We will do our best to understand our customers' requirements.
3. We will not ship crap.
4. We will be great to work with.
5. We will do something extra for our customers, as an apology, when something big goes wrong and it's our fault.
6. We will keep our promises.
7. We will treat the competition with respect.
8. We will cooperate with and help other friendly companies.
9. We will go above and beyond in times of crisis. If there's no one to authorize the required action in times of company or customer crisis - do what you know in your heart is right. (You may rent helicopters if necessary.)

Graphite Training: Mastering Basic Operations

Part No. 4850DR-550

Revision 4

MAN TR GRT 101

Release Date: December 1, 2017

The information contained in this Guide is subject to change without notice or obligation.

Copyright 2017, Ross Video Limited. All trade names, product names, logos and marks contained herein are the property of their respective owners.

Table of Contents

Welcome	7
Section 1: Access Content.....	9
Lesson 1 Access XPression Graphics.....	11
<i>Understanding XPression Fundamentals.....</i>	<i>11</i>
Lesson 1 Load a Graphics Package.....	12
<i>Custom Controls for Graphics.....</i>	<i>19</i>
Lesson 2 Explore Clips, Animations and Stills	21
<i>Graphite Media Workflows.....</i>	<i>21</i>
Lesson 2 Explore Clips, Stills and Animations.....	22
Lesson 3 Mix Audio with RAVE	39
<i>System Overview.....</i>	<i>39</i>
<i>Important Audio Terms and Concepts</i>	<i>41</i>
<i>RAVE Audio Signal Flow</i>	<i>42</i>
<i>Mix Audio with RAVE.....</i>	<i>43</i>
Lesson 3 Mix Audio with RAVE	43
<i>Custom Controls for Audio.....</i>	<i>57</i>
Section 2: Streamline Common Tasks.....	59
Tutorial 1 Custom Controls and Memories	61
Custom Controls	61
Memories	61
Tutorial 1 Custom Controls and Memories.....	62
Tutorial 2 Control Commands for XPression Graphics	69
<i>About Control Commands.....</i>	<i>69</i>
Tutorial 2 Control Commands for XPression Graphics	69

Tutorial 3	Take Graphics and Cut Key	79
	<i>About this Workflow</i>	79
	Tutorial 3 Take and Key Graphics.....	79
Tutorial 4	Double-Boxes with Graphics	91
	<i>About Double-Boxes</i>	91
	Tutorial 4 Double-Boxes with Graphic.....	92
Tutorial 5	Animated Wipe with XPression Graphics	113
	<i>About Animated Wipes with XPression Graphics</i>	113
	Tutorial 5 Animated Wipe with XPression Graphics	114
Tutorial 6	Animated Wipes with a Media Wipe Transition	131
	<i>About Animated Wipes with a Media Wipe Transition</i>	131
	Tutorial 6 Animated Wipe with a Media Wipe Transition	131
Tutorial 7	Chroma Key for “Green Screen” Video	139
	<i>About Chroma Keys</i>	139
	Tutorial 7 Create and Use a Chroma Key	139
Tutorial 8	Custom Controls for Audio	155
	<i>About Audio and Custom Controls</i>	155
	Tutorial 8 Custom Controls for Audio	155
	<i>Complex Audio Controls</i>	171
Tutorial 9	Show Open Sequence	173
	<i>About Creating and Running a Show Open Sequence</i>	173
	Tutorial 9 Show Open Sequence	173
Learn More, Do More	193
	<i>Learn More, Do More</i>	194
	<i>Contact Support</i>	194
	<i>We Want to Hear from You</i>	194
	<i>Ross Products</i>	195
Index		197

Welcome

Graphite is a powerful solution with multiple components offering you the tools to:

- Mix and Play Composite video (Ross Carbonite production switcher)
- Create, Animate and Play Graphics (Ross XPression graphics system)
- Mix and Control Audio (RAVE)
- Access and Utilize Clips (Ross XPression Clips)
- Control everything from an easy-to-use virtual interface (Ross DashBoard)

You may already know how to use some of these tools. You can learn about these tools in-depth with Ross Video's extensive learning resources including Ross University online, user's guides, additional product training manuals or customized on-site training. For more information about these resources, please visit rossvideo.com.

This document is designed to get you on your way quickly and easily with simple instructions for some of the most commonly required tasks for Graphite users.

Before you begin, all component systems and their inputs and outputs must be set up and configured. More information is available in the product manuals and in additional training materials.

For a quick introduction to Graphite, see the Graphite video gallery:

<https://www.rossvideo.com/production-switchers/graphite/video-gallery/>

Section 1: Three easy lessons familiarize you with accessing various types of content.

- Lesson 1 offers **basic information about preparing existing XPression graphics** for playout. For detailed information about creating, modifying or playing XPression graphics, refer to the XPression training manual or product documentation or to the many useful videos online at rossvideo.com.
- Lesson 2 offers a basic tour of accessing clips via **XPression Clips** and the **DashBoard Media Manager**.
- Lesson 3 offers a basic tour of **RAVE, Graphite's audio mixing toolset**.

Section 2: Tutorials offer examples and basic information about creating Custom Controls and Memories to streamline common tasks. With each tutorial, assign a series of actions to a single button that you can press either in DashBoard, on your Control Panel or on an auxiliary shot box.

- Tutorial 1: Custom Controls and Memories
- Tutorial 2: Control Commands for XPression Graphics
- Tutorial 3: Take Graphics and Cut Key
- Tutorial 4: Double-Boxes with XPression Graphics
- Tutorial 5: Animated Wipes with XPression Graphics
- Tutorial 6: Animated Wipes with a Media Wipe Transition
- Tutorial 7: Chroma Key for "Green Screen" Video
- Tutorial 8: Custom Controls for Audio
- Tutorial 9: Set Up a Show Open Sequence

Section 1: Access Content

In this section:

- Lesson 1: Load XPression Graphics
- Lesson 2: Tour Tools for Using Clips
- Lesson 3: Tour the RAVE Audio Mixing Tools

Lesson 1 Access XPression Graphics

Understanding XPression Fundamentals

XPression graphics exist in **project files, saved with the .xpf extension**. Each project contains **one or more scenes**. Each scene contains **one or more objects**, such as text, images, video or other design elements.

To play scenes, the project must be open and the scenes loaded to a sequence even if you do not plan to play them in sequential order. You can play one scene at a time as with a traditional page-based character generator. Or, by assigning scenes to different frame buffer layers, you can play more than one scene at a time, allowing one or more scenes to persist on-air while you play other scenes on or off, all within a single channel.

For the following tutorial, you need to have an XPression project already saved on your system. You can use your own project, a purchased graphics package or the demo project that comes with the system.

If you are using a graphics package designed on a different model of XPression, note that with a standard Graphite system:

- You have one XPression graphics channel
- You do not have Transition Logic or 3D objects (available on some other XPression models).

Therefore, if you are using a project created on another XPression system, you may need to make the appropriate modifications.

Typically, each graphic scene functions as a template, with text, images, scores or other data replaced as needed to support the broadcast. However, it is important to note that only those objects in the scene that have been designated as *Published* may be replaced within XPression's playout interface or via an external source. For more about creating templates, refer to the XPression training manual, product documentation or Ross University online videos at rossvideo.com.

Let's explore working with XPression graphics.

In this tutorial:

- > Open XPression
- > Load an XPression Project
- > Access the Sequence interface
- > Add graphics to a sequence
- > Modify a graphic's content

Lesson 1 Load a Graphics Package

1. Double-click the XPression Graphite desktop icon to open the XPression interface.

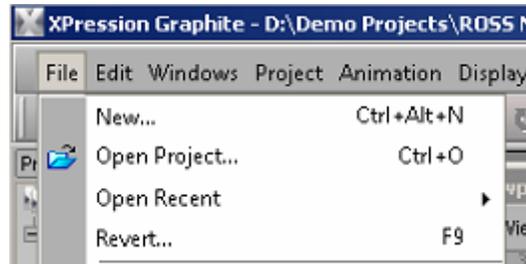


2. The application may open to the interface for graphics creation (Layout) or playback (Sequence). Look at the very top of the interface, near the middle. Locate the Layout and Sequence tabs. Click the Sequence tab.



3. The interface to play a sequence of graphics appears. You can also toggle from Sequence to Layout, or vice versa with keyboard shortcuts. Press F3 on your keyboard to return to the Layout interface. Press F4 to return to the Sequence Layout.

4. Like most programs that run on a Windows™ operating system, XPression opens and saves files from the File menu. Click File from the Main Menu, and then click Open Project.



5. The Open Project window appears. Navigate to the project that you want to open. If you plan to use a sample training project, go to:

D:\Projects\

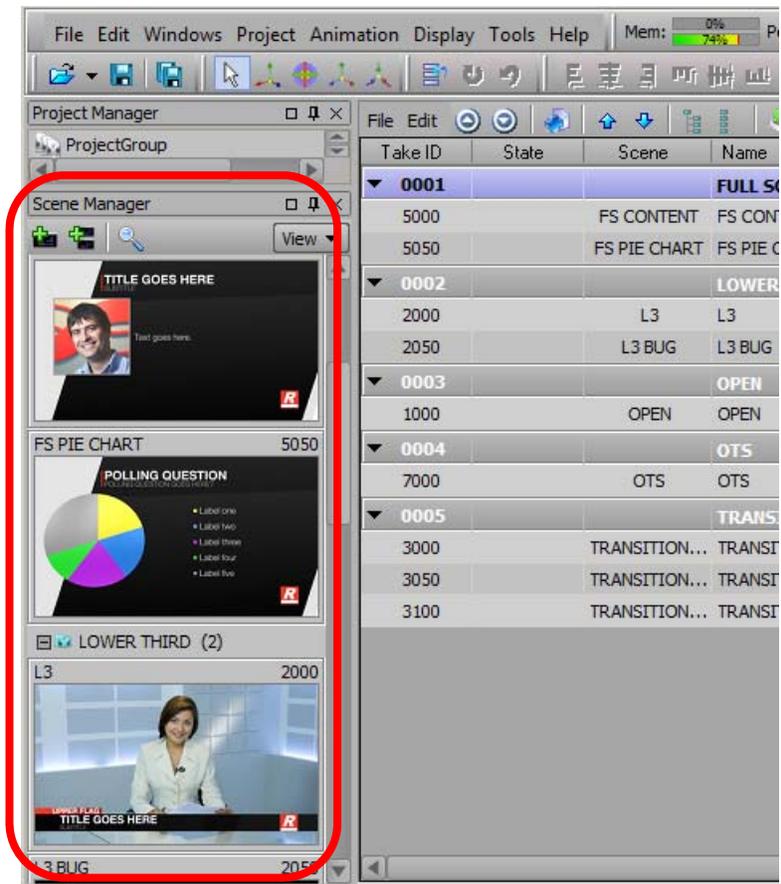
In the Demo folder, double-click to open the folder:

ROSS NEWS EVENING – GRAPHITE

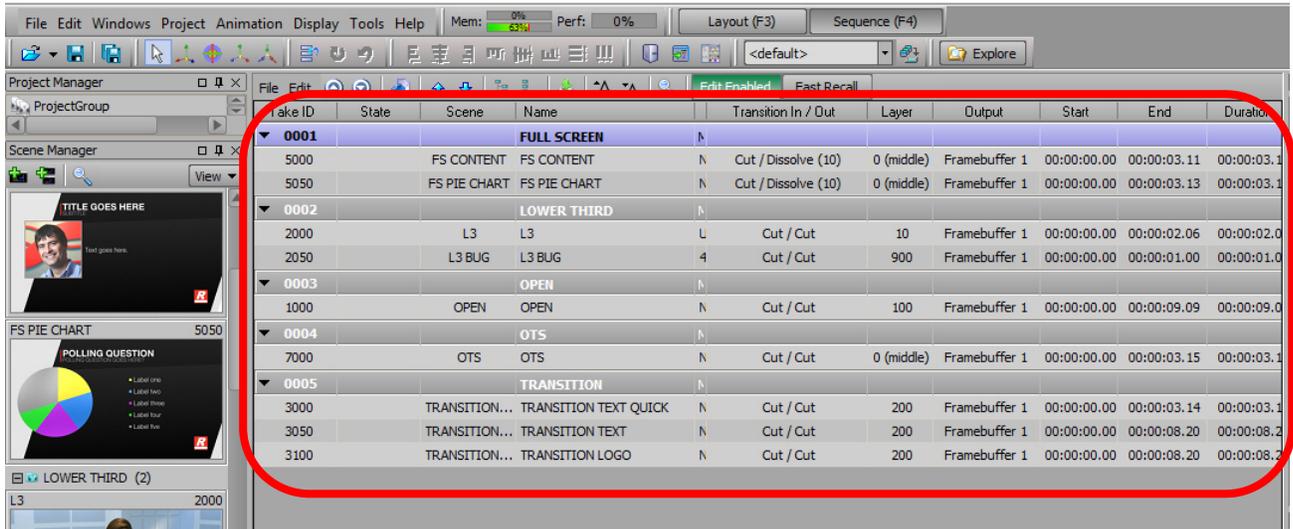
Note On some systems, you may find this in a sub-folder or different location.

6. In this folder, you can see several sub-folders with all the assets for this project. You can also see the .xpf file for this project. Select this project file and click Open.
7. You may see a Confirm dialog that asks if you want to save changes to the existing untitled project. Click No unless you have a working project open that you need to save.

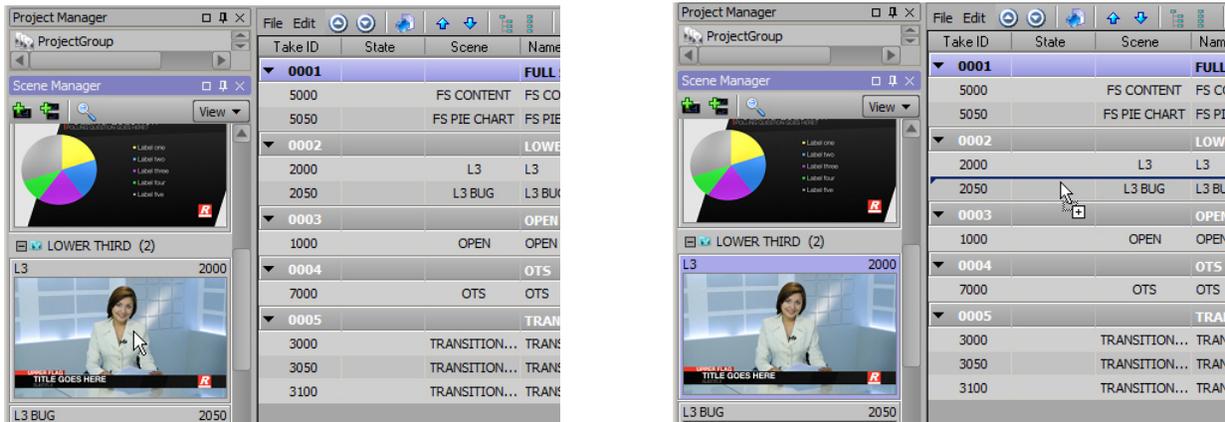
8. As the project opens, all the template scenes available in this project appear in the Scene Manager, at the left of the interface. You can use any of them one or more times, changing the text or images as needed.



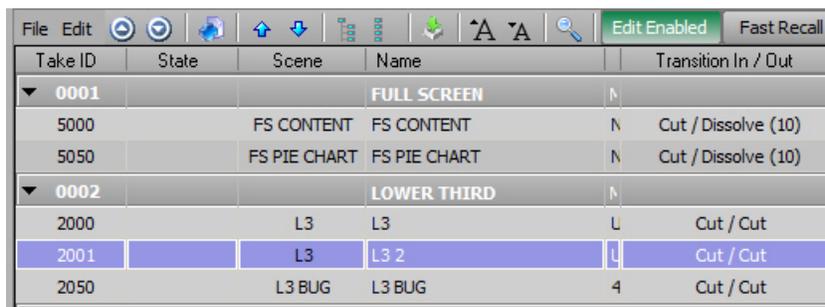
- This project already has scenes in the sequence, ready for playout. In this sequence, notice that the scenes are organized into groups by scene type.



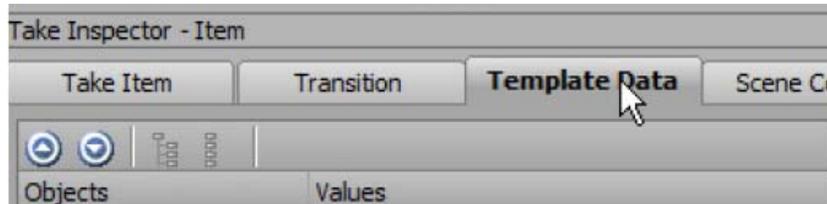
- To add a scene to the sequence so that it can be played, click and drag the scene from the Scene Manager to the Sequence List. Choose a scene that has text and add it to the Sequence List.



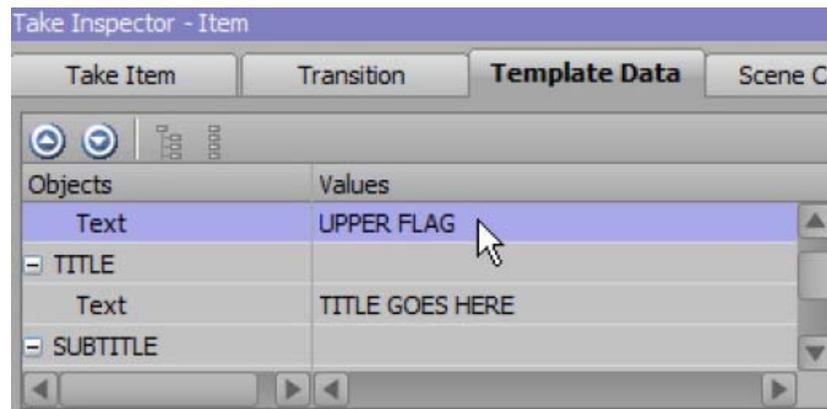
A new iteration of this scene appears in the Sequence List.



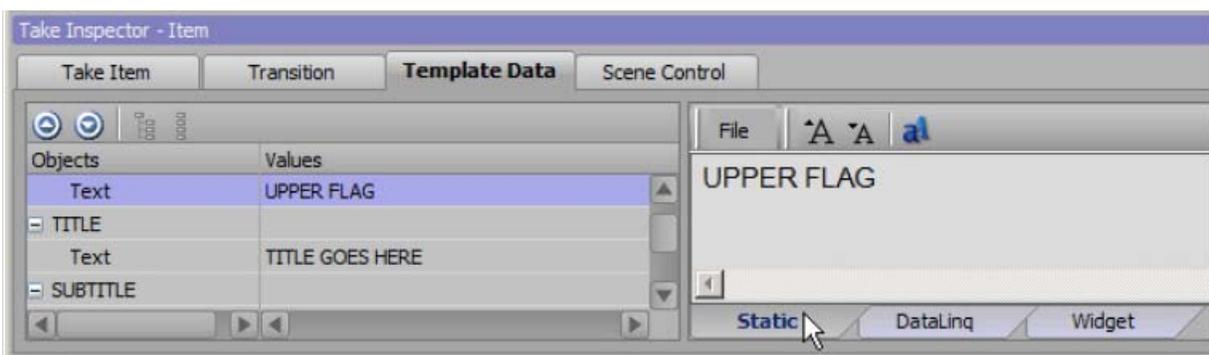
11. The scene that you just added to the list should still be highlighted in the list. If it is not, click anywhere in the row for that scene to highlight it.
12. In the Take Inspector, near the bottom left of your screen, select the Template Data tab if it is not already selected.



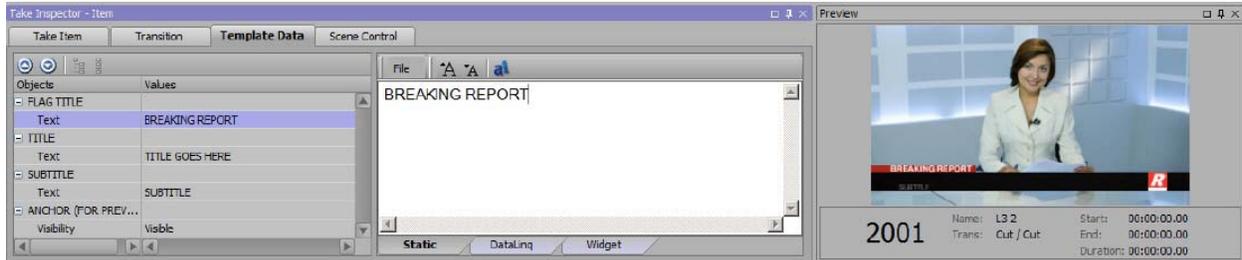
13. In the Objects List in the Take Inspector, click to select the Text object that you want to modify. Typically, this object has placeholder text that indicates the purpose of this field. You are going to change this to display the actual text that you want on air. In the example here, the placeholder text is UPPER FLAG.



14. In the field to the right of the Objects List, click the Static tab that is at the bottom. This tab allows you to manually enter text for this object.



15. Click to place your cursor in the large white area on the Static tab and type the text that you want to enter in your graphic. If there is existing text that you do not want, you can delete it here. In the example here, the placeholder text, UPPER FLAG is replaced with BREAKING REPORT. Notice that you can preview the text in the graphic at the right of this area.



Note Only objects designated as Published in the graphic creation process may be modified. For more information about template creation and publishing objects, refer to the XPression training manual.

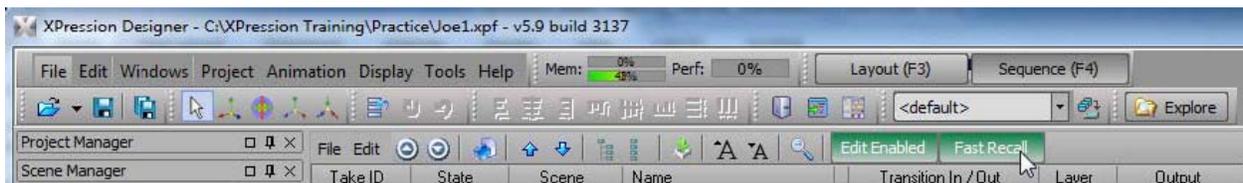
16. Observe that there are two additional tabs below the field where you typed the replacement text.
- Widgets allow you to access pre-configured text lists, clocks or timers. These items are available only if they have been built into the template.
 - DataLinq allows you to populate the text object with an external source if the template has been configured for a DataLinq connection.

Note For more about Widgets and DataLinq, refer to online resources or to the XPression training manual.

- Look at the Sequence Playlist on the right side of the interface. Make sure that the Thumbnail tab is selected. This area looks a lot like the Scene Manager on the left, with thumbnails of your scenes. However, these thumbnails show each iteration of each scene in the playlist with any modifications made to the original template. Notice that the text that you just entered appears in only one iteration of that scene.



- You can manually navigate and play items in the playlist. Press the Numlock key on your keyboard. Click the Fast Recall above the Playlist so that it is green and enabled.



19. Experiment with these keyboard shortcuts:

To select an item in the playlist	Press the Up arrow key or the Down arrow key
To cue an item in the playlist with its ID	Enter the Take ID (from the first column in the playlist) on the Numeric keypad
To play the currently selected item	Press Enter on the Numeric keypad
To take the currently cued item online and cue the next item in the list	Press + on the Numeric keypad
To take the currently playing item offline and cue the next item in the list	Press – on the Numeric keypad
To clear all channels	Press Escape two times
To insert another item in the playlist	Press Ctrl + I to open the Insert window

Custom Controls for Graphics

You can play graphics manually, as demonstrated in this exercise, or you can create Custom Controls to trigger graphics. A Custom Control allows you to trigger one or more actions with a single click in the Ross DashBoard ShotBox interface, the Carbonite Control Panel or with an optional shot box.

For more about creating Custom Controls for graphics, see Custom Controls Lesson 1, later in this book.

Lesson 2 Explore Clips, Animations and Stills

Graphite Media Workflows

With Graphite, there are several ways that you can use media in your broadcast.

- Within XPression Graphite, you can use an image or a clip as a material on an object in a graphic. This can be for design purposes, such as an abstract moving design for the background of a lower third. Or, there may be an image or video of an event, perhaps displayed on an over-the-shoulder or double-box object to support a story. Using images or clips as materials is part of the XPression graphic design process and is not covered in this manual. For more details, refer to the XPression Training: Design Basics or to Ross University XPression U tutorial videos, available at Rossvideo.com
- Within XPression Graphite, you can open the XPression Clip Browser and either play graphics directly from the Clip Browser or drag them into the Sequence List. You can play any clip encoded with the XPression AVI codec, including:
 - > Any clip recorded with XPression Graphite's Record Client
 - > Any clip encoded with the XPression Video Coder
 - > Any clip encoded with the XPression INcoder

Note *XPression INcoder is a separate product, available for purchase. XPression INcoder offers workflow efficiencies including intelligent watch folders, multi-target publishing, and embedded meta-data.*

- You can also access media stored on a USB inserted into USB port on the Graphite frame. The media is accessible via DashBoard's Media Manager or via the Control Panel. This workflow works well for still images, audio and short animations. Due to storage capacity, it is not meant for longer clips. Graphite includes 8 GB of internal storage. Supported file types include:
 - .bmp
 - .png (with or without alpha)
 - .jpg
 - .wav
 - .tga (with or without alpha)

To prepare to access images, animations or clips for other lessons in this book, let's explore the available tools.

In the following tutorial:

- > Record, play and edit clips
- > Open and explore the XPression Clip Browser
- > Open and explore the Clip Server window
- > Open and explore the Crash Record window
- > Open and explore XPression Video Coder
- > Open and explore the DashBoard Media Manager

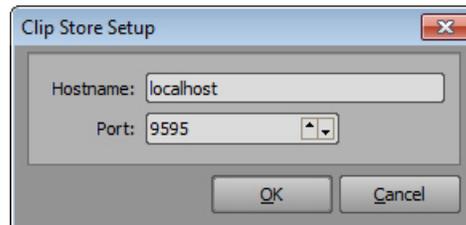
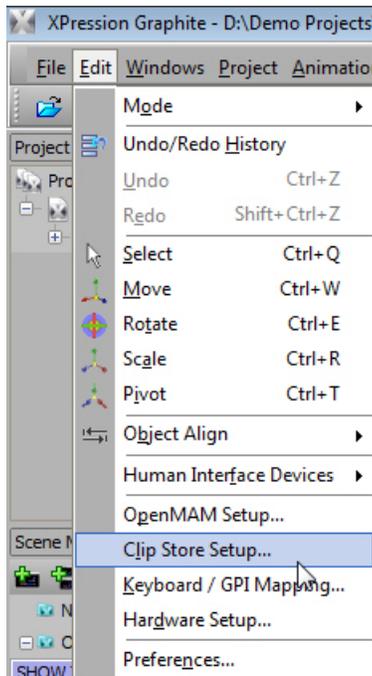
Lesson 2 Explore Clips, Stills and Animations

Part 1 – Getting Started

1. If it is not already running, open XPression Graphite from the desktop icon.

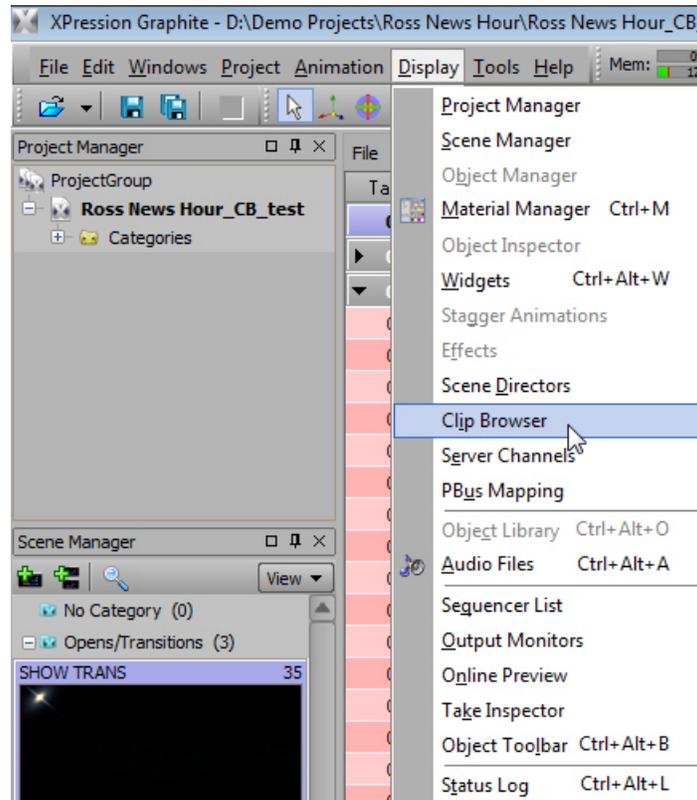


2. XPression defaults to the Sequence Layout, or you can press F4.
3. XPression uses a specified Clip Store. This may already be configured. However, should you need to access these settings, click Edit>Clip Store Setup. Then in the Clip Store Setup window, enter the Host Name and Port number and then click OK.

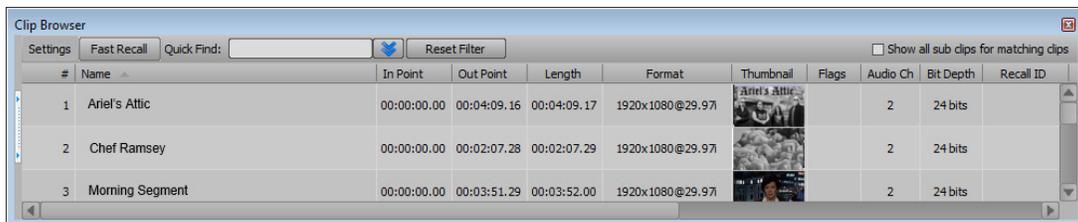


Part 2 – The Clip Browser

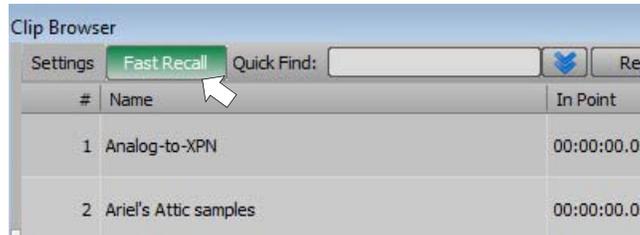
1. Click Display>Clip Browser.



2. The Clip Browser appears. Click and drag the edges to size it to fit below the playlist. Click and drag the title bar of this window to position it.



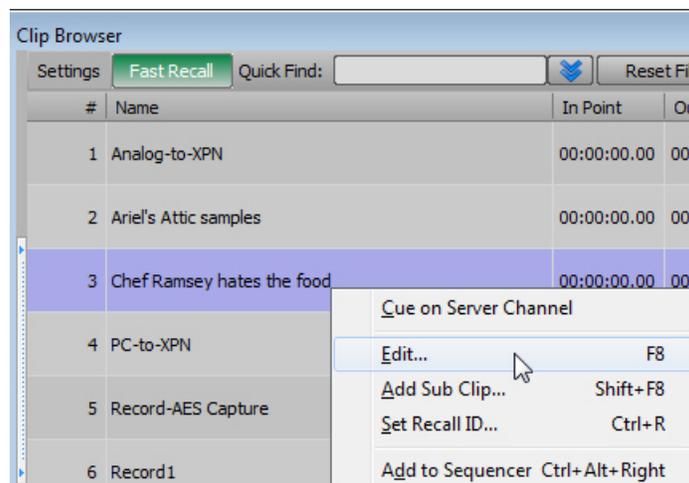
3. Drag a file from the Clip Browser to the Sequence List. Once a clip is in the sequence list, you can play it to its designated server channel just as you would play any graphic in the list to its designated framebuffer.
4. In the Clip Browser, click the Fast Recall button. This enables recall of numerically named files in the Clip Browser from your PC keyboard's numeric keypad.



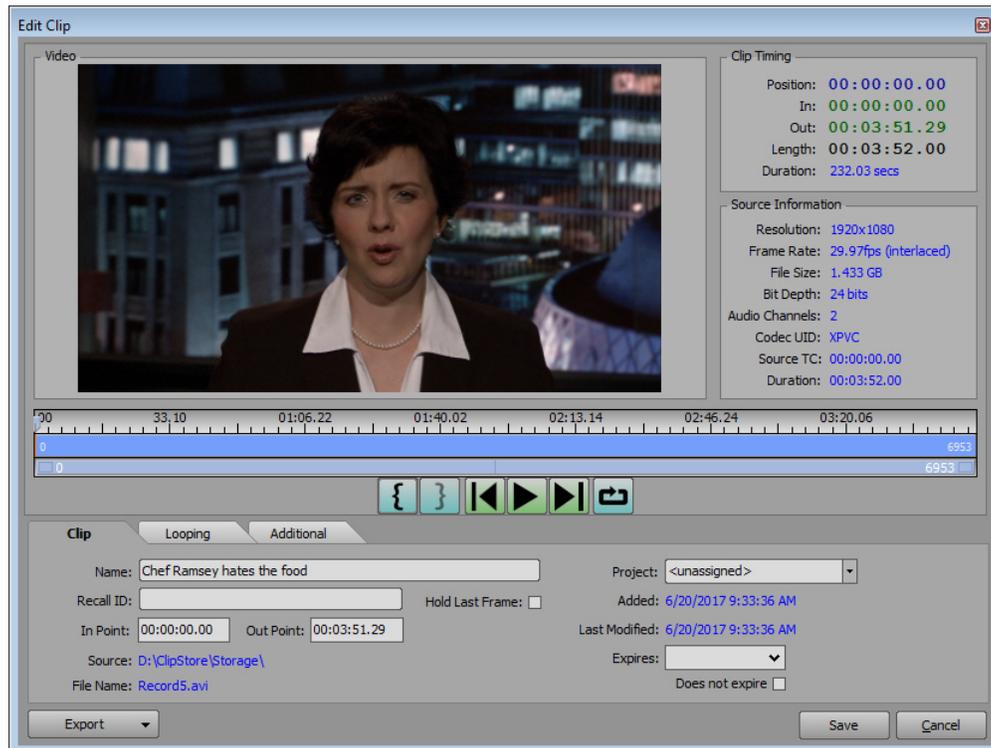
5. On the numeric keypad of your keyboard, enter the number of a numerically named video file. The Clip Browser populates with only this file.
6. In the Quick Find field, enter the complete or partial file name for one of the videos in the browser. The Clip Browser populates with only this file.
7. Click the Show/Hide button to access other search criteria. When you are finished exploring here, click the Show/Hide button again to close these controls.



8. To remove all filters and repopulate the clips list, click Reset Filter.
9. Right-click an item in the Clip Browser and from the popup menu, choose Edit.



The Clip Edit window appears.



10. You can edit your clip and create a new sub-clip:

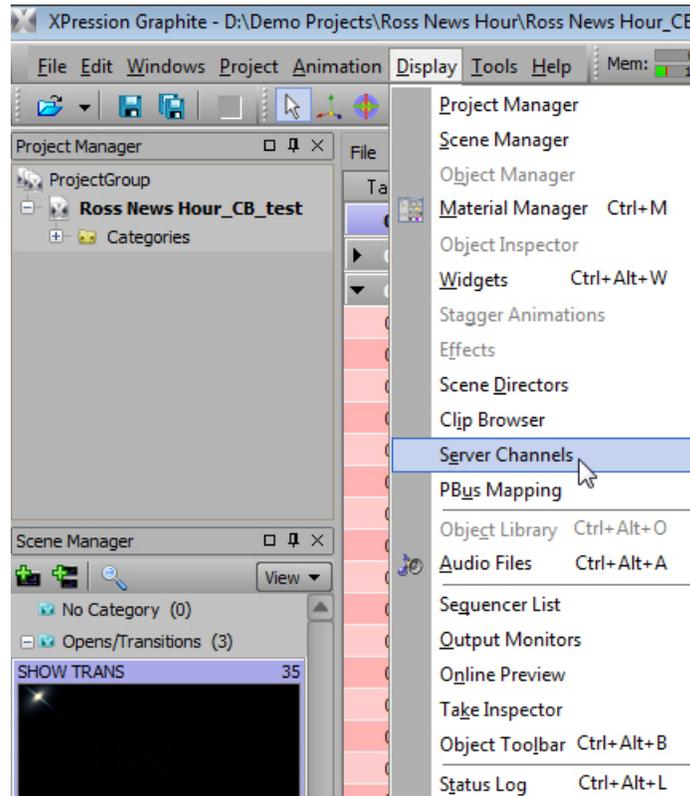
- Set an In Point and an Out Point to trim your clip.
- Click the looping tab and set up looping from start to finish or from two specified points in the clip. Designate the number of times the clip is to loop or set infinite looping.
- Play and test the edited sub-clip.
- Save the edited sub-clip.

When you finish experimenting, close the Clip Edit window.

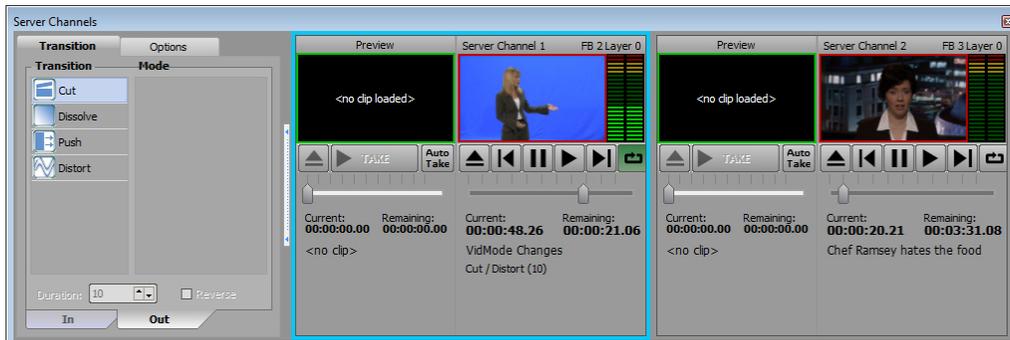
Part 3 – The Server Channel Window

XPression Graphite typically includes a single graphics channel and two clip server channels. You can display a window to monitor the clip server channels and play clips directly from this window.

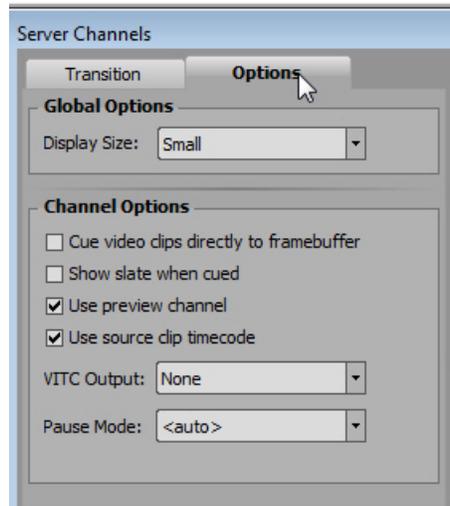
1. Click Display>Server Channels.



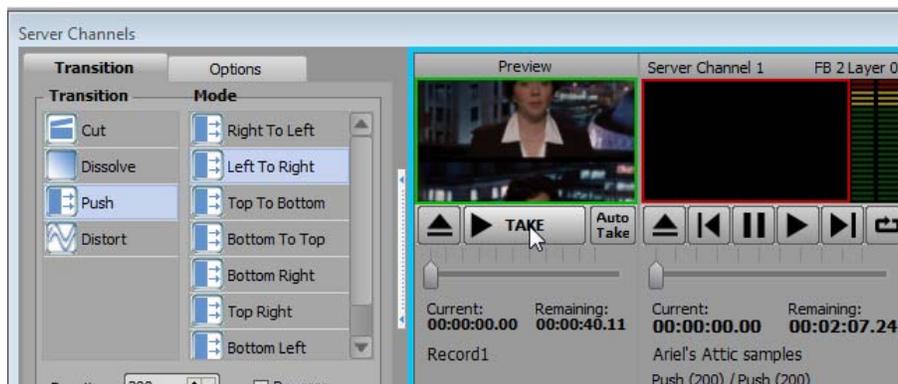
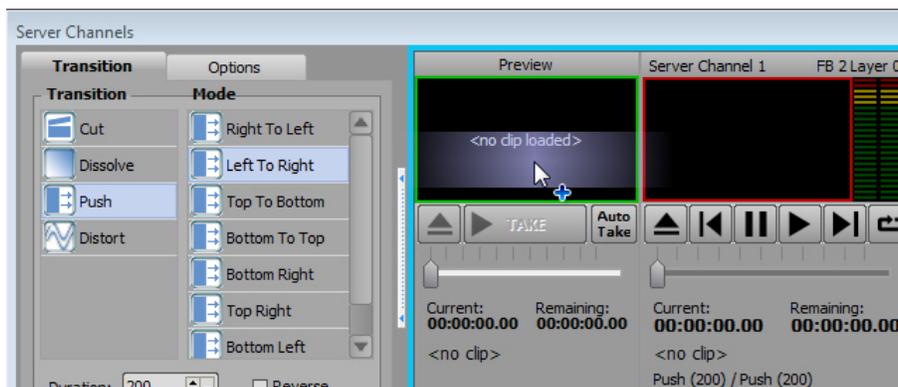
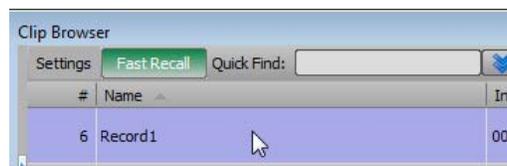
The Server Channels window opens. If you do not see it, you may need to resize and reposition some of your windows.



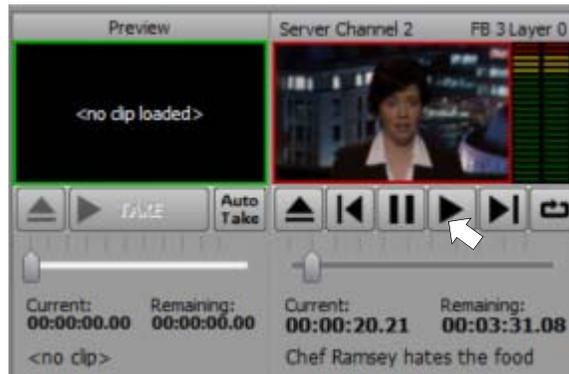
- Click the Options tab. Here you can adjust the appearance and behavior of the Server Channels window.



- Drag a clip from the Clip Browser to the Preview thumbnail for either Server Channel and then click the Take button. The clip plays to the server channel.



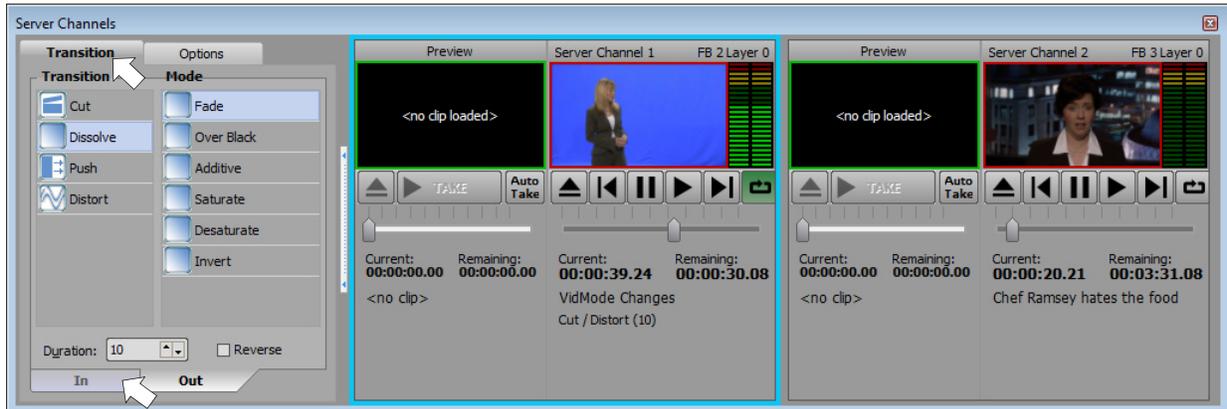
4. Drag a clip from the Clip Browser directly to either Server Channel thumbnail in the Server Channel window and click the Play button.



5. Click the Enable Loop button and click the Play button again. Each time the clip plays to the end, it automatically repeats from the beginning.



- In the Server Channels window, click the Transitions tab, near the top.

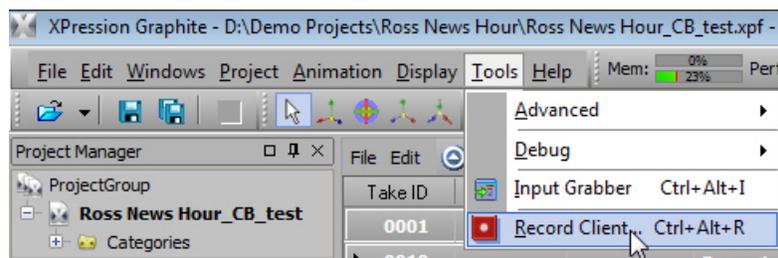


- Click the In tab, near the bottom. Use the controls on this tab to specify how a clip transitions on.
- Make a selection from the Transition column and then the Mode column. If the transition is a cut, then no Mode selection is needed.
- In the Duration field, type a value to indicate the number of frames for the transition.
- Check the Reverse checkbox to reverse the transition effect, or leave it unchecked.
- Click the Out tab, near the bottom, and then enter the transition and duration settings to specify how the video is to transition out.

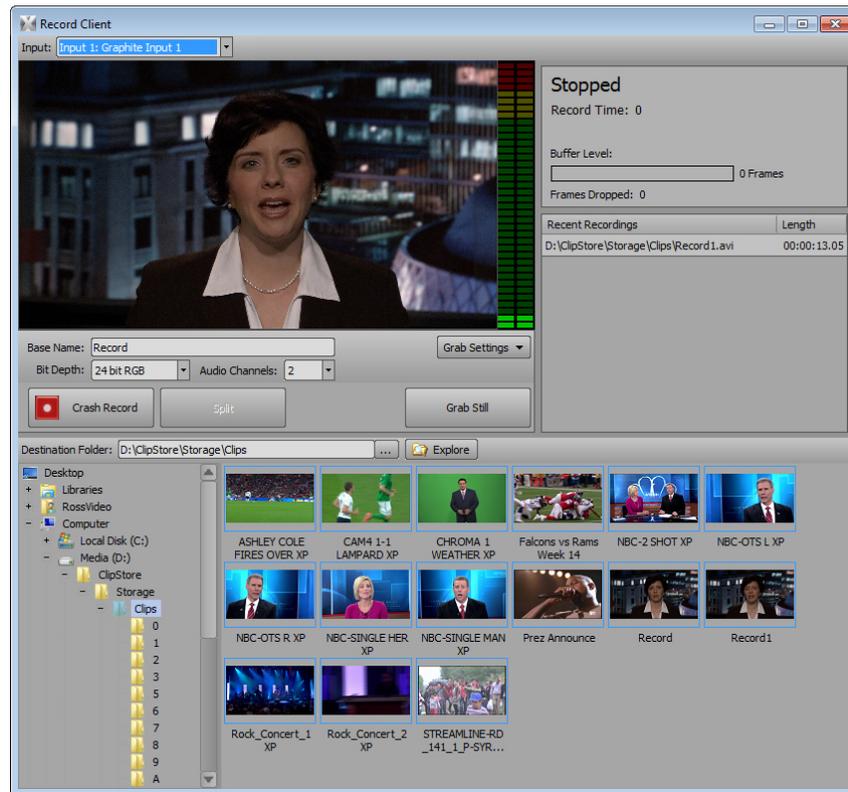
Part 4 – The Crash Record Window

This tool allows you to record video with embedded audio from any of your input sources.

- In XPression, click Tools>Record Client.



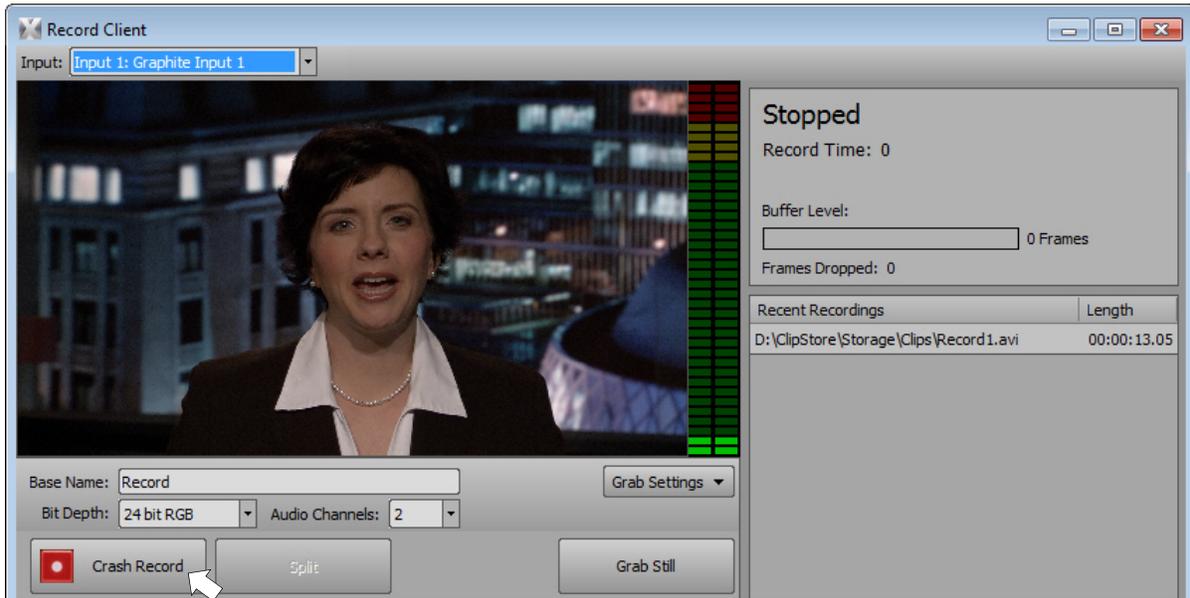
The Record Client Window appears.



2. From the Input dropdown at the top, select the video input that you want to record.
3. In the Base Name field, enter a file name for your new recording.
4. From the Bit Depth dropdown, choose 24 Bit RGB or 32 Bit RGBA depending on whether you want to capture an alpha channel (RGBA) or not.
5. From the Audio Channels dropdown, specify the number of Audio Channels that you want to capture: 2,4, 6, 8, 10, 12, 14, or 16.
6. Click the Grab Settings button and specify the Interlaced setting for the input video and the file format that you want to generate (TGA or PNG).
7. Use the Browse button (...), the Explore button or the Folder tree to specify a location for your new recording.

Note To specify a default location for your recordings, click *Edit>Preferences>Folders>Default Grab and Record*.

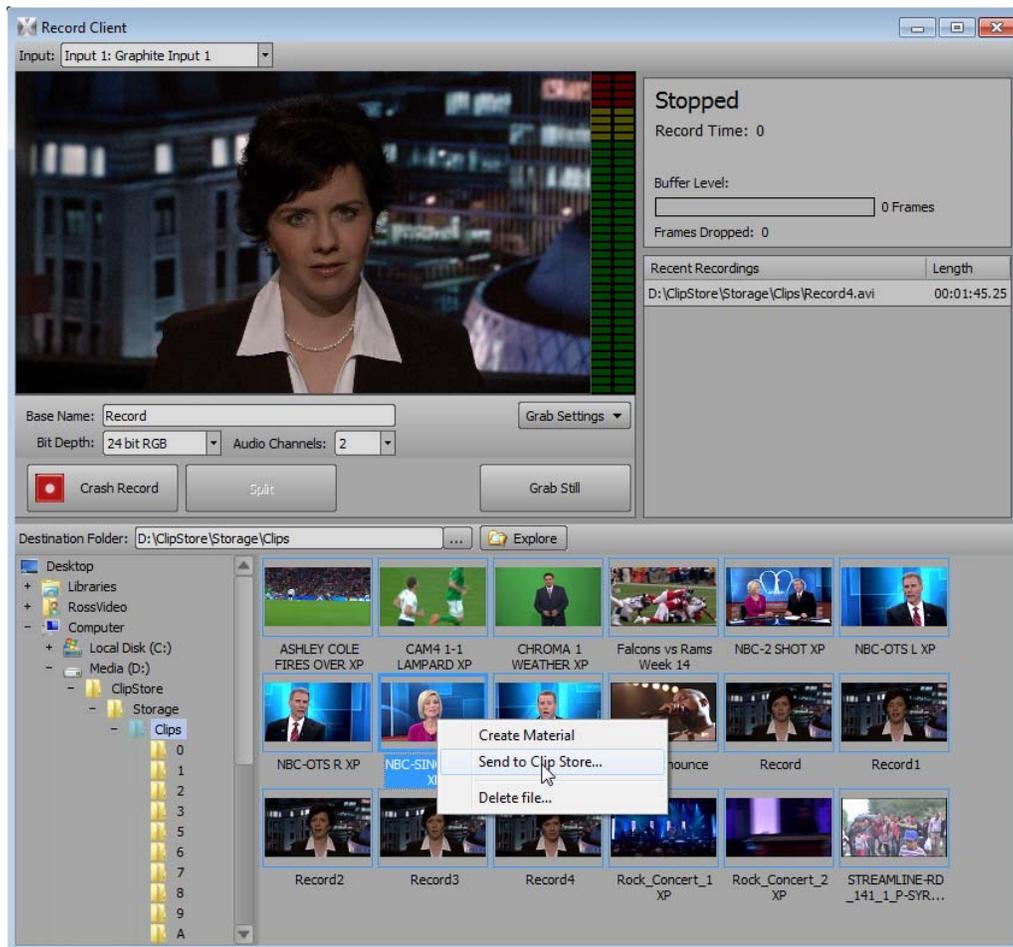
8. Click Crash Record.



9. Notice that the Crash Record button is now a Stop Record button. Click this button when you want to stop recording.



10. To put the recorded file in the Clip Store so that you can access it in the Clip Browser, right-click the file. From the popup menu, choose Send to Clip Store.



11. Make settings in the Send to Clip Store window and then click Send to Clip Store. The clip appears in the Clip Browser.

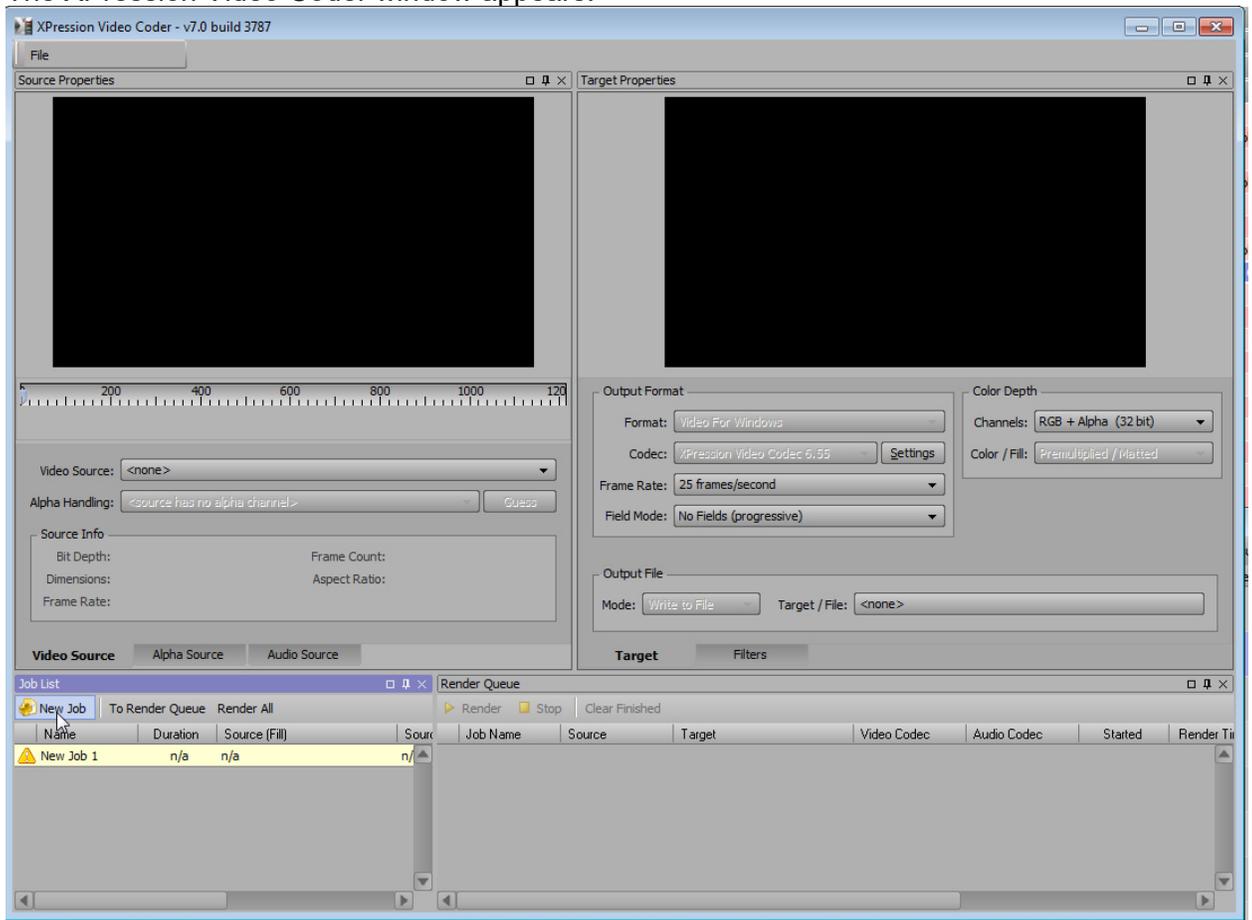
Part 5 – The XPression Video Coder

The XPression Video Coder allows you to encode clips to play with XPression.

1. Click the XPression Video Coder icon on your desktop.

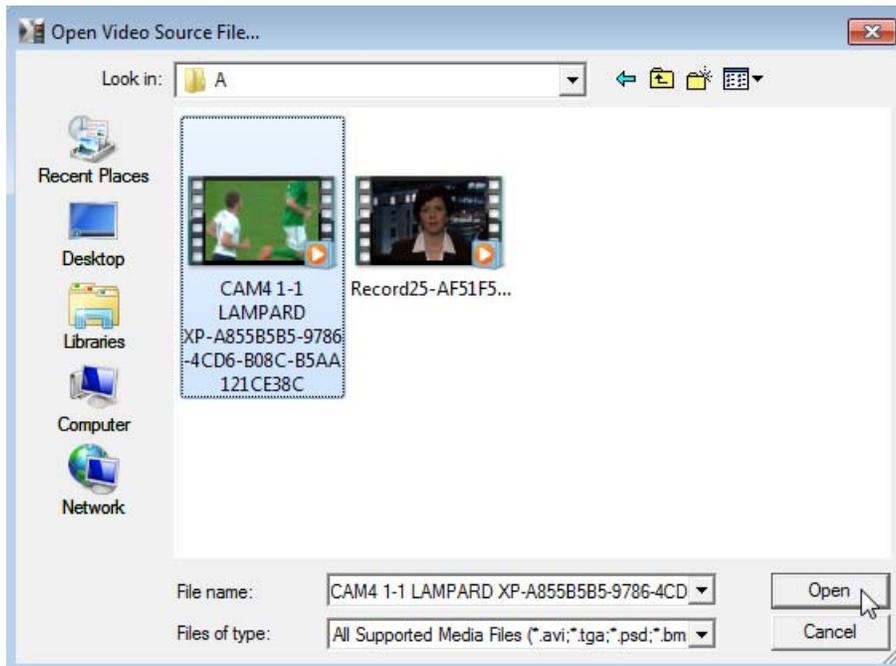


The XPression Video Coder window appears.

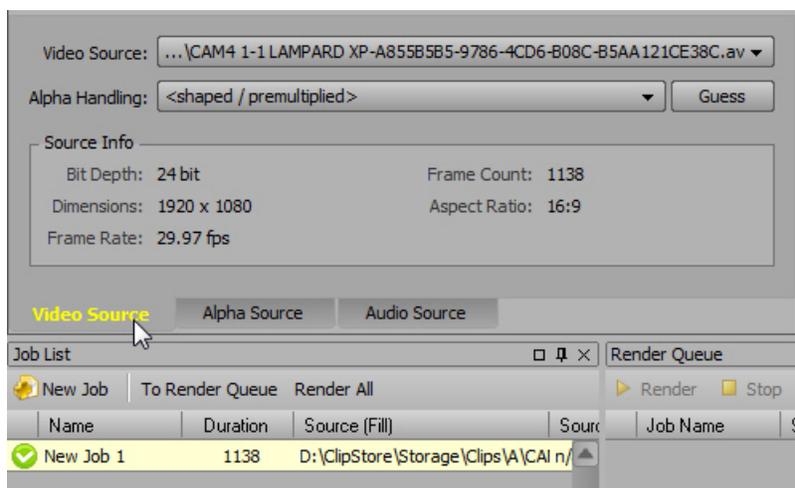


2. Click the New Job button.

The Open Video Source File window appears.

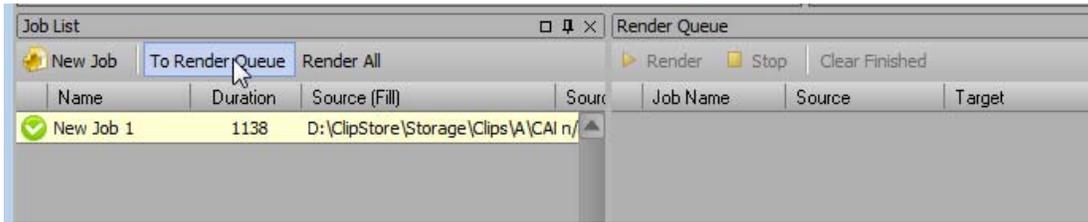


3. Navigate to a video file that you want to encode for use with XPression Graphite, select it and then click Open.
4. You want to tell the system about the video source that you just selected. Make the appropriate settings in the Source Properties area, including the Video Source, Alpha Source and Audio Source tabs.

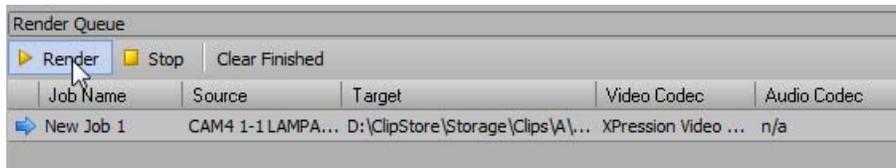


5. Next, you want to specify the properties of the encoded video. Make the appropriate settings in the Target Properties area.

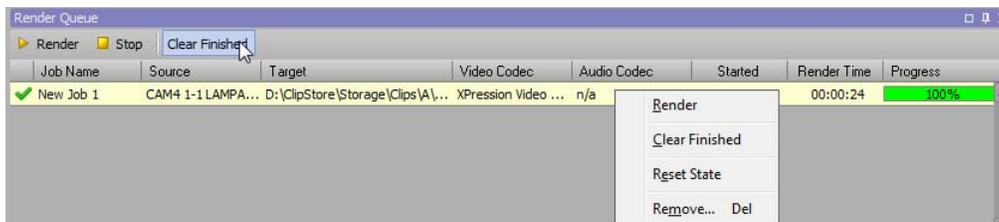
6. With this job selected in the Job List, click To Render Cue.



7. Click Render.



8. Once the Progress Bar indicates that the job is 100% rendered, click the Clear Finished button, or right-click the item and from the popup menu, choose Clear Finished.



9. If you want this new clip to appear in your XPression Clip Browser, return to the XPression Record Client window (Tools>Record Client).
10. Navigate to the folder where you rendered the new clip.
11. Right-click the clip and choose Send to Clip Store.

Part 6 – Use Media with DashBoard’s Media Manager

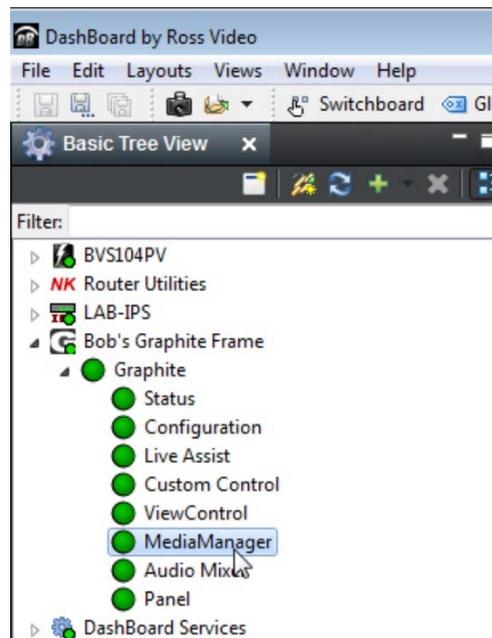
With the Media Manager, you can access media stored on a USB drive or internally on the Graphite. A typical and convenient workflow is to keep all media needed for a certain show on a USB drive and insert that drive as you prepare for the show. The Media Manager is useful for still images and shorter animations, but is not meant for longer clips.

Note Internal storage to the Media Manager does not occur on the Windows platform and is an advanced procedure. For further instructions about internal storage refer to Graphite user documentation.

1. From the Windows desktop, double-click the DashBoard icon to open DashBoard.



2. In the Basic Tree View, navigate to the Graphite system and expand this item in the tree.



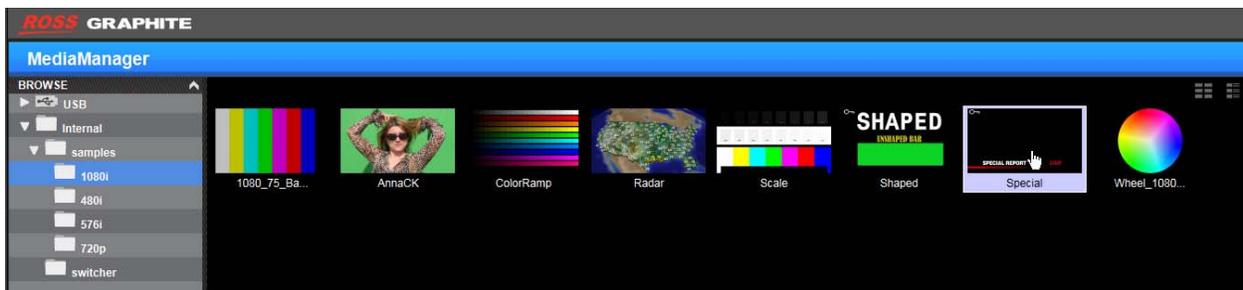
Note If Graphite does not appear in the Basic Tree View:

1. Locate its IP address. When you power on the Control Panel, the IP address appears in the mnemonic display in the Menu area near the top of the panel.
2. In DashBoard in the Basic Tree View, click the (+)Add New Connection button. The New window appears. In this window, expand the General category and then click to select Manual Connection. Click Next. The Manually Detect Device window appears. Enter the Graphite Panel IP address so that DashBoard can locate it on the network and then click Finish.

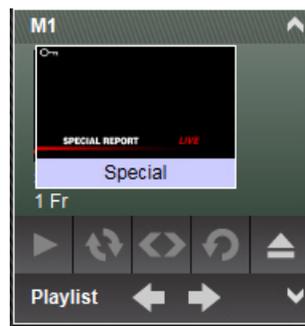
- Do one of these to open the Media Manager:
 - Double-click Media Manager if you have not previously opened it in this session, or simply click if you have already opened it.
 - Click the Navigation Menu button at the bottom right, and then click Media Manager.



- Expand the USB carat or the Internal carat in the Browse area and navigate to stored media files.



- To load media to one of the internal media channels, drag it to the Media player. The media is now available to play when this source is included in the video output.



Lesson 3 Mix Audio with RAVE

System Overview

With Graphite's RAVE Audio Mixer, you can mix video from:

- External sources such as microphones
- Internal PC sources such as iTunes
- Embedded audio from clips, XPression graphics, or input video

With RAVE, you have the same tools as with a traditional audio mixer but with the convenience and additional capabilities of a virtual GUI mixer. The audio mixing components of your Graphite system include:

- Hardware
Dedicated professional grade twenty-eight channel hardware-based audio mixing engine
- Breakout Panel
Optional mic and line breakout panel with low distortion



- Software Control Interface
The Dashboard RAVE audio GUI, accessible from any Dashboard client, has all the features that an audio operator would desire, including: input management, level monitoring, volume/gain adjustment, and more.



Important Audio Terms and Concepts

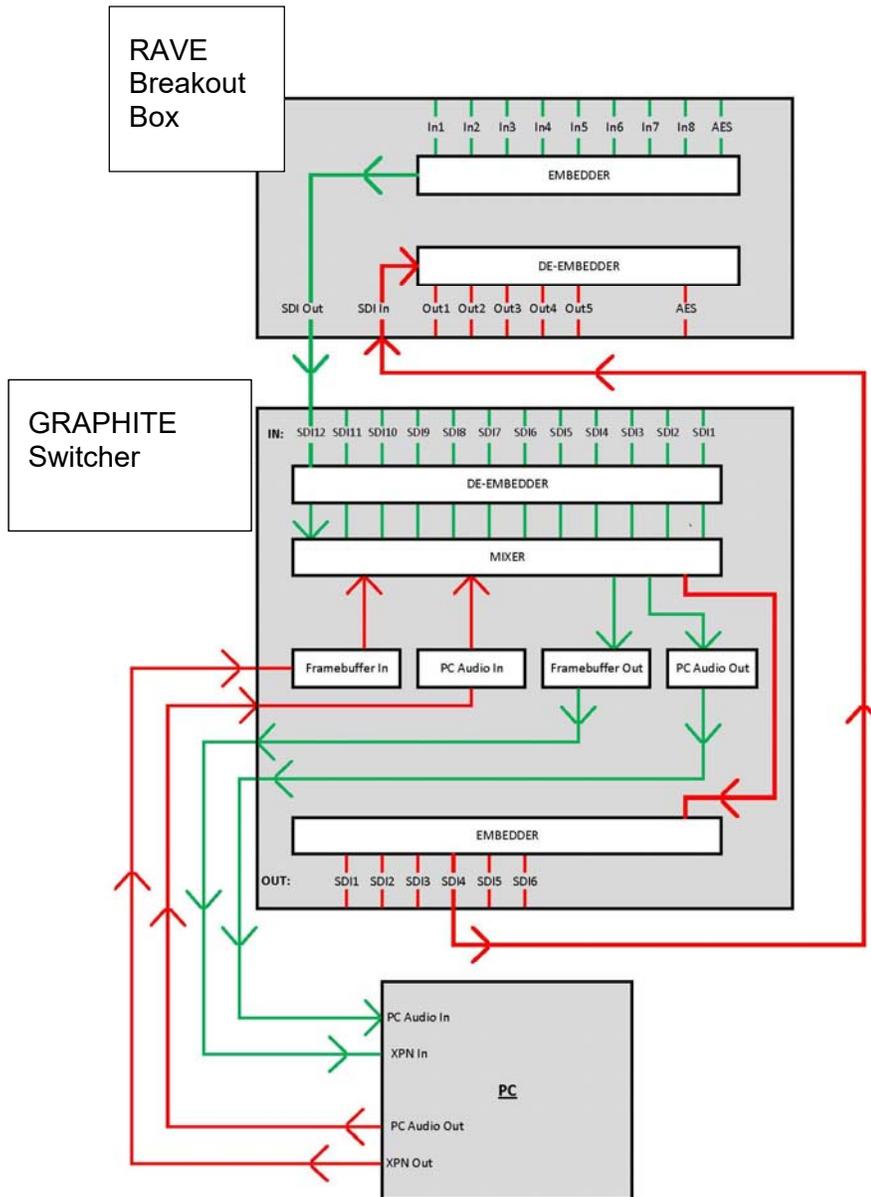
If you have worked with audio before, the tools and terminology associated with RAVE will be familiar to you. If audio mixing is new to you, here are some important terms and concepts to learn:

- **Balance** refers to stereo input and output and specifies the relative volume of sources to one another.
- **Pan** refers to working with a mono input source and defines the level that goes to each the left and right stereo output. By controlling the balance between left and right sides, the sound seems to come from a certain point in sonic space.
- **Pad** sets the number of decibels to automatically subtract from an input, making it softer. This is often used to prevent overload of an amplifier downstream.
- **Gain** adds decibels to a source, making it louder.
- **Sampling** in digital recording is the numerical measure of the level of waveform at a given instant of time. Analog music is represented digitally by many samples taken in rapid succession. The sample rate is the number of times per second that samples are taken. The higher the sample rate, the more realistic the digital reproduction of the sound, and the higher frequencies of the sound can be reproduced.

Note RAVE's sample rates of 48 Khz, 24 bits produce broadcast quality audio, higher than the CD standard rate of 44 Khz, 16 bits.

RAVE Audio Signal Flow

In this diagram, you can see how audio signals flow from their source, or input, to the final, mixed output. Your system should be set up before you begin the tutorial in this section. For more information, refer to the appropriate product documentation.



Mix Audio with RAVE

For the following tutorial, you should have:

- two or more channels of audio configured. For more information, see the appropriate product documentation.
- an audio output monitor

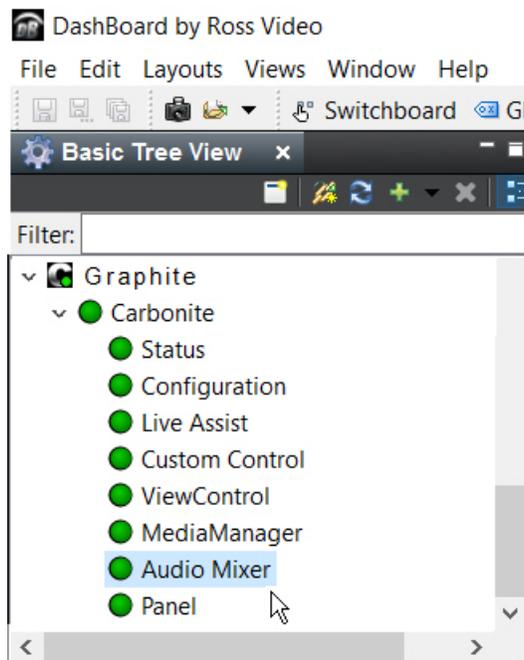
In this tutorial:

- > Open the RAVE audio controls in Dashboard
- > Configure the GUI
- > Set audio levels
- > Set audio to follow video
- > Customize monitoring
- > Customize auxiliary output

Lesson 3 **Mix Audio with RAVE**

Part 1 - Configure the GUI and Set Levels

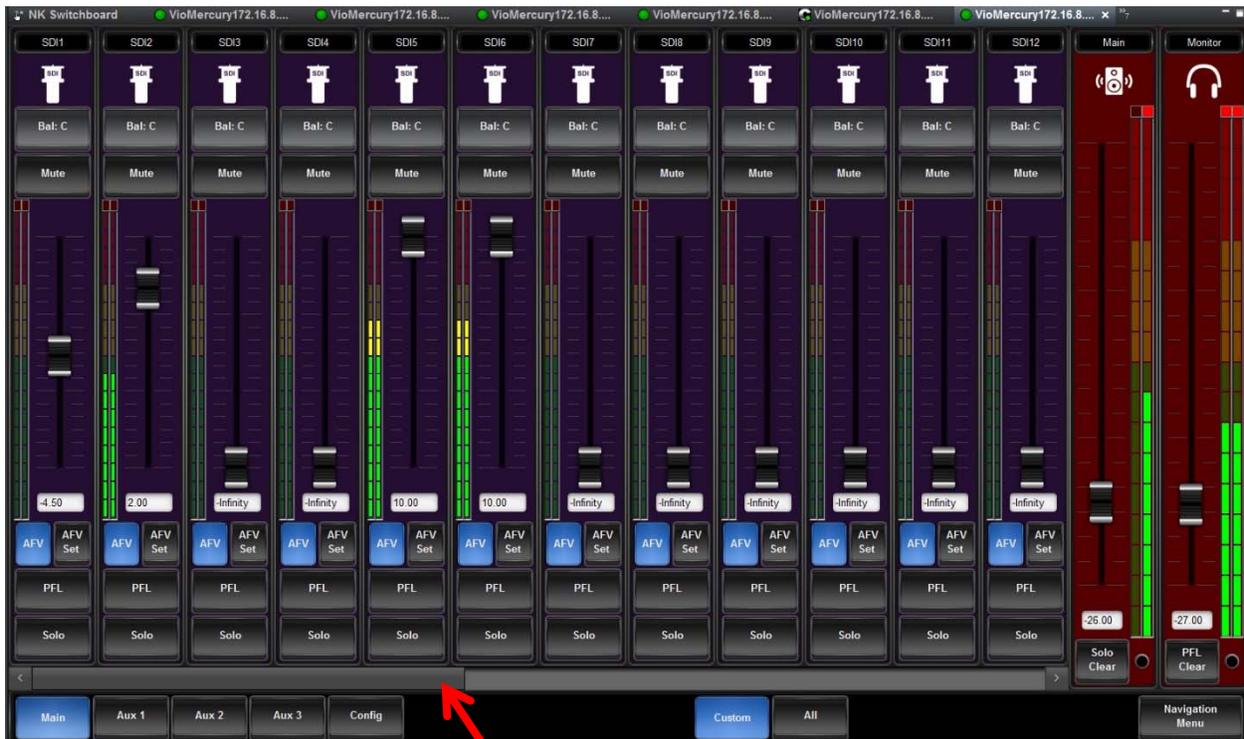
1. To access the RAVE audio mixing GUI, do one of these:
 - If you are not already working with Graphite in DashBoard, open DashBoard. In the Basic Tree View, expand the Graphite entry. Within the list of Graphite components, expand the Carbonite entry and then click Audio Mixer.



- OR, if you are already working with Graphite in DashBoard, click the Navigation Menu button at the bottom right and then click the Audio Mixer button.



The audio mixing interface appears. You can see that the controls here mimic those on a traditional audio mixing console. Depending upon your monitor setup, you may need to use the Slider Bar near the bottom of the GUI to see all the channels.

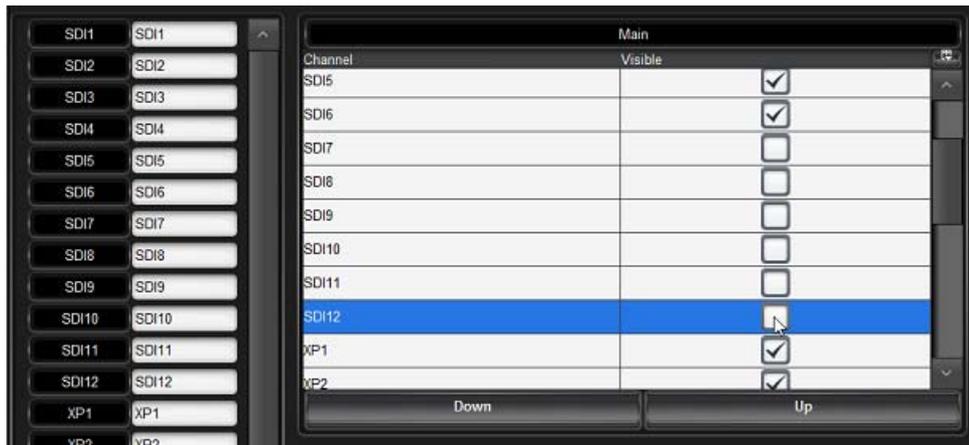


Slider Bar

2. Unlike a traditional, physical mixing console, you can modify what channels are displayed or not displayed here. Locate a channel or channels that are not in use. For example, in the image shown in the previous step, you can see that SDI 7-12 are not in use. Click the Config button at the bottom of the GUI.



3. In the Main Configuration table, click to uncheck the Visible box for your unused channels. In our example here, those are SDI 7 – 12.



4. Click the Main button to return to the virtual audio console.

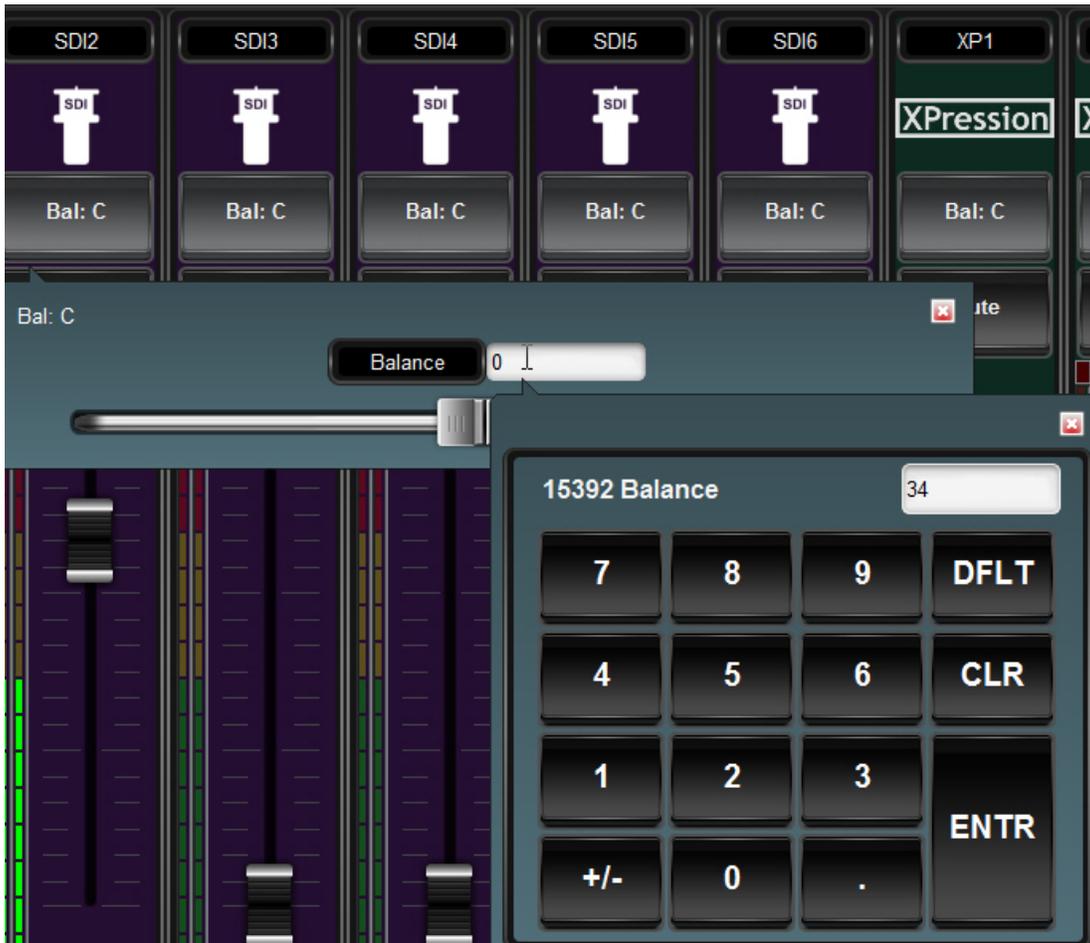


- Notice that the channels that you deselected in the Configuration Table no longer appear in this GUI. By deselecting channels that are not in use, you can see more of what you need without using the Slider Bar.



- Near the bottom, center, of your interface, locate the Custom and All buttons. Click the Custom button to see only the selected channels. Click the All button to see all the channels. Click the Custom button to return to the custom view.
- Near the top of the controls for each channel, there is a Balance button. By default, these are set to Bal: C. This means “center” and indicates that the balance of left to right is set at 0 for equal output to left and right stereo channels.

8. To adjust the balance, click the Balance button above any channel. A virtual slider appears. You can:
- Move it right or left to adjust the balance.
 - Click in the Value Field. A Value Entry dialog appears. Select the number buttons to indicate a numeric decibel value. Then click ENTR to enter this value and close the dialog.



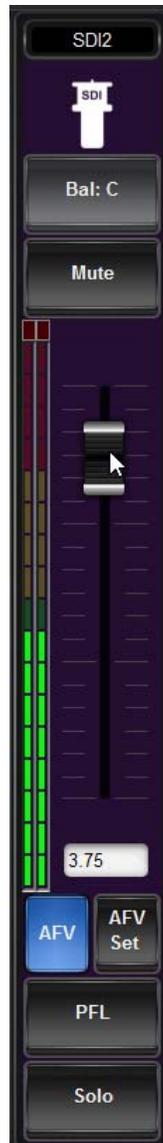
- Double-click the Slider Bar to return the setting to zero, the default value.

- Below the Balance Button for each channel, notice the Mute button. Click the Mute button. The channel remains active but is no longer audible in the output.



- Mute all active channels and notice that there is now no output.
- Click the Mute buttons again to unmute the channels.

- Each channel has a Virtual Decibel Slider. Click and drag a slider up or down. The displayed Decibel Value changes but the volume meters do not change. This is because the volume of the output adjusts as you adjust the slider but the inherent decibel level of the input source remains the same.



- If you drag the slider for each of the active channels all the way to the bottom setting of -Infinity, there is no sound in the output.
- Double-click on each slider track to return the level to the default of zero.
- Click anywhere in the Virtual Slider track to instantly apply a new setting.

16. Click the Numeric Value field for the slider to open a Value Entry dialog. Click the numbers to specify the value that you want and then click ENTR.



Part 2 – Set Audio to Follow Video

Audio Follows Video means that audio embedded in video remains associated with that video throughout the workflow from input to switcher to output. For example, if the video fades out, so does the audio.

1. Beneath the Virtual Slider for each channel, locate the AFV and AFV Set buttons.



2. Click to enable AFV so that audio plays with its video source.



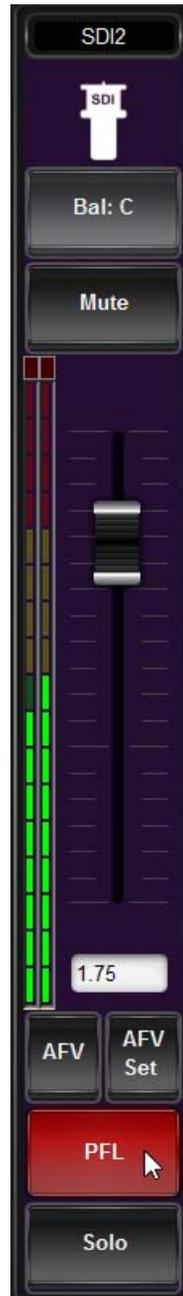
3. Set the fader to the desired level for this audio and then click AFV Set. When the associated video plays, the audio rises to this level.



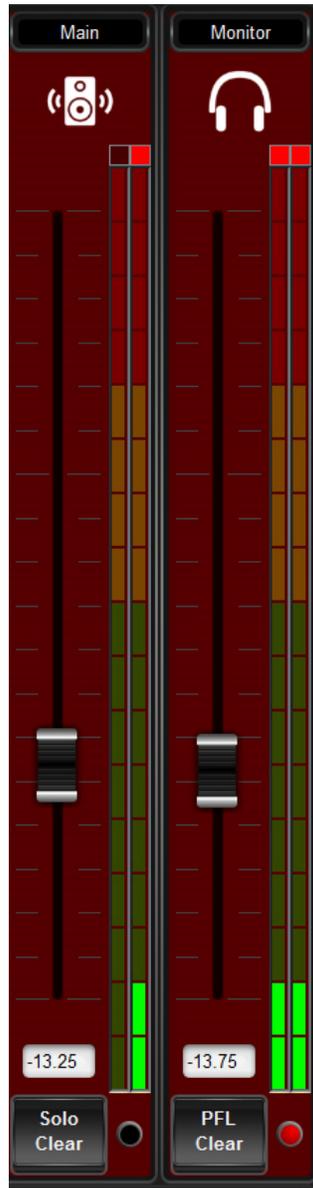
Part 3 – Customize Monitoring

For any input channel, you can listen to the audio at its original level without changing the current mixer decibel setting. You can monitor it either with or without the other audio channels in the mix.

1. For one of the active audio channels, click the PFL (Pre-Fade Level) button. The button turns Red, indicating that you can now monitor this audio at its original input level.

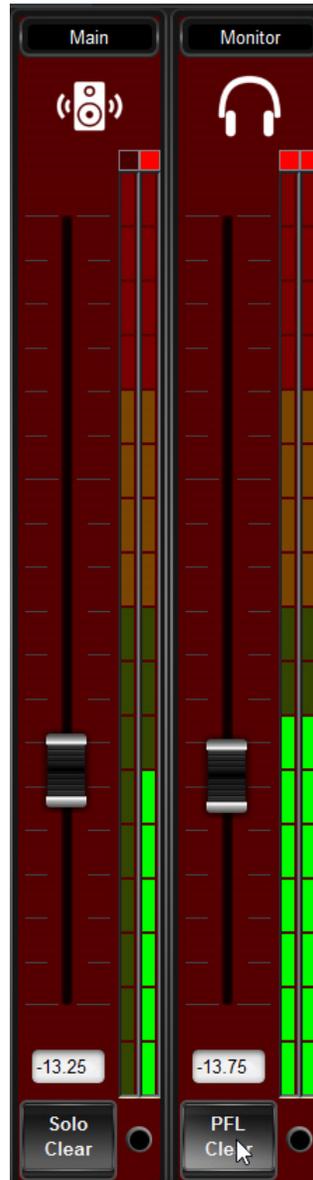


2. In the Output channels area, notice that the Monitor channel has a blinking red light indicating that one or more channels are set at their pre-fade levels in the output to the Monitor. Levels for these channels remain as set for the output mix in the Main channel.



3. Click the PFL button for another channel. This button also turns red so now both channels are at their pre-fade levels as you monitor them.
4. Click one of the active PFL buttons to deactivate it. The button is no longer red.

5. With the PFL button for one channel still active and red, click the mute button for the other active channels. Now you hear only one channel in the Monitor, at its pre-fade level.
6. At the bottom of the Monitor Channel controls, click PFL Clear. The red indicator light turns off and the PFL button that was active and red becomes inactive.



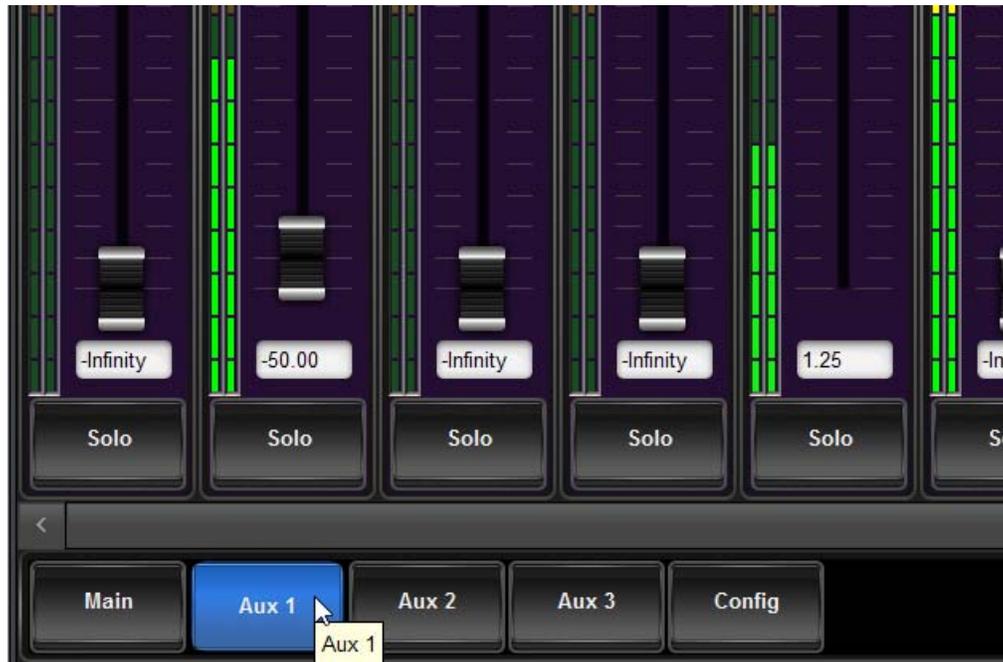
7. Click the Mute buttons for those channels that you muted to deactivate muting.

Part 4 – Customize Auxiliary Output

Besides output to the Main Channel, you may have additional output. For example, you may output to the headset or earpiece of an on-air personality or guest.

These additional outputs may be configured to the Aux output channels.

1. Click one of the Aux buttons at the bottom of the GUI to access controls for an additional output channel.



2. Notice that you have decibel level controls for each input channel just as you do for the Main Output channel. You can set these independently of the Main Channel.

Custom Controls for Audio

You can play audio manually, as demonstrated in the preceding tutorial, or you can create Custom Controls to trigger audio. A Custom Control allows you to trigger one or more actions with a single click or button press on the Ross DashBoard ShotBox interface, the Control Panel or an auxiliary shot box.

For more about creating Custom Controls for audio, see the instructions that begin on page 155.

Section 2: Streamline Common Tasks

Section 1 covered basic instructions for accessing graphics, clips and audio content. In Section 2, there are simple instructions for creating commands to streamline many of the tasks typically performed with Graphite.

In this section:

- Custom Controls Tutorial 1: Custom Controls and Memories
- Custom Controls Tutorial 2: Control Commands for XPression Graphics
- Custom Controls Tutorial 3: Take Graphics and Cut Key
- Custom Controls Tutorial 4: Double-Boxes with XPression Graphics
- Custom Controls Tutorial 5: Animated Wipes with XPression Graphics
- Custom Controls Tutorial 6: Animated Wipes with a Media Wipe Transition
- Custom Controls Tutorial 7: Chroma Key for “Green Screen” Video
- Custom Controls Tutorial 8: Custom Controls for Audio
- Custom Controls Tutorial 9: Set Up a Show Open Sequence

Tutorial 1 Custom Controls and Memories

To prepare for all of the following tutorials, it is important to be familiar with the tools and concepts of Custom Controls and Memories. This tutorial gets you started with the basics.

Custom Controls

A Custom Control:

- Allows you to save one or more actions to a single command
- Recall the command later from single button press on your Control Panel or shot box, or with a single click in DashBoard's Custom Control ShotBox.

Custom Controls may be created and edited from the Control Panel or DashBoard.

Memories

A Memory:

- Saves the current settings of the switcher
- May include some or all parts of the switcher (one or more MEs)
- May include some or all types of settings

Memories may be created from the physical Control Panel or the DashBoard virtual Panel.

It is helpful to understand that when you store a memory, you specify how the memory is recalled. There are **three Memory Recall modes**:

- **Program** – All elements are recalled as stored. This is the default mode.
- **Memory AI** – This is an intelligent recall mode. Current on-air elements are unchanged. The transition area configures to take the on-air elements of the memory to air with the next transition.
- **Effects Dissolve** – Specific on-air elements transition to the condition stored with the memory. These may include:
 - > Matte colors (background, wash or borders)
 - > Keyer Settings like clip, gain, transparency
 - > Mask position and size
 - > Chroma key settings, except background color
 - > DVE settings like size, position, aspect, border, softness, cropping

- > Media-Store x/y position
- > Transition Progress

Memories are explored in depth in the Carbonite Basic Training Manual.

Key concepts in this tutorial:

- > Access tools to build Custom Controls
- > Play Custom Controls
- > Access tools to save switcher memories

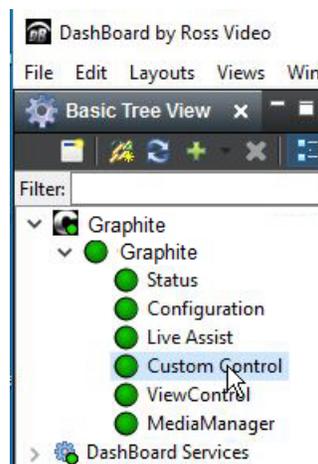
Tutorial 1 Custom Controls and Memories

Part 1 – Access Custom Controls

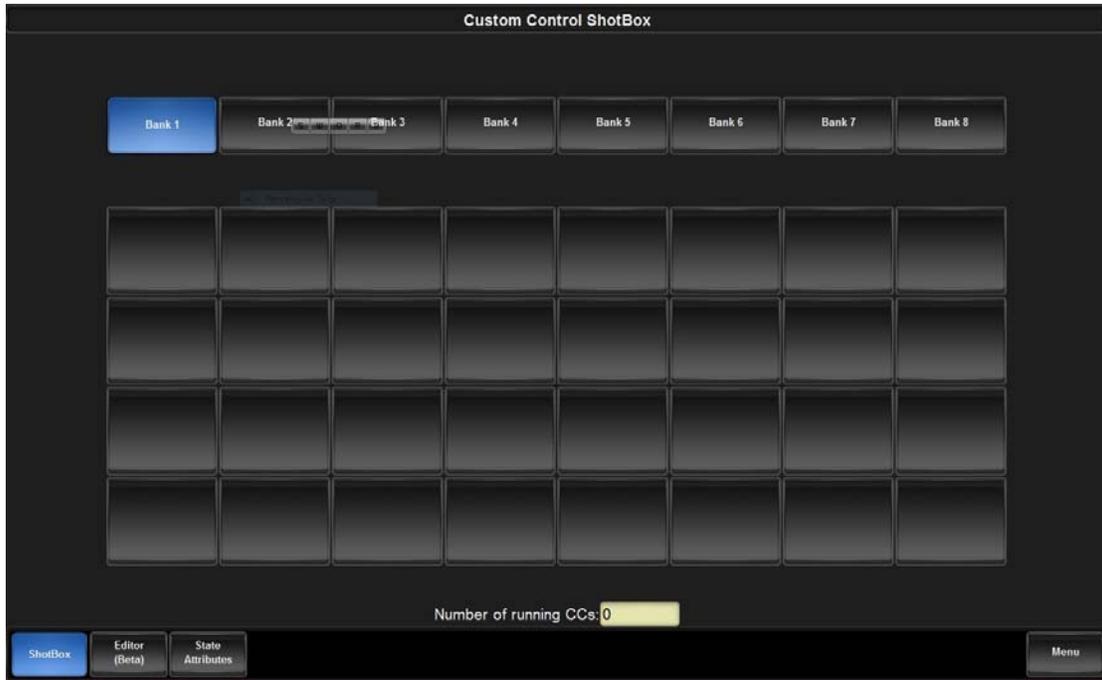
1. From your desktop, double-click the DashBoard icon to start DashBoard if it is not already running.



2. In the Basic Tree View on the left, locate the Graphite system. Click the carat on the left to expand this item in the tree.
3. Double-click Custom Control to access the Custom Control interface. If you previously opened Custom Control in this session, you only need to click it.

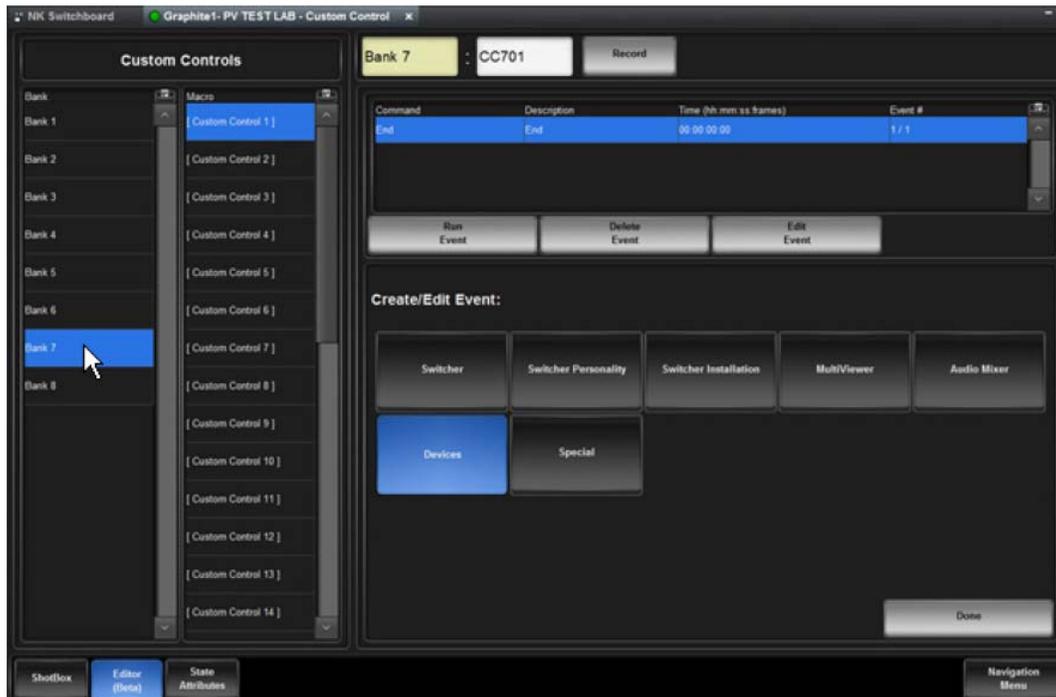


4. By default, the Custom Control interface opens to the virtual ShotBox. Notice the eight Bank buttons across the top. Select any Bank button and notice the thirty-two control buttons within the bank. Some of these may already be configured, or if your system is new, they may all be blank. Once Custom Controls are configured, you can operate them from here.



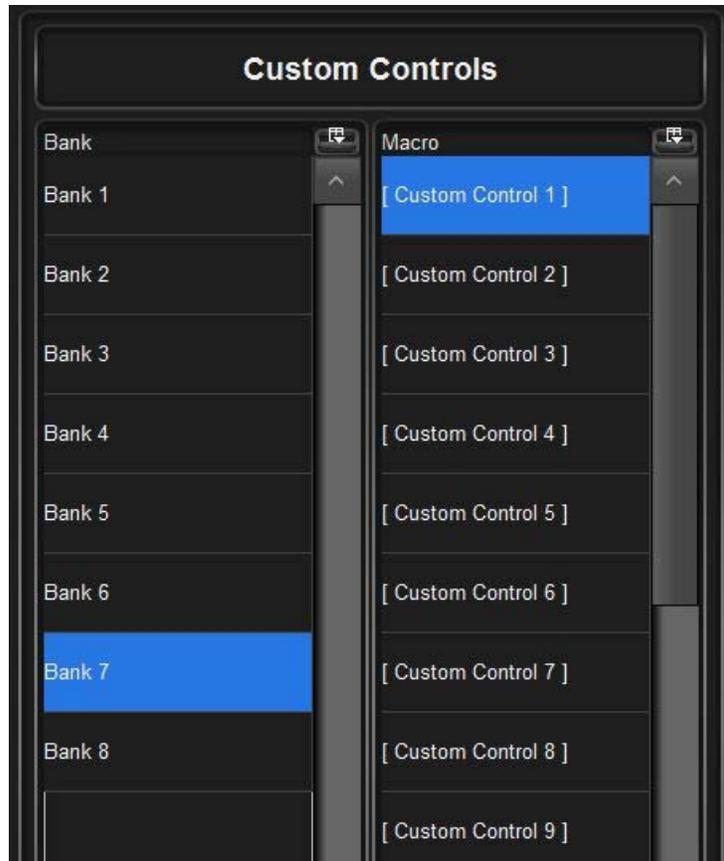
5. At the bottom left of the interface, click the Editor button. The Editor interface appears. This is where you can set up Custom Controls.

6. From the list of banks on the left, you can select the Bank that you want to use for a new Custom Control. In the example here, Bank 7 is selected.

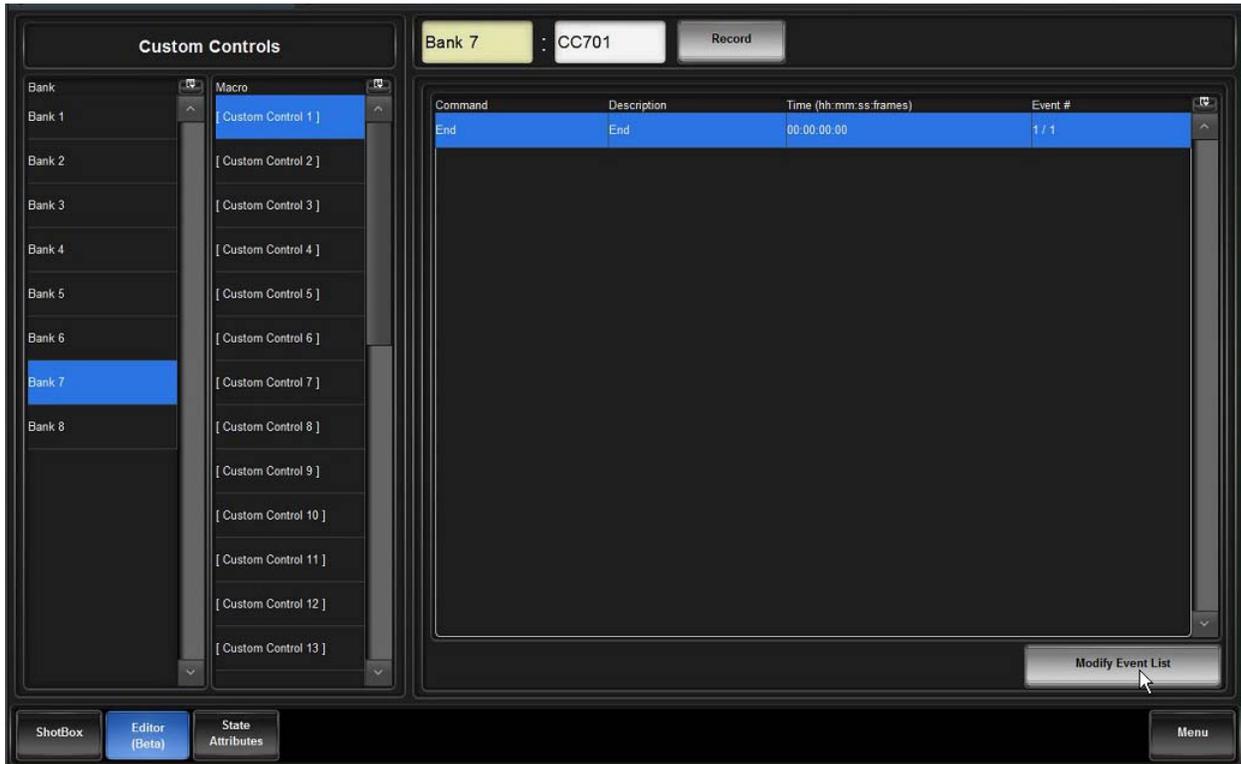


Note You may want to organize your custom controls in a way that is useful for your needs. For example, you may want all the controls for a certain program in one bank or all the controls for audio in one bank.

7. From the Custom Control menu column, at the right in the Custom Controls area, select a Custom Control. In the example here, Custom Control 1 is selected. The command or commands that you choose in the following steps are assigned to the selected Custom Control.



8. Click the Modify Event List button, near the bottom right of the interface.



Once you click Modify Event List, the interface offers tools to select the device or devices you want to control and what you want them to do. In each of the remaining tutorials in this book, you can use the steps here to get started, and then add commands to create some of the most common types of Custom Controls.

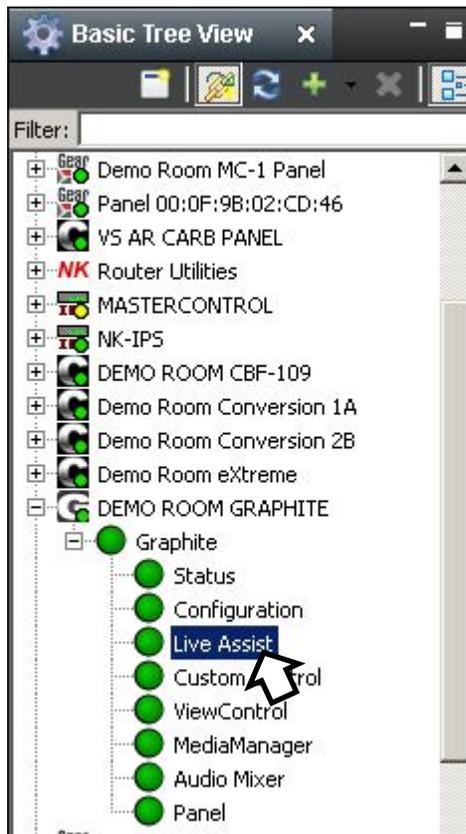
Once you finish building the commands in a Custom Control, you can name the Custom Control in the field at the top, just to the left of the Record button. Then, the name appears in the Dashboard ShotBox.

Part 2 - Work with Memories

For some of the following tutorials, you need to create a Memory. Traditionally, Memories are saved from the physical Control Panel. To access the tools to save Memories in Dashboard, follow the steps here.

1. In Dashboard, from the Main Menu, click Views>Basic Tree View if the Basic Tree View panel is not open.

- Expand the Graphite item in the tree and double-click Live Assist.



- At the bottom of the Live Assist interface, select Memory.



4. In the row of buttons just above this, select Store.



Now, you can select the parameters of your memory:

- What the memory includes
- Where the Memory is stored
- The Recall Mode, as discussed at the beginning of this lesson

In some of the remaining tutorials in this book, there are specific examples and instructions.

Tutorial 2 Control Commands for XPression Graphics

About Control Commands

Many of the actions that you can perform on items in an XPression sequence with your keyboard can also be invoked from DashBoard's ShotBox interface. Some examples include:

- Clear Channel
- Take Next
- Move Item Selection Up
- Move Item Selection Down
- Take Multiple Items

Before you begin, load a project in XPression and add scenes to your sequence as needed. If you need practice doing this, follow the instructions that begin on page 11.

Key concepts in this tutorial:

- > Start a new Custom Control
- > Add Control Commands for XPression
- > Name a Custom Control
- > Play a Custom Control from ShotBox

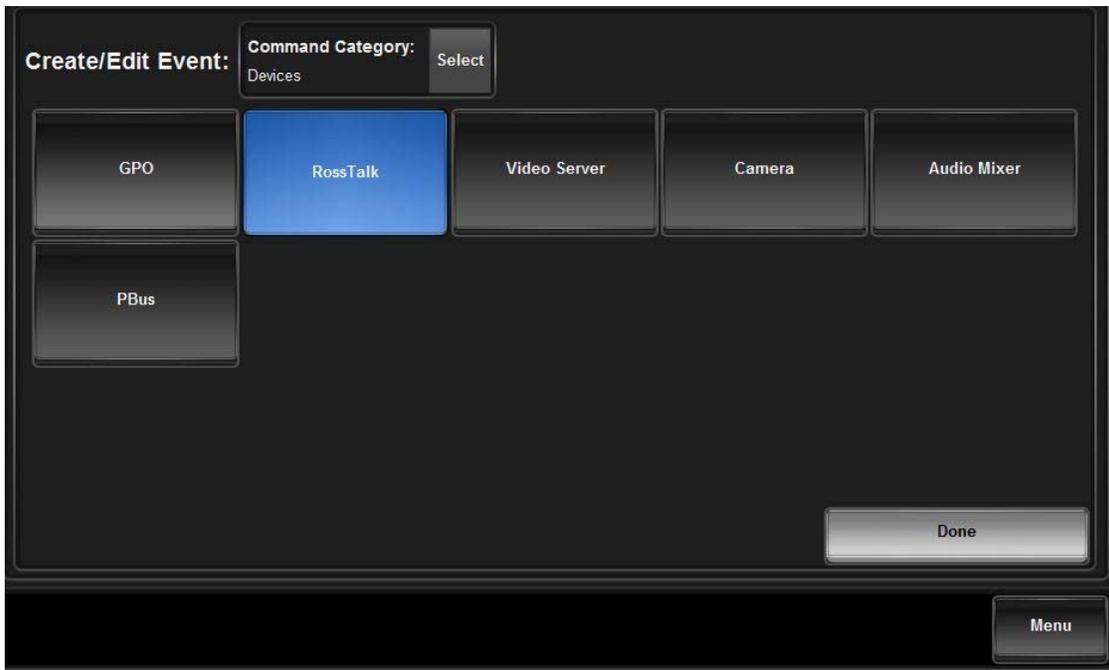
Tutorial 2 Control Commands for XPression Graphics

1. Access the DashBoard Custom Controls Editor. Select a Bank and an empty Custom Control. Click Modify Event List. If you do not know how to do this, refer to Tutorial1, Part 1.

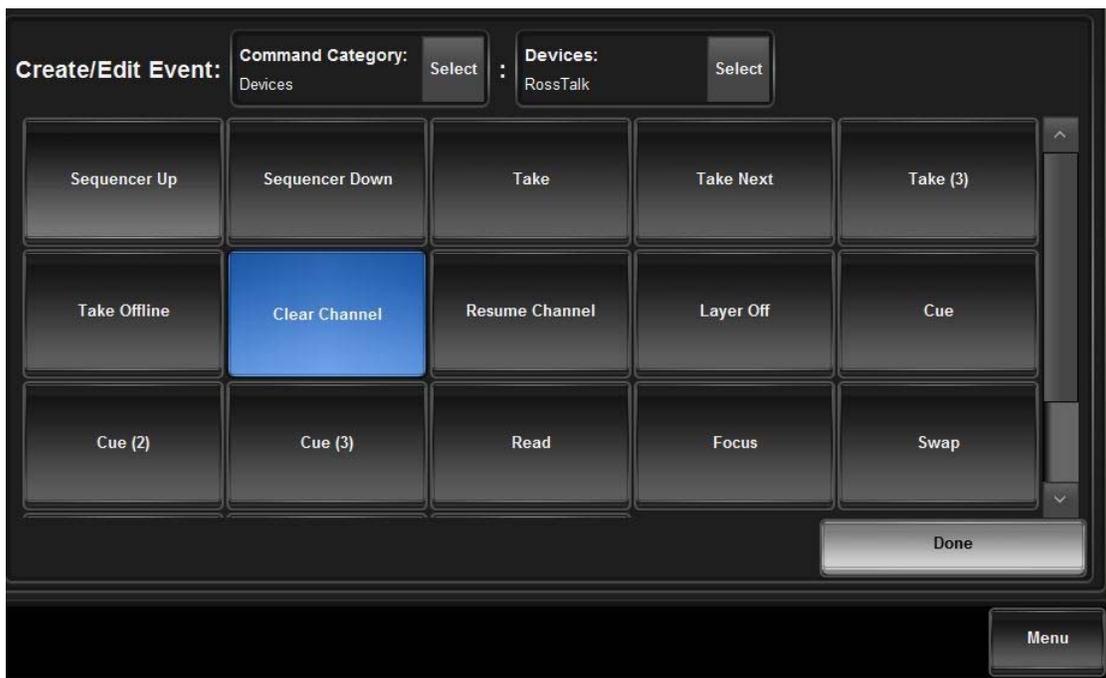
2. In the Create/Edit Event area, click the Devices button.



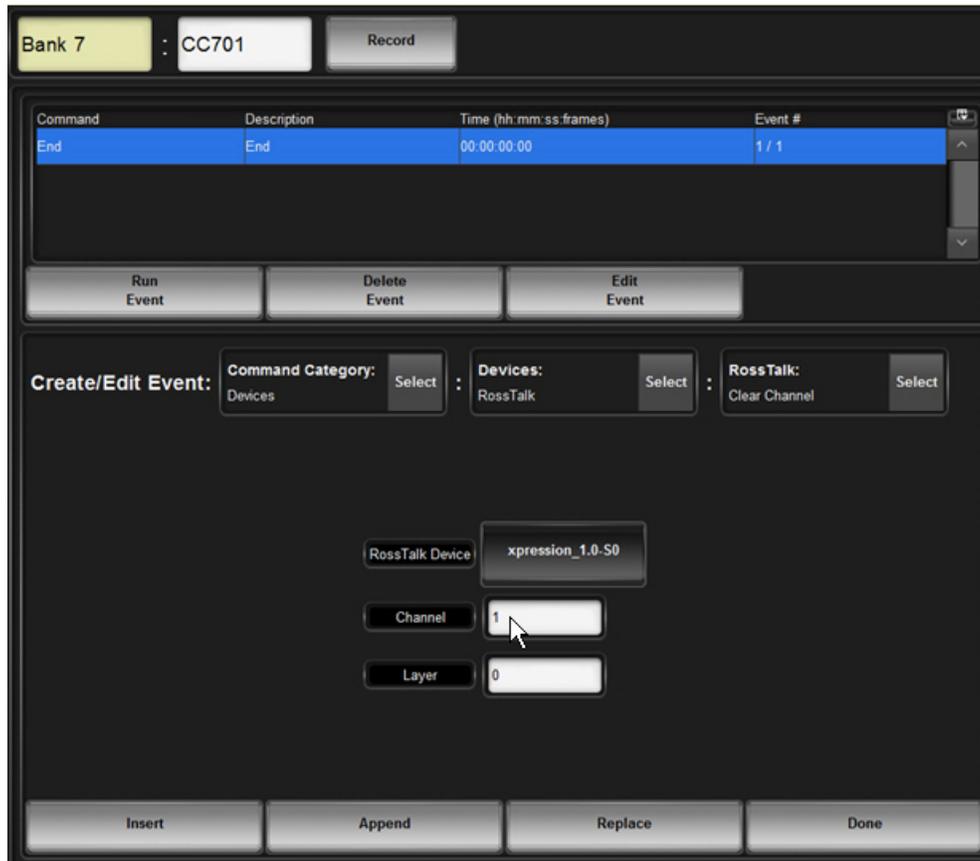
3. The Create/Edit Event area populates with connections to various devices. To communicate with XPression, select RossTalk.



4. The Create/Edit Event area populates with buttons for various XPression Sequence commands. Select the Clear Channel command.

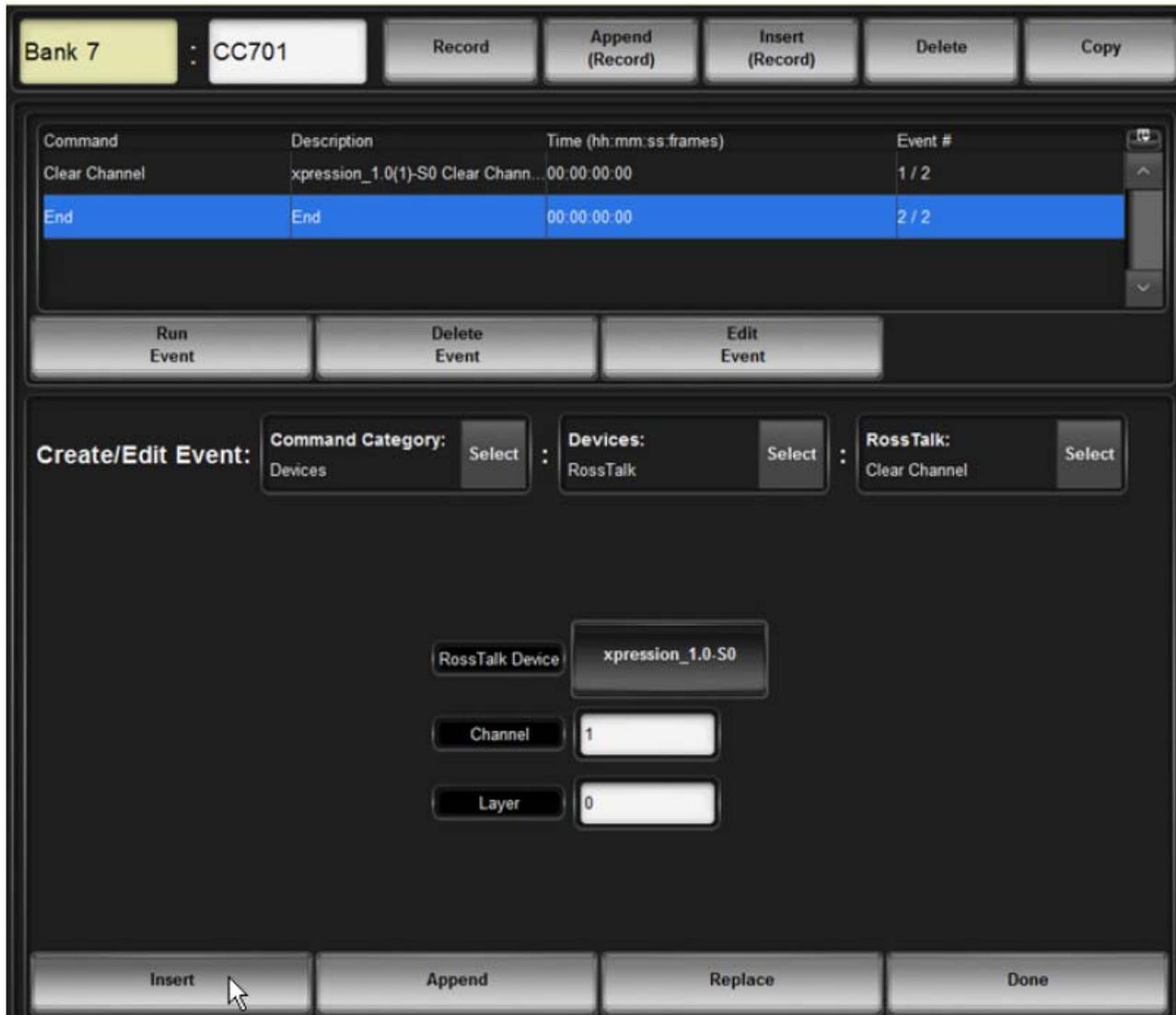


5. The RossTalk Device Selection button and the Channel and Layer fields appears. Click the Ross Talk Device Selection and choose XPression.
6. Enter the channel number and layer number that you want to clear with this command. For example, you can select Channel 1 and Layer 0 to clear anything on Channel 1, Layer 0 whenever you use this Command.



Note In XPression, Framebuffer indicates the scene's playout channel. Within a single framebuffer, scenes can be assigned to different layers. Assigning graphics to different layers allows you to play more than one graphic at a time to the same channel. Framebuffer and layer assignments may be made as the scene is created or within the Sequence interface. For more about layer and framebuffer selection, refer to the XPression training manual.

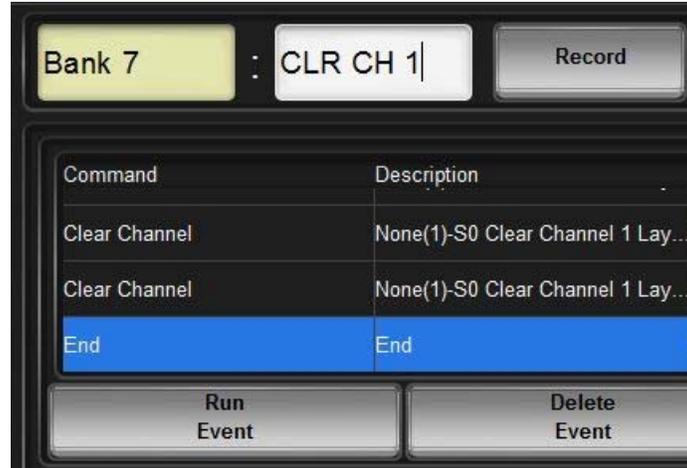
7. Select Insert to insert the command above the blue highlighted line.



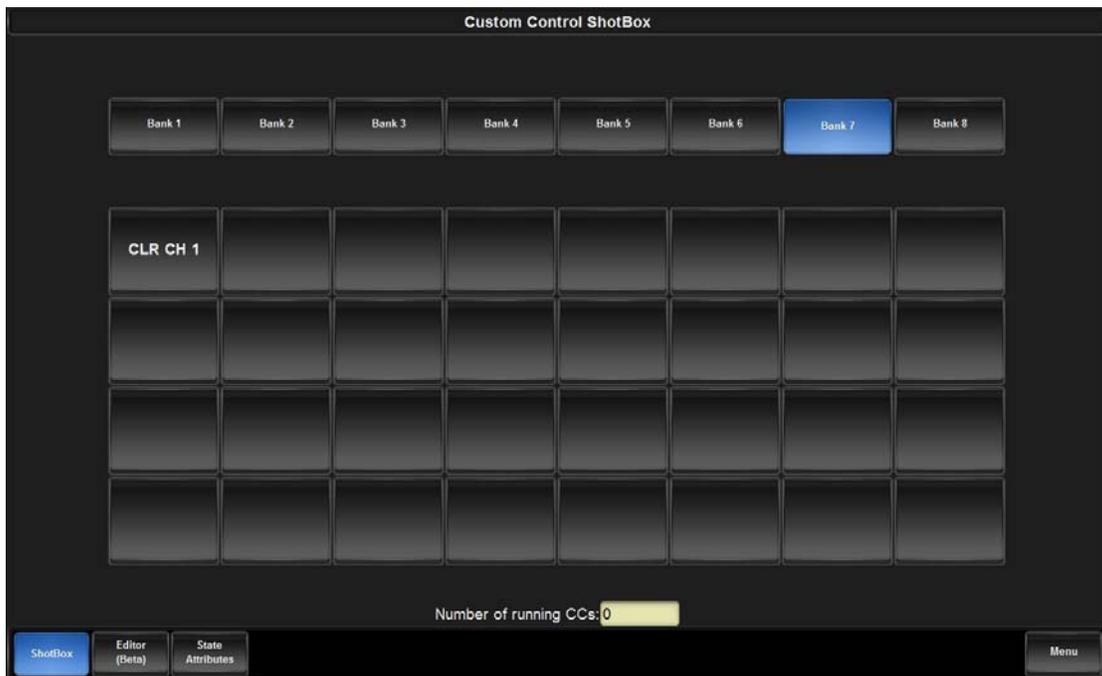
8. Notice that there are now two commands in the Command list for this Custom Control. One command clears Channel 1, Layer 0 and one ends this Custom Control. You can add additional commands to this Custom Control.

- *To add similar commands*, simply enter new values and click Insert again. In this example, to clear other layers on Channel 1 at the same time, with a single Custom Control, enter a new value in the Layer field and then click Insert.
- *To add a different type of new command*, click Done and then click Modify Event List or click the Command Category Select button. Then, you can build a new command from the beginning and when done, click Insert.
- *To add a new command in the same Command Category*, click the Select button for that category and build the command from that point. In this example, you could click the Devices Select button, select a device other than RossTalk and build a command from there.

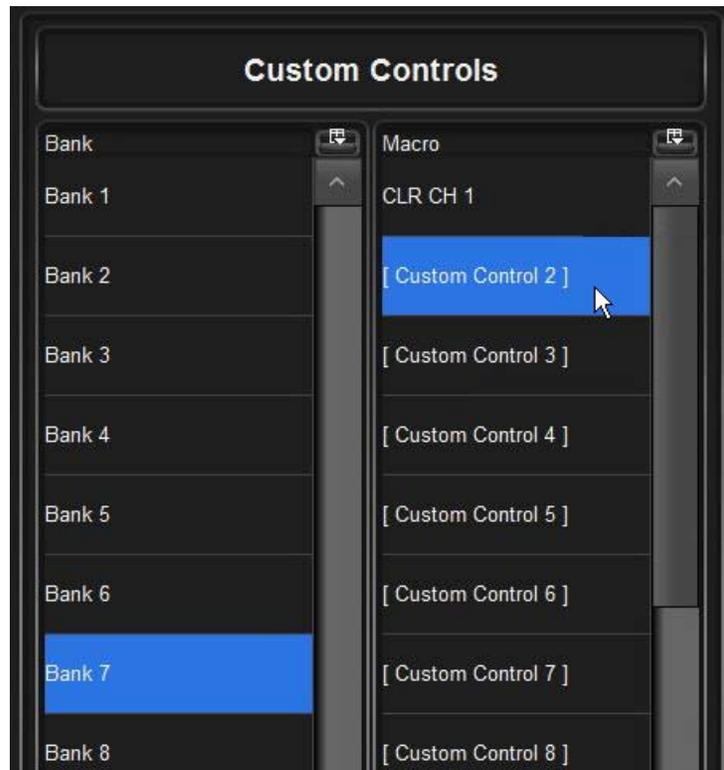
9. Above the Command list, notice the Bank number. To the right of the Bank number, there is a Name Field for this Custom Control. By default, it displays a number to indicate that this is Custom Control Bank 7, Control 1. Typically, users enter a name here to indicate the function of this Custom Control. Place your cursor in this field and type CLR CH 1. Note that you are limited to 8 characters, including spaces.



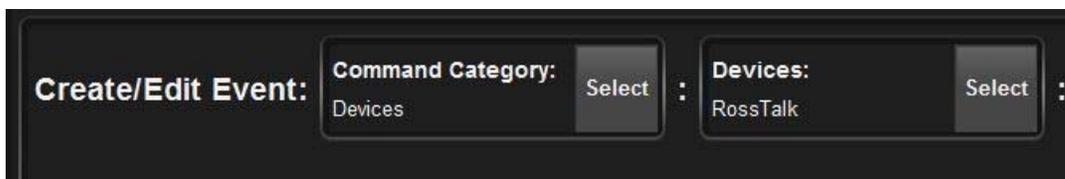
10. Click the Shot Box button near the bottom of the interface. The Custom Control Shot Box appears. Choose the Bank that has your new Custom Control. Notice that the new Custom Control is now available on the first button in this bank.



11. Click the Editor button near the bottom left of the interface. Let's add some more Command Controls for XPression. From the Custom Control menu column, at the right in the Custom Controls area, select an unused Custom Control.



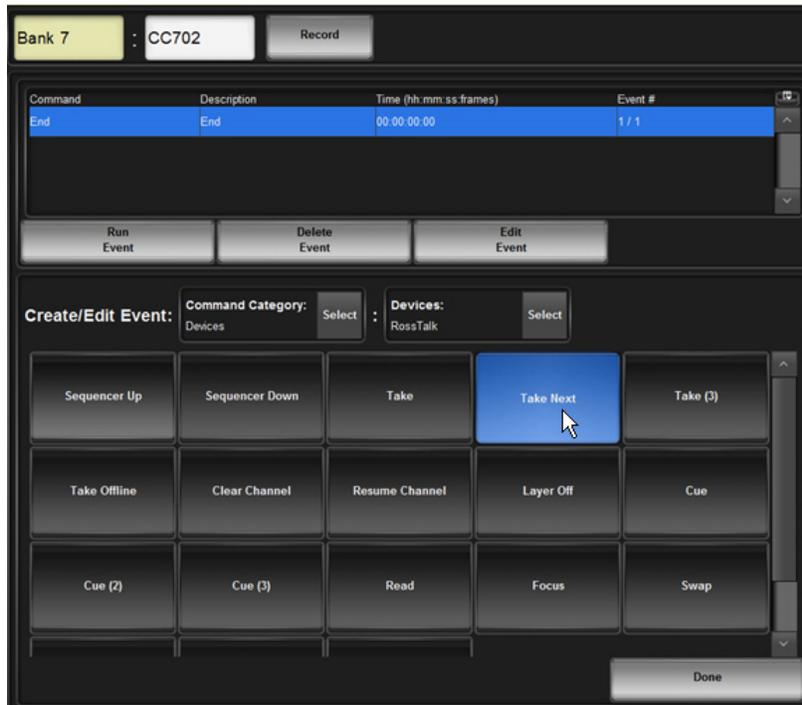
12. Confirm that the Command Category is still set to Devices. Confirm that Devices is still set to RossTalk.



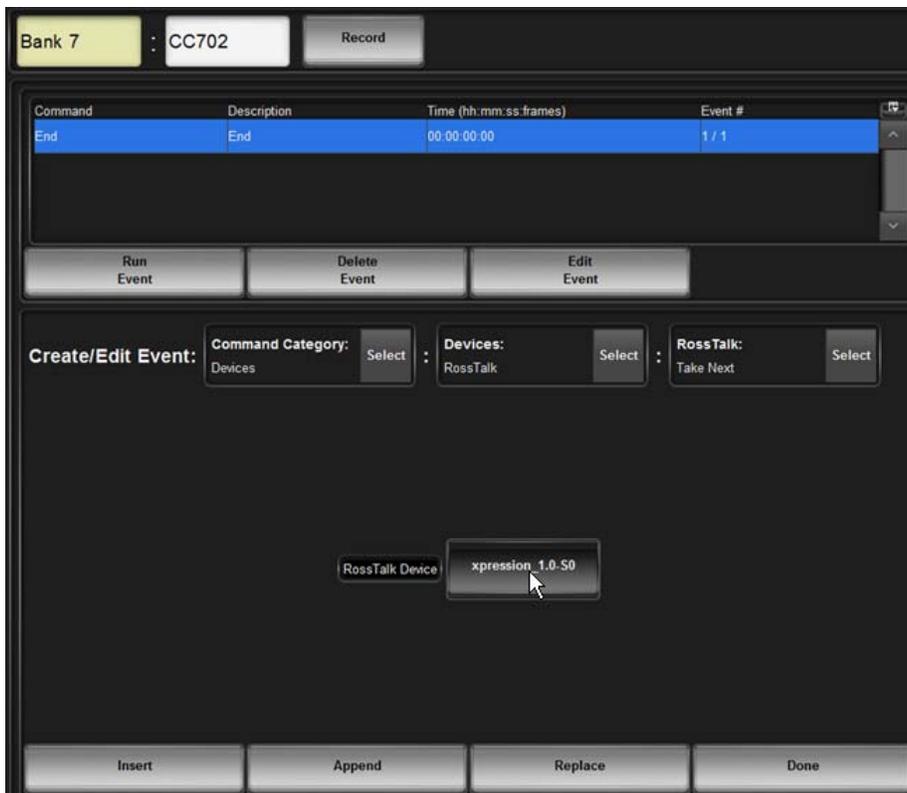
13. The RossTalk setting shows the last command that you used. Click the Select button to see the Command Selection buttons.



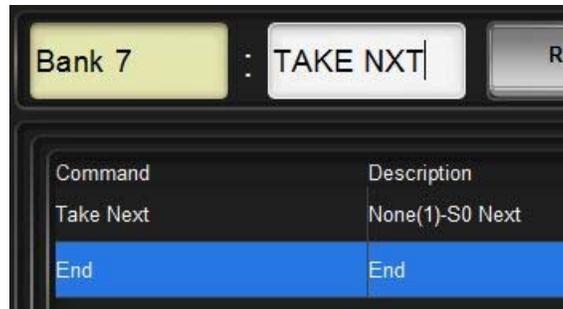
14. Select Take Next.



15. Select XPression as the RossTalk device.



16. Click Insert. The new command is inserted above the blue highlighted line.
17. Enter a name for this command in the field at the top of the interface. Notice that the names of your configured commands appear in the Custom Controls list, to the left, as well as on the buttons in the ShotBox interface.



18. To continue adding commands, select a new Custom Control from the Custom Control menu column and then repeat this tutorial, changing your selections and the command name as appropriate.

Note For some commands, you may need to identify a specific graphic by Take ID, Layer and Framebuffer. In the XPression Sequence, the Take ID is in the left column. The Layer is found in the layer column and the Frame buffer is found in the Output column.

Once your Custom Controls are ready, click the ShotBox button and then click any configured button in the ShotBox to execute the command. Commands configured here may also be played directly from your switcher Control Panel. For more information about using your Control Panel, refer to the appropriate product documentation.

Tutorial 3 Take Graphics and Cut Key

About this Workflow

In a traditional workflow, XPression graphics are played from a sequence to one or more of XPression's output channels. This output serves as the source for one or more of the keyers on the Graphite switcher. When you play a graphic from the sequence and cut the key on, the graphic appears over the background video.

In the previous tutorial, you partially streamlined this workflow by creating Custom Controls to work with graphics in an XPression sequence. With the following tutorial, you can create an even more streamlined workflow by creating a custom command to play the XPression graphic and cut the key on that is populated by the XPression graphic.

Before you begin this tutorial:

- A project must be loaded in XPression. See Lesson 1 for more information.

Key concepts in this tutorial:

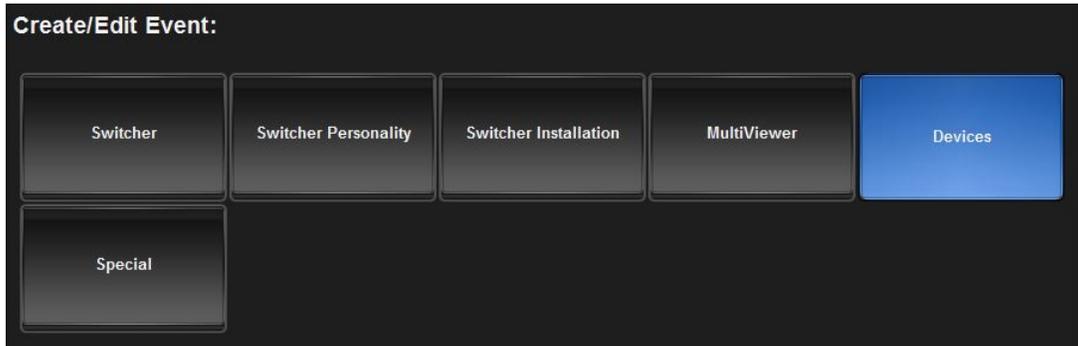
- > Add a command to cue an XPression graphic
- > How and why to add a pause command
- > Add a command to assign XPression as the Key Source
- > Add a command to specify Key type
- > Add a command to cut a key on

Tutorial 3 Take and Key Graphics

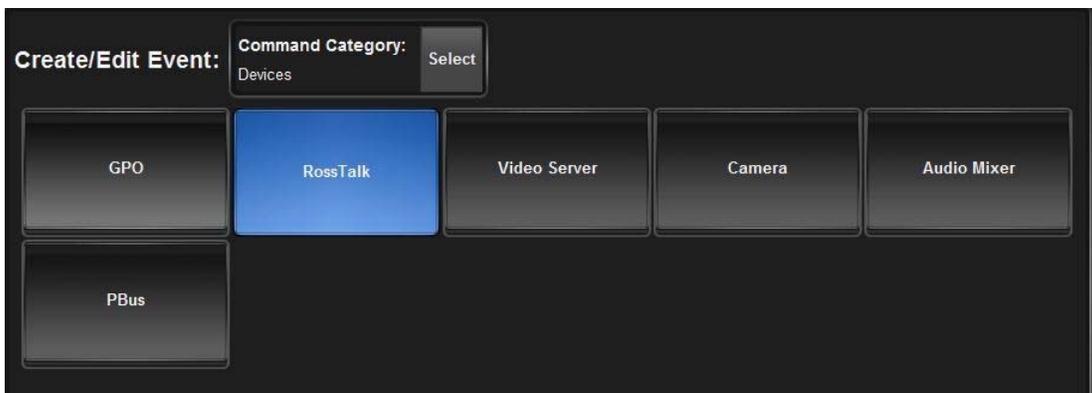
Part 1 – Cue an XPression Graphic

1. Check that XPression is running and the demo project is open. If you are not sure how to do this, refer to Tutorial 1.
2. Access the DashBoard Custom Controls Editor. Select a Bank and an empty Custom Control. Click Modify Event List. If you do not know how to do this, refer to Tutorial 1, Part 1.

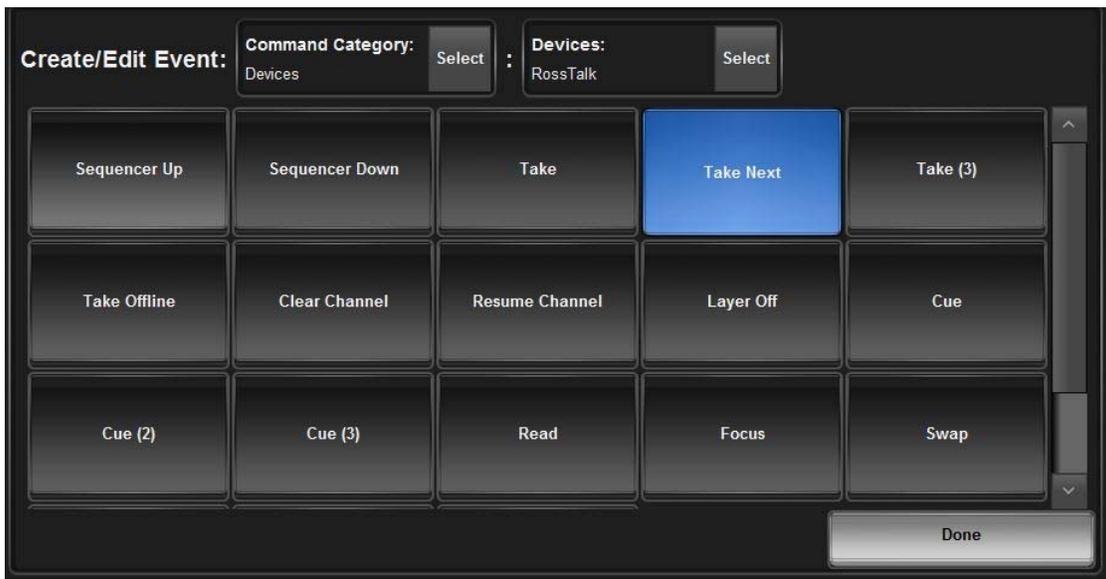
3. In the Create/Edit Event area, click Devices.



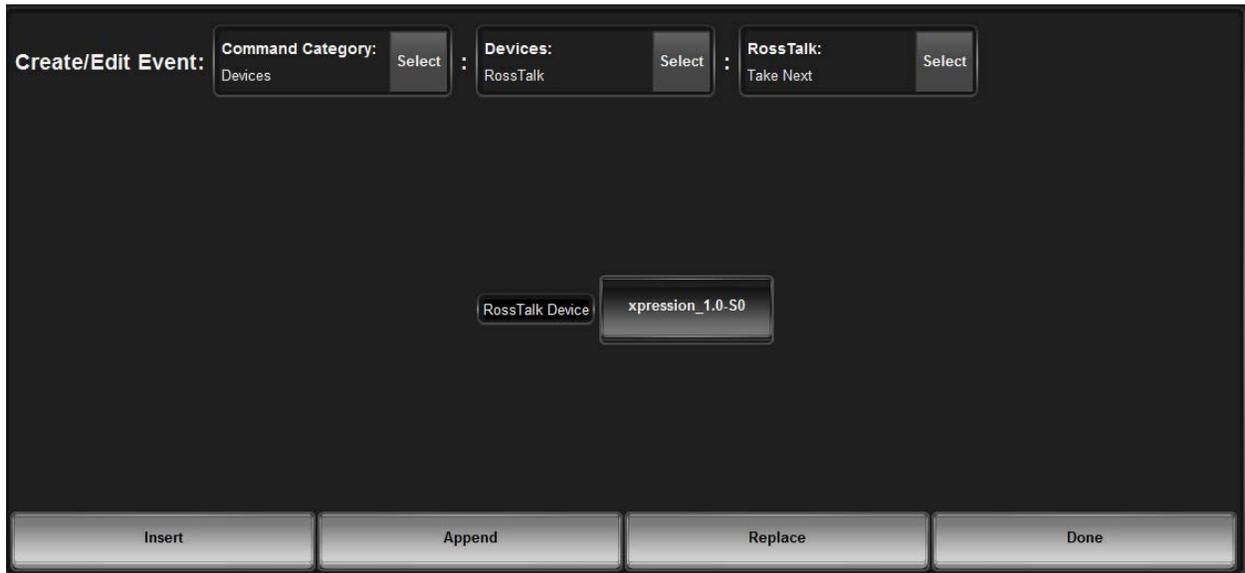
4. Device buttons appear. Click to select the RossTalk button.



5. Command buttons appear. Click to select Take Next.



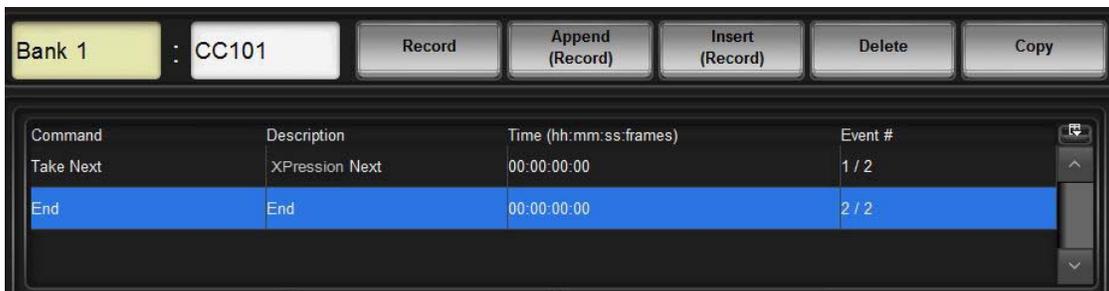
- Click the RossTalk Device Selection button and then click to choose your XPression device.



- Click Insert.



- Notice that this command is now in the Command List for this Custom Control.



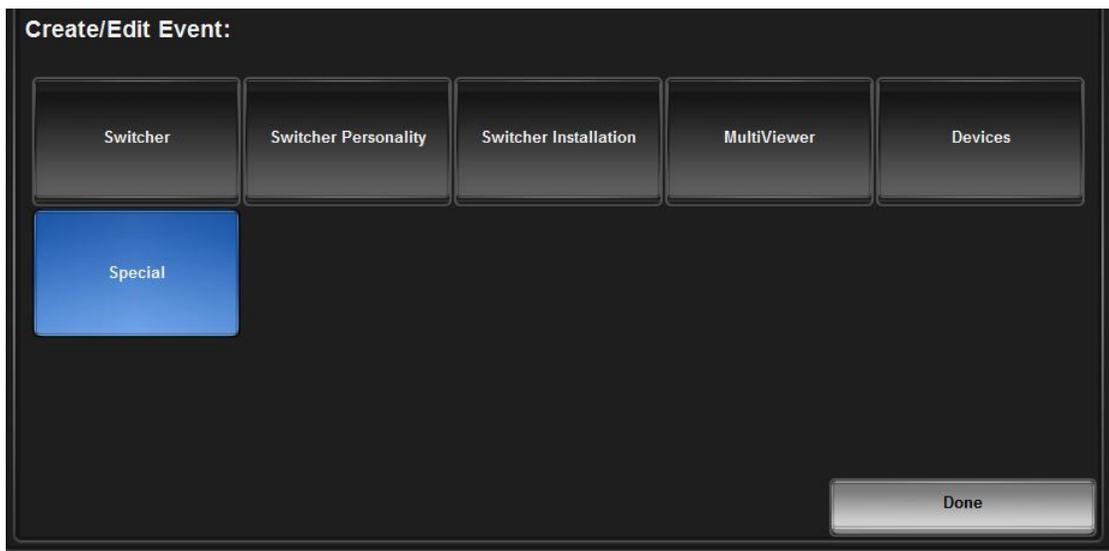
So far, this Custom Control will select the next graphic in the sequencer playlist and cue it to XPression's output. To further streamline your work, you can add to this custom control so that it not only cues and plays the graphic but also cuts to air the key to which it is assigned.

Part 2 – Add a Pause to Allow the Key to Clear

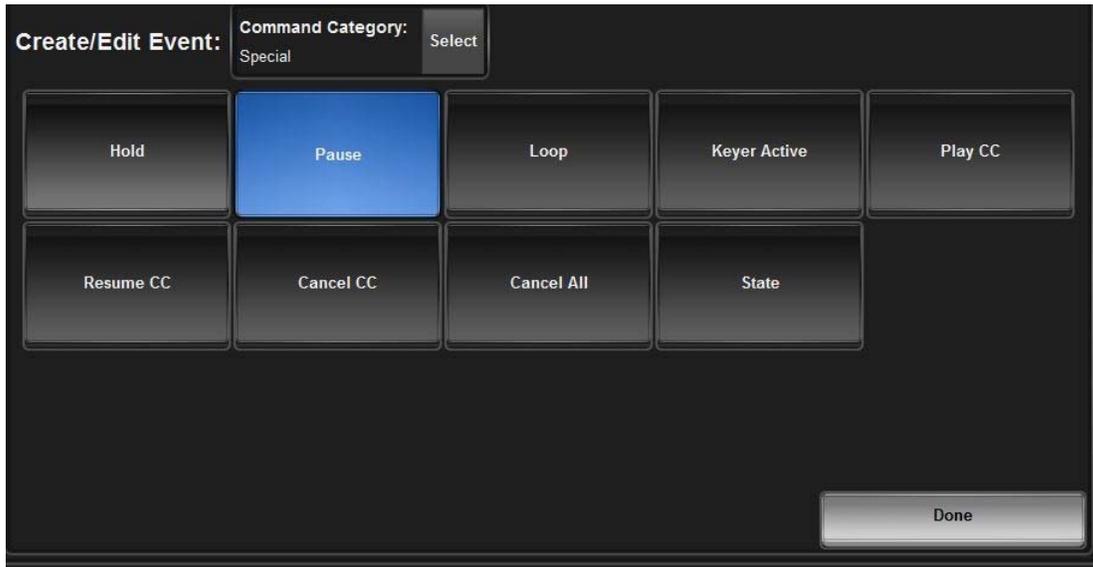
1. Click Done.



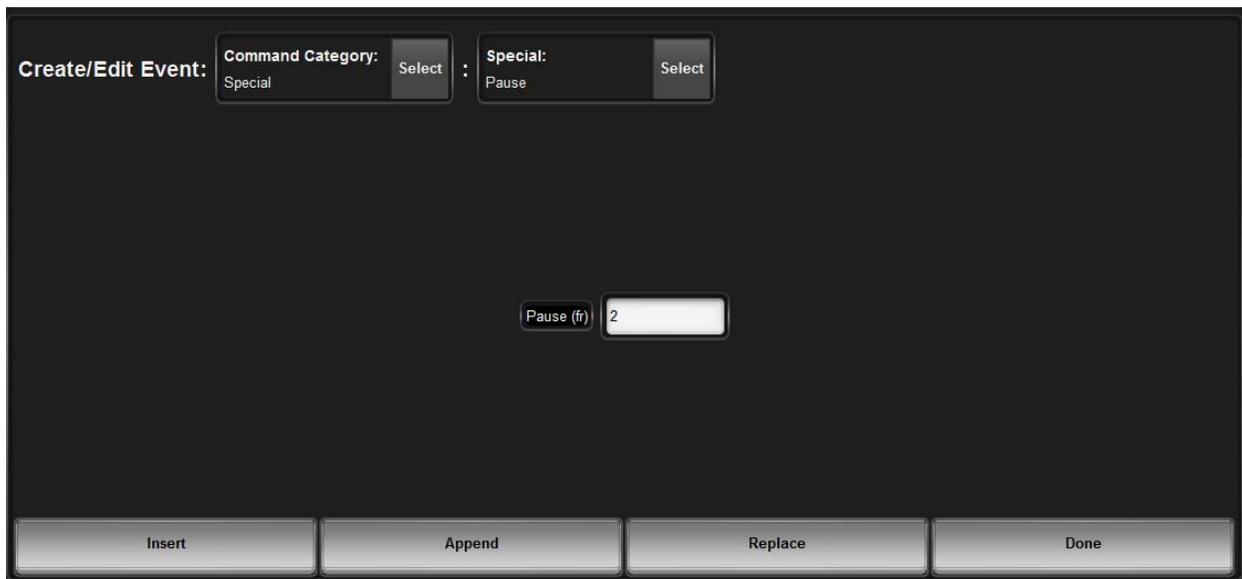
2. Click Modify Event List.
3. In the Create/Edit Event area, choose Special.



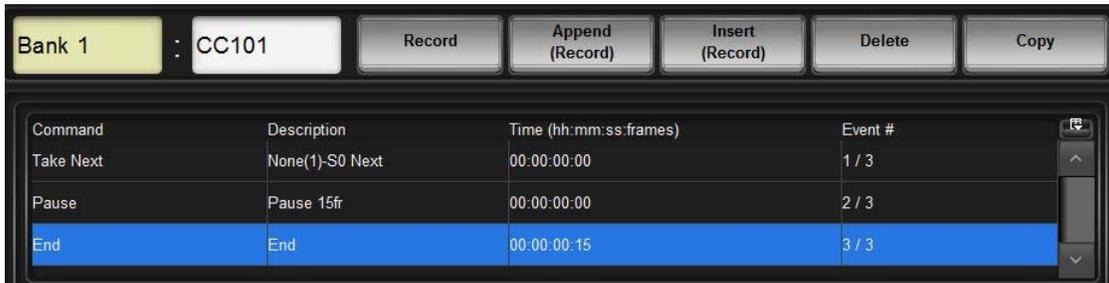
4. You want to insert a pause to allow the key to clear properly. From the Command selection buttons, choose Pause.



5. The Pause Duration field appears. The duration is expressed in frames. Click this field to open a Value Selection dialog. Change the Pause duration to 2 frames and then click ENTR.



6. Confirm that the End Event is selected in the Command List and then click Insert.
7. The Pause event appears in the Command List for this Custom Control.

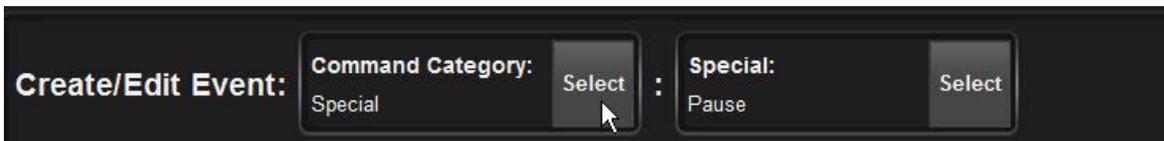


Note When you click Insert, you place the new command before the selected command, indicated with a blue highlight. If you had the Take Next command selected, then your Pause command would be in the wrong order. A good practice is to insert commands in the desired order and always confirm that the End command is selected before you click Insert.

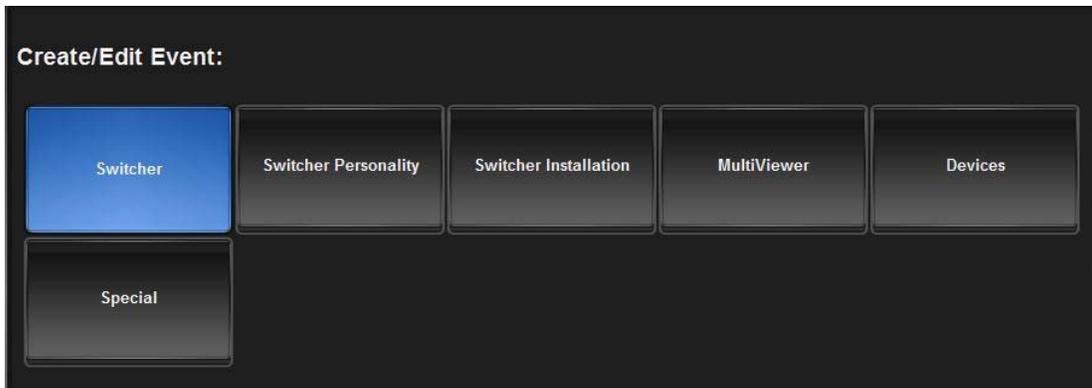
Part 3 – Assign XPression as the Key Source and Add a Pause

Next, add an event to the Custom Control to assign XPression as the source for a key.

1. In the Create/Edit Event area, click the Select button for Command Category.



2. The Command Category Selection buttons appear. Select Switcher.

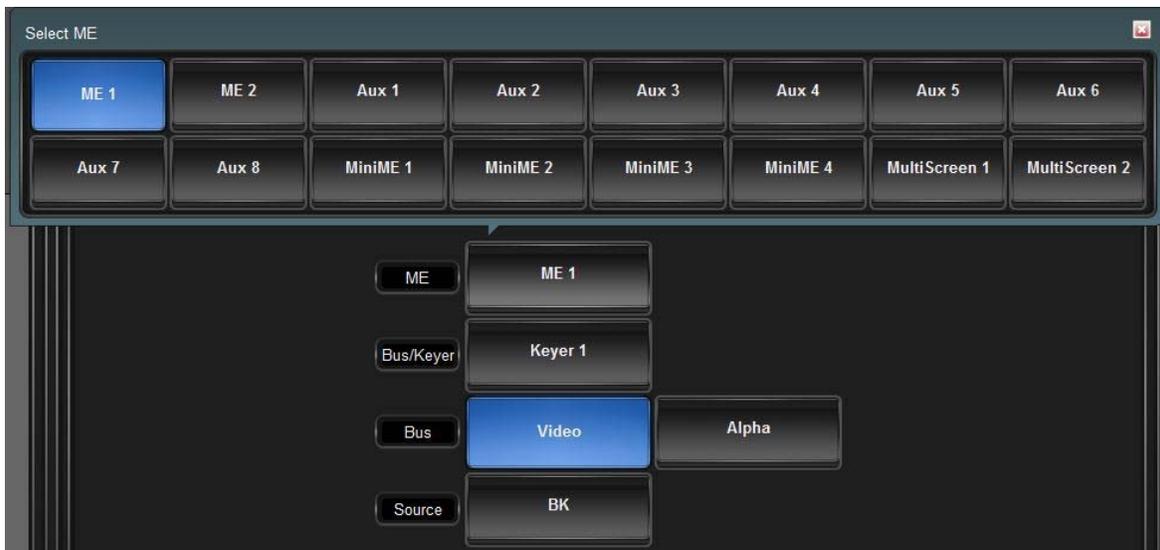


3. From the Switcher commands, select Bus Source.



4. To define this source, you need to make several specifications:

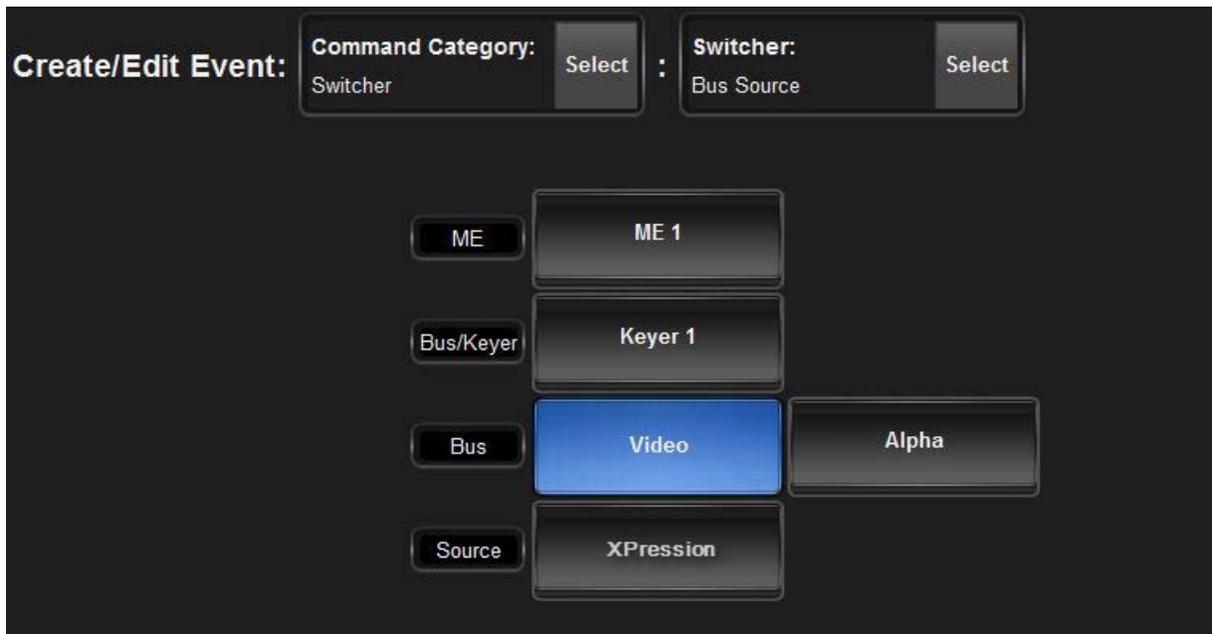
- Click the ME Selection button and choose the Program ME. Typically, this is ME 2. Note that some of our examples may vary. Check your system configuration and modify the tutorials accordingly.



- Next, click the Bus/Keyer selection button and choose the key (1-4) that you want to use for XPression graphics. In the example here, Keyer 1 is selected.



- Leave Bus set to Video.
- Click the Source selection button and then choose XPression.



5. In the Command List, click to select the End event. Remember, when you insert an event, it appears above the selected item.
6. Click Insert.

We need to add another Pause in the Command List.

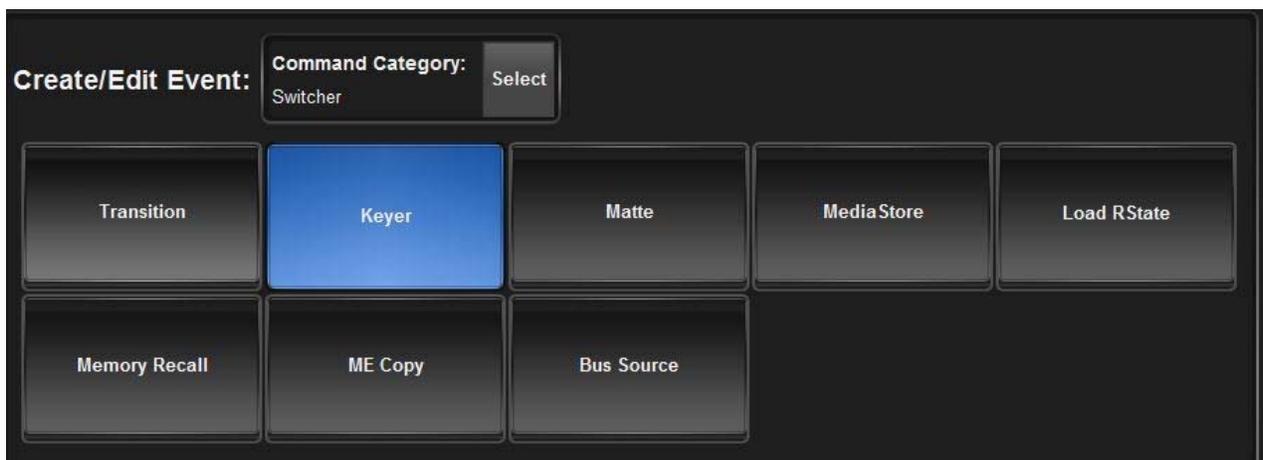
7. In the Create/Edit Event area, Click the Select button for Command Category and then click Special.

8. From the Special commands, click to choose Pause. Change the Pause duration to 2 frames, and then click Insert.

Your Command List for this Custom Control now has five events: Take Item, Pause, Bus Source, Pause and End.

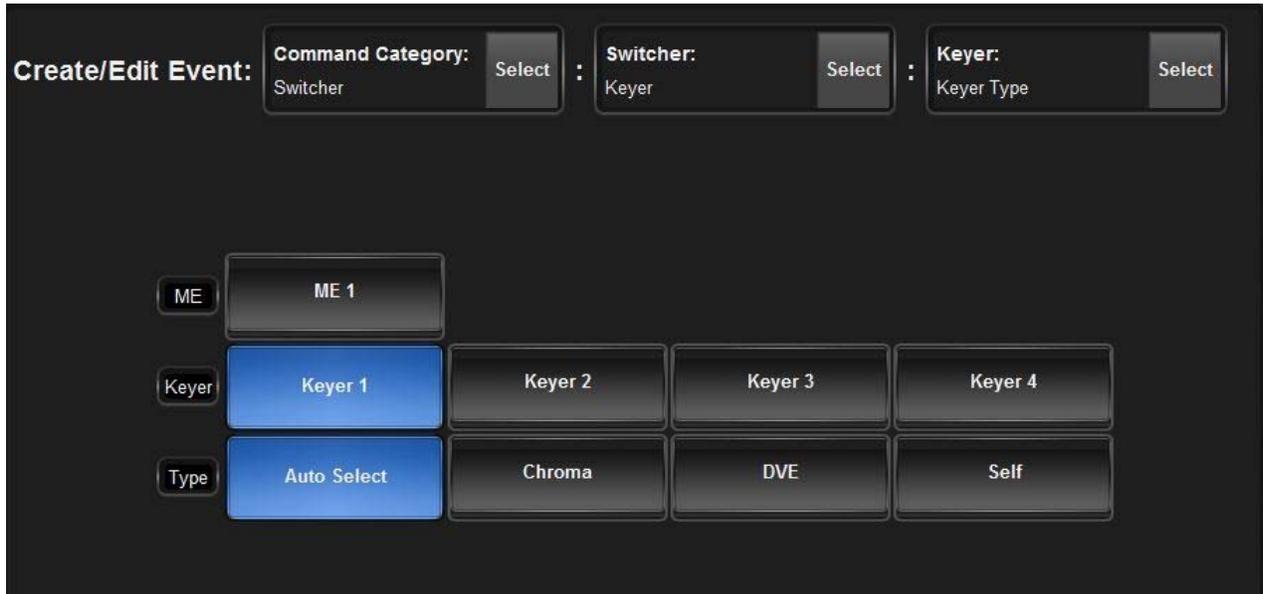
Part 4 – Add a Command to Specify Key Type and Add a Pause

1. Click the Command Category Select button.
2. Select Switcher as the category.
3. From the switcher commands that appear, select Keyer.



4. From the Keyer commands that appear, select Keyer Type.
5. Make sure that the correct ME and Keyer are selected. These should be the same as you selected before when you assigned XPression as the source.

6. For Type, choose Auto Select.



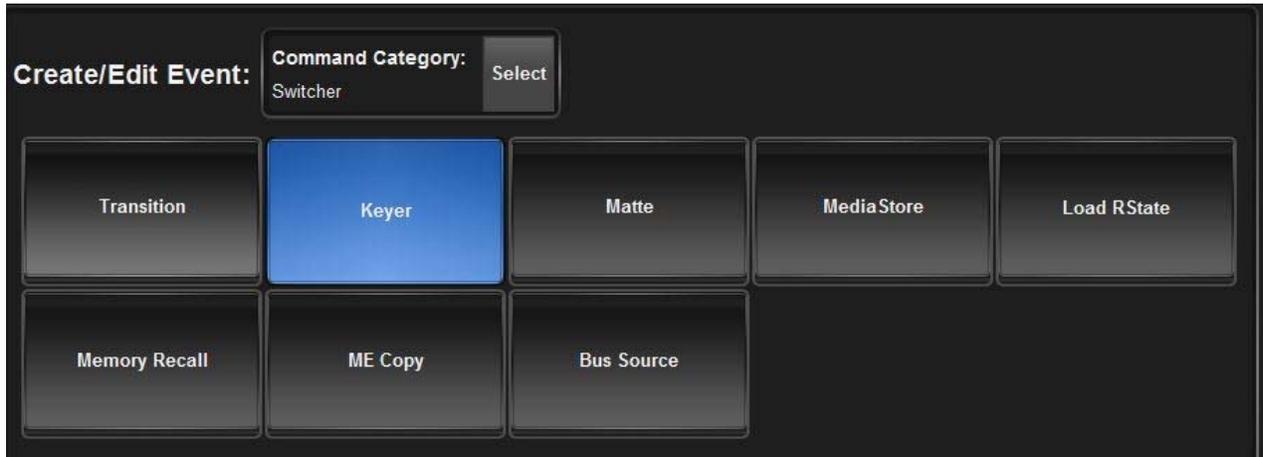
Note *Auto Select is the key type typically used for graphics. This key type indicates that the graphic is full frame and its transparent areas are keyed out so that you can see the video behind it. For more about key types, refer to the appropriate product documentation.*

7. With the End event selected in the Command List, click Insert.
8. In the Create/Edit Event area, click the Select button for Command Category and then click Special.
9. From the Special commands, click to choose Pause. Change the Pause duration to 2 frames, and then click Insert.

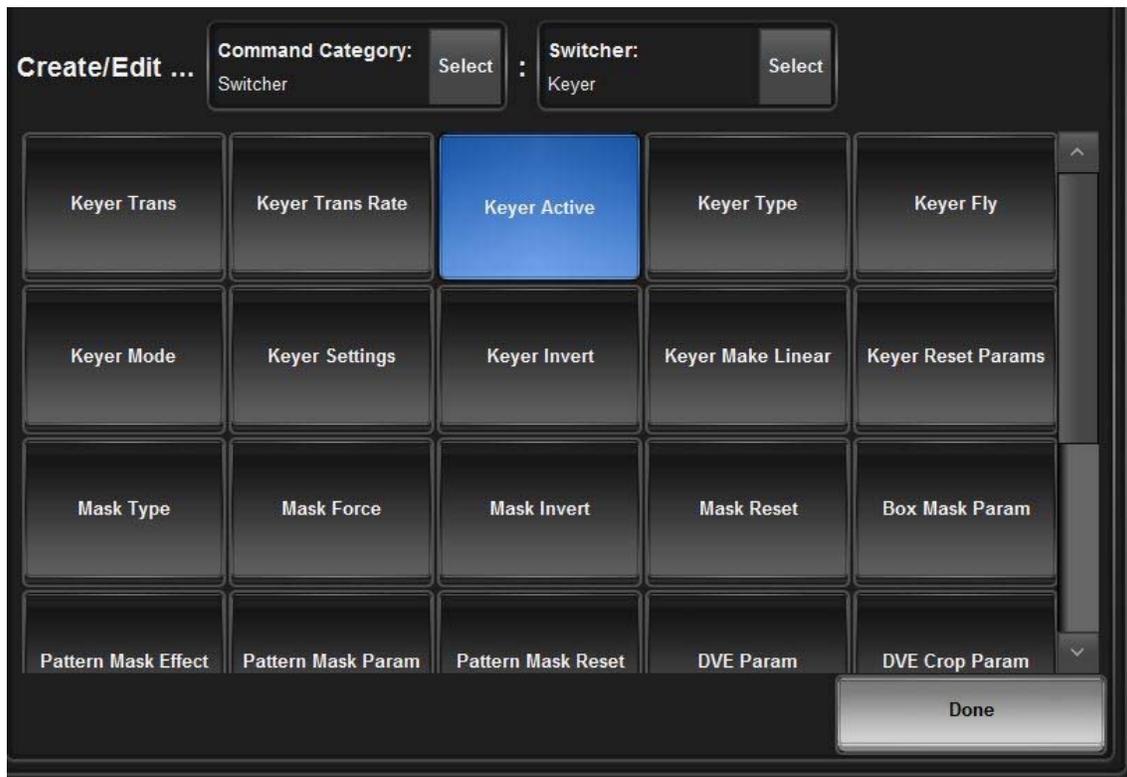
Part 5 – Add a Command to Cut the Key On and Add a Pause

1. Click the Command Category Select button.
2. Select Switcher as the category.

- From the switcher commands that appear, select Keyer.

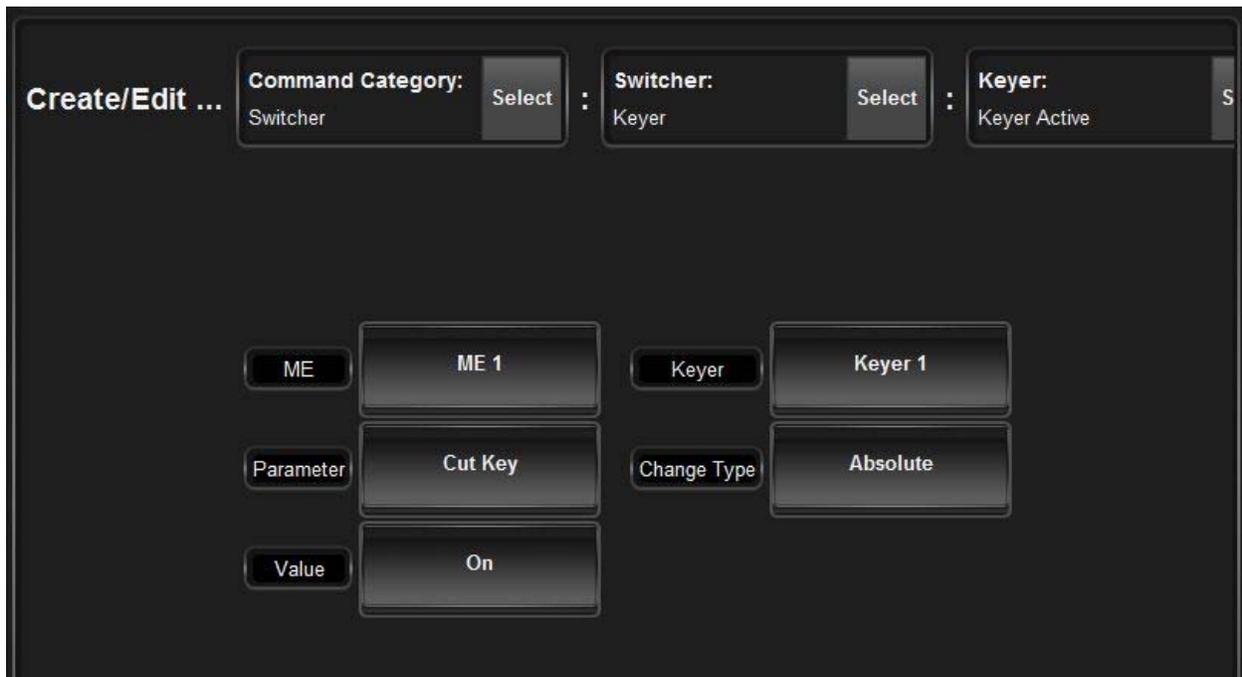


- From the Keyer commands that appear, select Keyer Active. You want to make sure the Keyer is in the video output of the switcher so that the graphic effect is visible.



- Make sure that the correct ME and Keyer are selected. These should be the same as you selected before when you assigned XPression as the source.

6. For Parameter, select Cut Key. For Change Type, select Absolute. For Value, select On.



7. Don't forget to confirm that the End event is selected in the Command List, then click Insert.

You can modify this tutorial as needed. For example, add commands or additional custom controls for a hold, cut the key off, or advance to the next graphic.

8. In the Name field near the top of the interface, enter a name for this Custom Control that indicates its function.
9. You can run your Custom Control either from your Control Panel or from DashBoard by selecting the ShotBox button at the bottom left.

Tutorial 4 Double-Boxes with Graphics

About Double-Boxes

A commonly used format for displaying two video or image sources is called a “double-box” or a “two-box.”



The XPression Demo project that you worked with in earlier tutorials includes a scene that is designed for a two-box. In the following tutorial, you can use this or any similarly designed graphic and assign two video sources as the sources for DVE keys. You can then position the DVE keys so that they are framed by the boxes in the graphic and store the entire effect to a memory. In the final part of this tutorial, create a Custom Control to recall the effect and the graphics to Preview.

Note In the image above, the video in each box appears rotated, but it is not. This is an illusion created with dimensionality in the overlay graphic that works well with panoramic views like the ones shown here. Please note that the DVE keyer on the Carbonite switcher can manipulate scale and position, but not rotation.

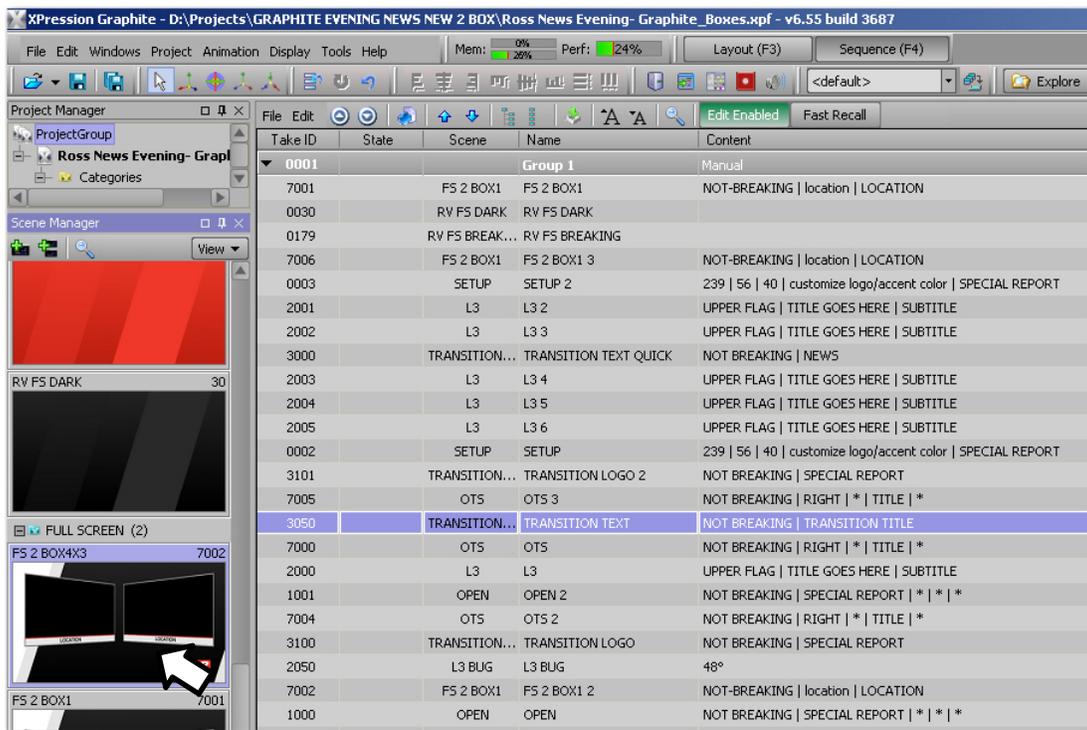
Key concepts in the following tutorial:

- > Temporarily load an XPression scene to the background as a guide for positioning DVE keys
- > Create, size and position two DVE keys on the switcher for a “double-box”
- > Create a key to position the double-box graphic over the two DVE keys
- > Save an effect as a memory
- > Create a double-box Custom Control

Tutorial 4 Double-Boxes with Graphic

Part 1 – Load the XPression Scene for the Background

1. Open the XPression demo project if it is not already open. If you are not sure how to do this, refer to Lesson 1.
2. Look through the XPression sequence, and make sure that a scene designed as a double box is in the Sequence list. If not, locate a double box scene in the Scene Manager and drag it to the Sequence List.

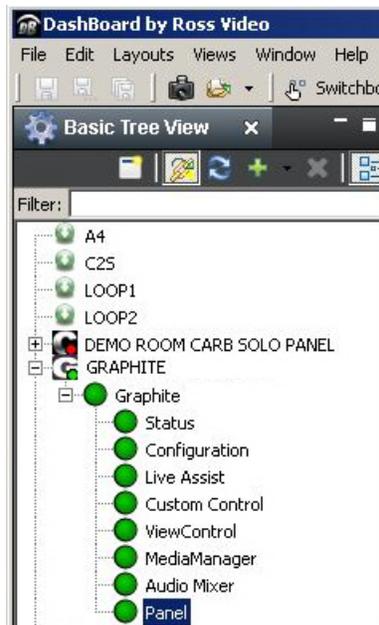


3. Once this scene or another suitable double-box scene is in the Sequence List, double-click it in the Sequence list to load it to the framebuffer. This scene should now appear in the monitor for XPression.

Part 2 – Set Up the Double-Box on the Switcher

Your Graphite system's switcher functions may be controlled with a physical Control Panel or with DashBoard's virtual Control Panel. In some of the following instructions, DashBoard steps are presented as the first alternative for each step and the corresponding instructions for the physical Control Panel are offered as the second alternative.

1. To access switcher controls, do one of these:
 - Start DashBoard from the desktop icon if it is not already running. Expand the items in the Basic Tree view and locate your Graphite system. Expand the Graphite item in the tree and then double-click Panel.

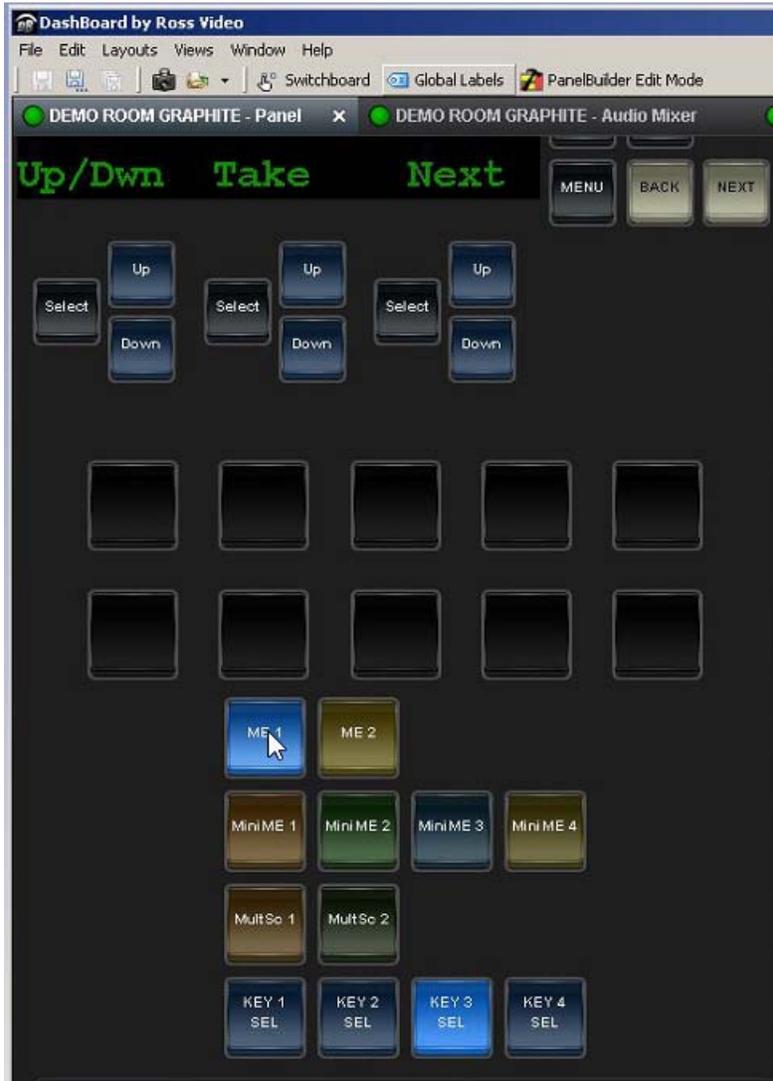


Note You may want to click X at the top of the Basic Tree View panel and any other Views open in this area to have a complete view of the virtual Control Panel. You can always open the Basic Tree View again from the Main Menu by clicking Views>Basic Tree View.

- Power on the Control Panel if it is not already on.

2. We want to display the XPression two-box scene so that we can use it as a guide for sizing and positioning the two boxes. To designate the XPression two-box scene as the background, do one of these:

- In DashBoard:
 - > near the top left of the virtual Panel, click ME1. With this selection, the controls displayed affect ME 1.



- > To assign XPression as the source for the background on ME 1, in the Program bus (middle row of buttons), click the button for XPression. In the example here, it is labeled CG1.



- > Click ME 2. Now all the controls displayed affect ME 2.



- > In the Program bus, click ME 1 as the source for ME 2. This allows you to monitor this project as you build it.



- On the physical Control Panel:
 - > In ME 1, press the button associated with XPression in the Background Bus
 - > In ME 2, press the button associated with ME 1 in the Background bus

For simplicity, as we continue our instructions we may use either DashBoard or the Control Panel only, but feel free to explore the comparable controls if you wish.

- Let's create a key to position in one of the two boxes. In the DashBoard Panel, Transition Parameters area, select ME1 and then Key 1.

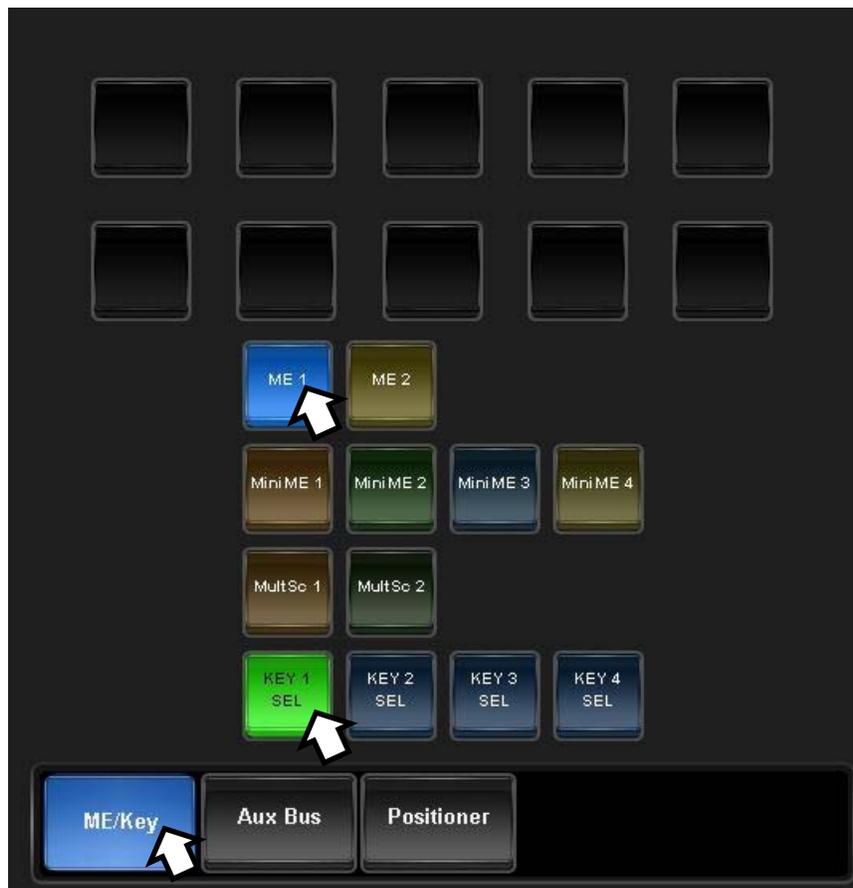
Note *Until you make these selections, you may not see all of the buttons shown here.*



4. Click DVE Key to specify that this is a Digital Video Effect, or DVE, key. This means that you can resize and reposition it to key it over other images or video.



5. In the Bus Delegation area, make sure that ME 1 and Key 1 Sel are selected. If you do not see these, make sure that ME/Key is selected.



6. Select a video source in the Key bus. This is the top row of the three long rows of buttons near the bottom of your screen. In the example here, Video C is selected.



7. To cut the key on, do one of these:

- In DashBoard, click the Cut button next to the DVE Key button



- On your Control Panel, press the Key 1 Cut button, near the Fader bar for ME1.

Now in your output monitor, you should be able to see video over your 2-Box graphic.



8. To size and position the image, do one of these:

- In DashBoard, click and drag the virtual sliders and dials at the top right of the interface.



In each pane, the slider and the dial do the same thing. Their functions, from left to right are:

- > Scale
- > Move left or right
- > Move up or down
- > Squeeze
- > Soften edge
- > Add and size border

Note Click the color buttons below the Add Border control to specify a border color. Right-click the large color square for advanced color controls.

- > Crop left
- > Crop right
- On your Control Panel:
 - > Twist the joystick to scale the video
 - > Move the joystick left, right, up or down to position the video
 - > Refer to the mnemonic display window. You may see labels there for scale, position, cropping and borders. Use the dials below this window to adjust these parameters. Use the Next button to see other parameters in the

mnemonic display. Press the Key 1 Sel button, above the Key delegation bus, to reset this menu.

Note For more information about using your Control Panel to add borders or soften edges, refer to the product documentation or the Carbonite training manual.

You can experiment with these controls. Then, make sure your video is over the box on the left. If you have added borders or soft edges, you can remove these. For this tutorial, the graphic will eventually be in front of the video boxes, so the edges will not show.

To make a second box, you can repeat the steps to make the first box and then reposition it, or you can simply copy the first box as described in the next step, ensuring that your two boxes are the same size and aspect ratio.

9. To copy the first box, in ME1 on your physical Control Panel, press and hold the Key 2 Sel button. While you are pressing it, press and release Key 1 Sel and then release Key 2 Sel.

Note In general, to copy Keys, press and hold the destination while you press and release the source.

10. Cut Key 2 on, either from DashBoard or your Control Panel.



It won't look like there is a new box, because it is positioned directly over Key 1.

11. Use the controls in DashBoard or the Control Panel joystick to move Key 2 to the right and position it appropriately over the box in the graphic. You do not need to scale it or move it up or down. Part of the efficiency of copying it is that it is already the correct size and in the correct Y position.

12. With the Key 2 Sel button still selected, do one of these to select a fill source:

- In DashBoard, Click the Key Fill button and from the Key Fill Source dialog, select a source for this Key.



- Or, in DashBoard, change the Bus Delegation selection to Key 2 Sel and choose a source from the Key bus.

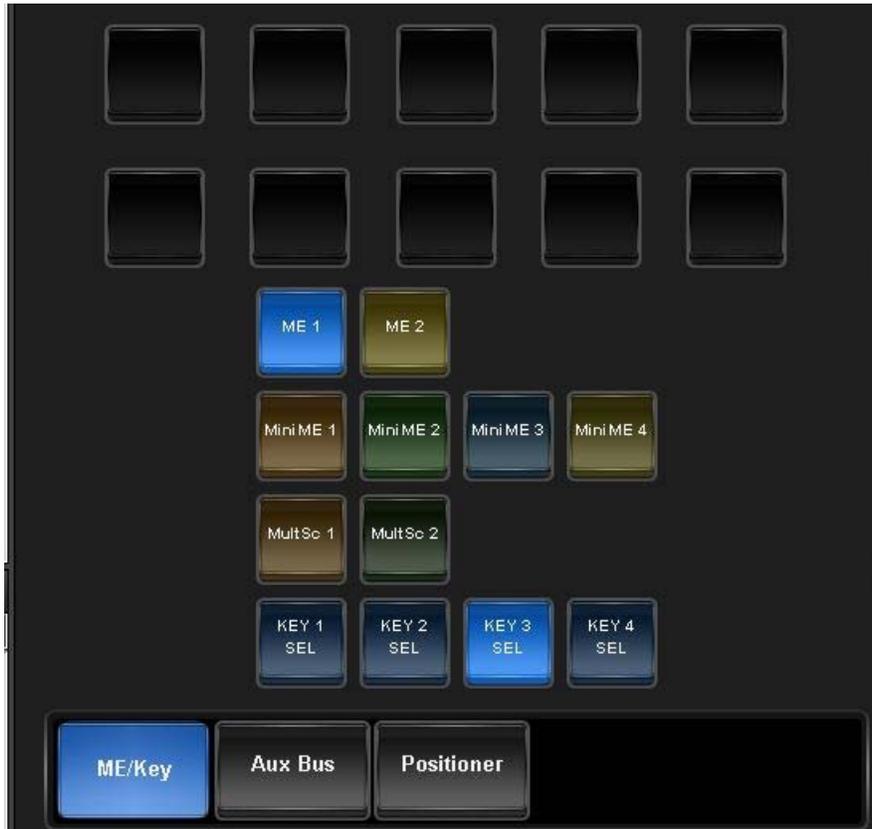


Now we are ready to place the graphic in front of the two video boxes.

13. In the Key Parameters area, select Key 3 and click Auto Select as the key type.



14. Select Key 3 Sel in the Bus Delegation area.



15. From the Key Bus row, select the button assigned to XPression. In our example, it is CG 1.



- In the Key Parameters area, click Cut to cut this key on. Since it is Key 3, it appears in front of your two boxes, Key1 and Key 2.



Part 3 – Save this Effect as a Memory

Now you are ready to save this effect in ME 1 to a Memory.

- In Dashboard, return to the Basic Tree view and open Live Assist. In Live Assist, choose Memory>Store. If you are not sure how to do this, refer Tutorial 1, Part 2.
- In the Inclusions area, select ME 1 at the top left, to only store ME 1's effect. Note that selected items are in color. If you need to deselect an item, you can click it.



- In the Memory Store area, pick the Memory bank, 0-9, where you want to store this memory.
- Within this Memory Bank, pick this Memory Location, 0-9 for this memory. In the example here, Bank 0 and Memory 0 are selected.



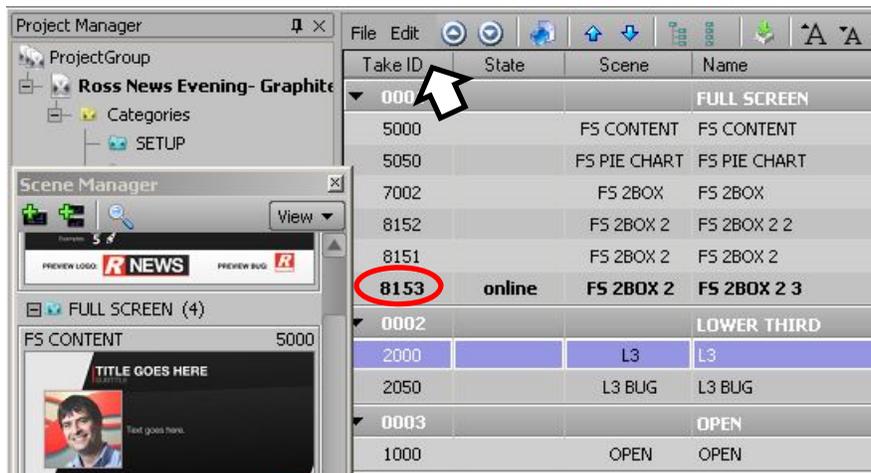
Note You may want to have an organized plan for storing memories so that they are easy to locate.

- Click the Store button at the end of the Memory Store row.



Part 4 – Create A Custom Control for a Double-Box

Now you are ready to start creating your custom control. You will need the Take ID for the XPression 2 Box graphic. If you do not remember it, open XPression’s Sequence interface. The Take ID is in the Sequence List in the row for that graphic, on the left.

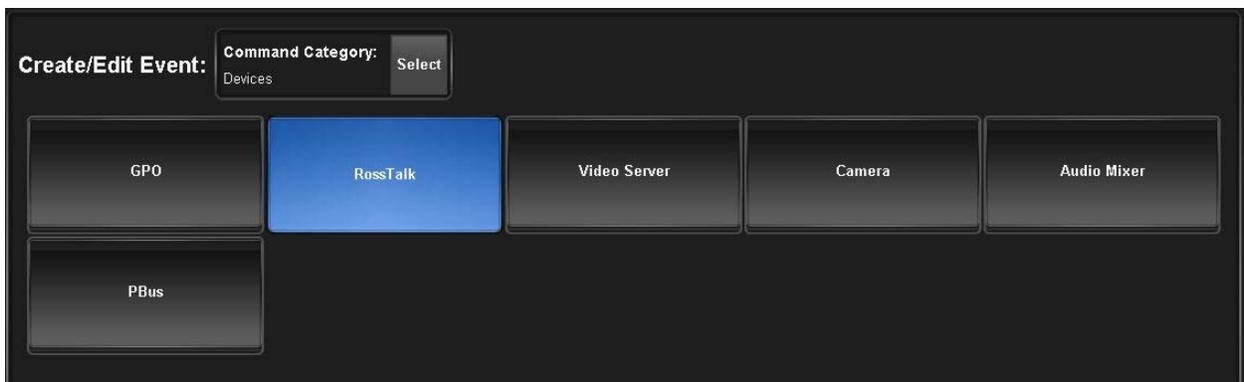


- Access the DashBoard Custom Controls Editor. Select a Bank and an empty Custom Control. Click Modify Event List. If you do not know how to do this, refer to Tutorial 1, Part 1. If the Modify Event List Button is not present, click the Done button to reset the interface and then you should see the Modify Event List button.

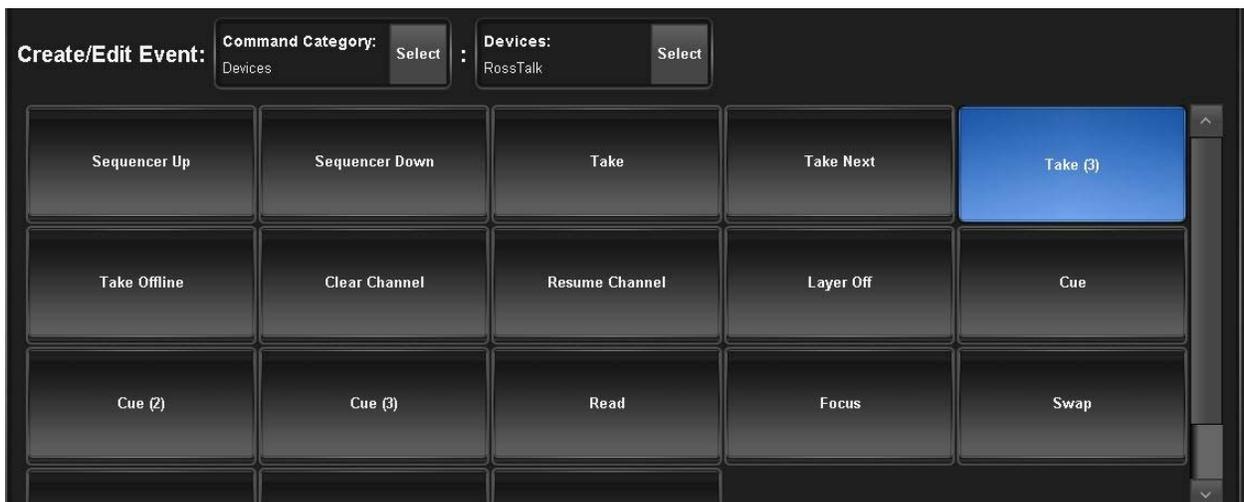
2. In the Create/Edit Event area, select Devices.



3. Select RossTalk.



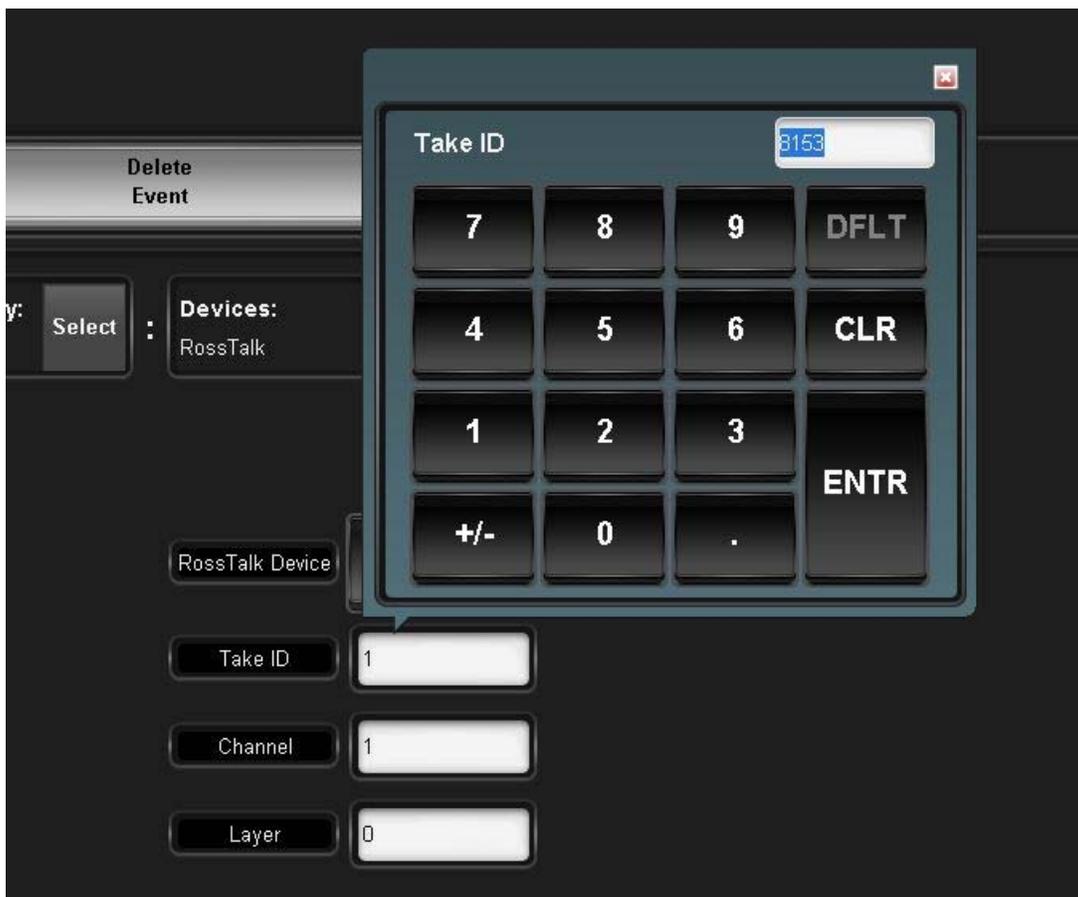
4. Select Take (3).



5. Click the RossTalk Device selection button.
6. From the Select RossTalk Device dialog, select the XPression.

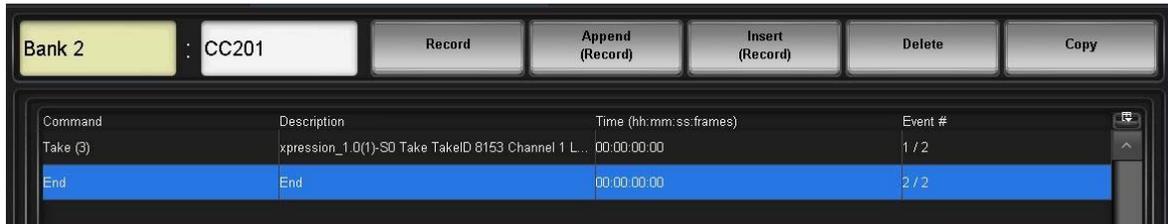


7. Click the Take ID field. In the Number Keypad that appears, type or enter the Take ID of the 2 Box graphic and then click ENTR.

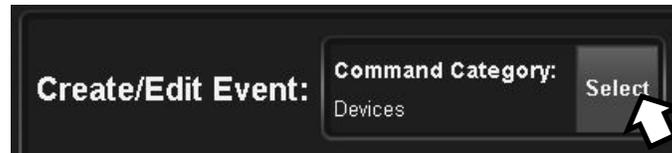


8. Click the Channel field. In the Number Keypad that appears, enter the playout channel of XPression for this graphic and then click ENTR. Typically, with Graphite, you only have one XPression channel, but if you have additional channels, you can use this setting to override any settings made in XPression.

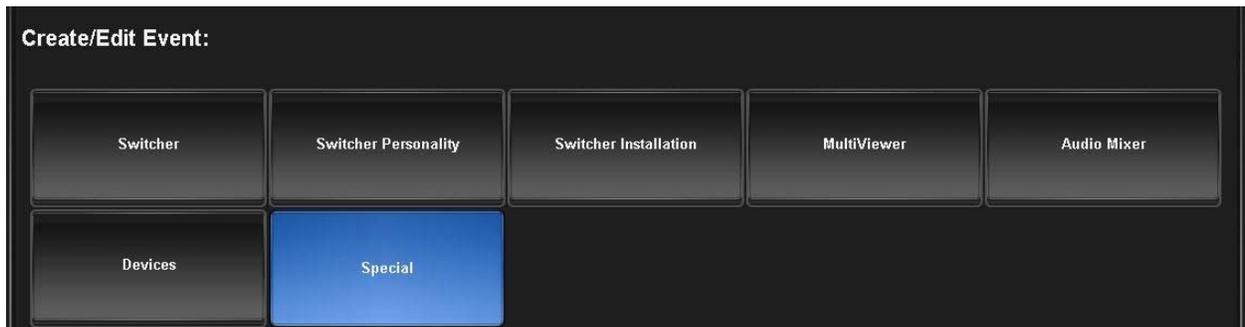
9. Click the Layer field. In the Number Keypad that appears, enter the Layer within the channel's framebuffer of XPression for this graphic and then click ENTR. The graphic has an assigned layer number in XPression, but you can override that with this setting.
10. Click Insert. The command to take the two-box graphic is now in the Command List for this Custom Control.



11. Click the Command Category Select button.



12. Select Special.



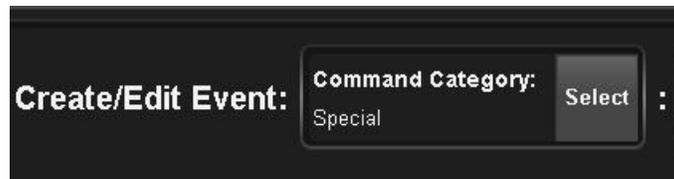
13. Select Pause.
14. Click in the Pause field. Use the Number Keypad that appears to enter a value of 2 frames here.

15. Make sure that the End event in the Command list is selected and then click Insert.

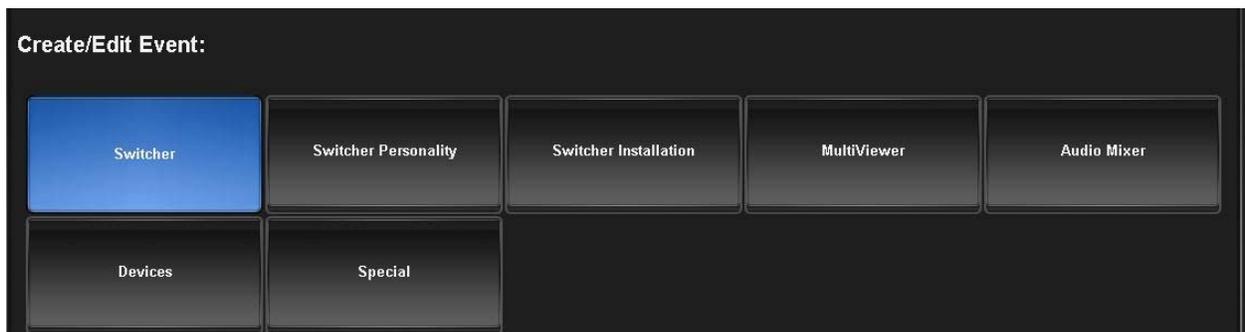
Note *Insert places the newly configured command above the highlighted command. So, if you are creating your commands in sequential order, always select End so that your most recent command is placed after the previous ones.*



16. Click the Command Category Select button.

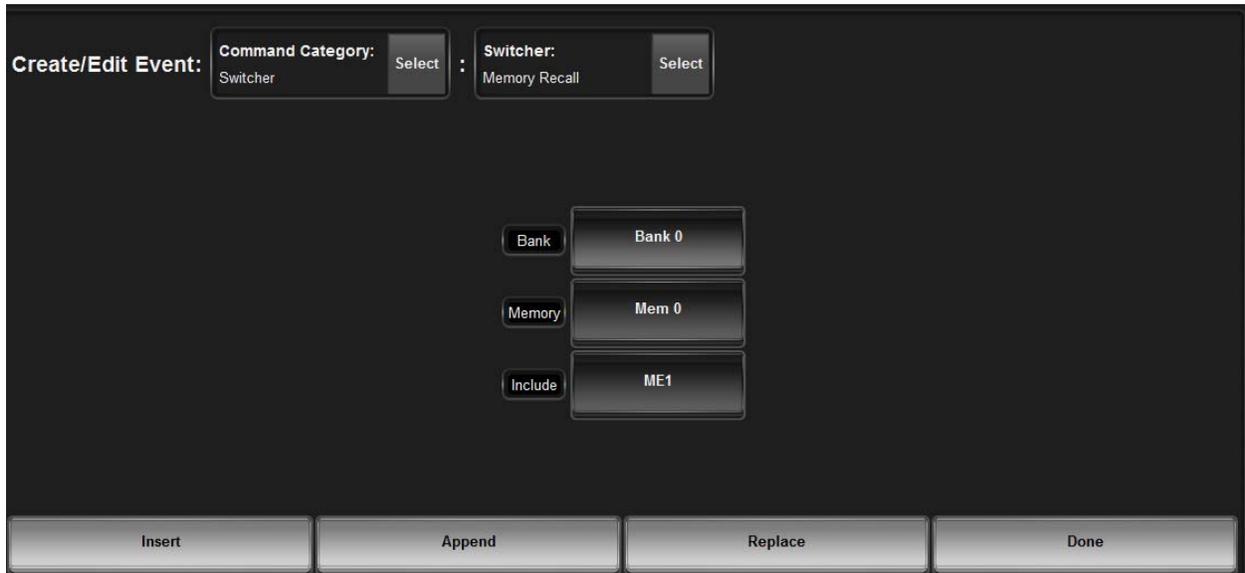


17. Select Switcher.



18. Select Memory Recall.

- Click the buttons next to Bank and Memory and select the Memory number and Bank on ME 1 where you saved the double-box memory. In our example, this is Bank 0, Memory 0.



- Make sure the End event is selected in the Command List and then select Insert.



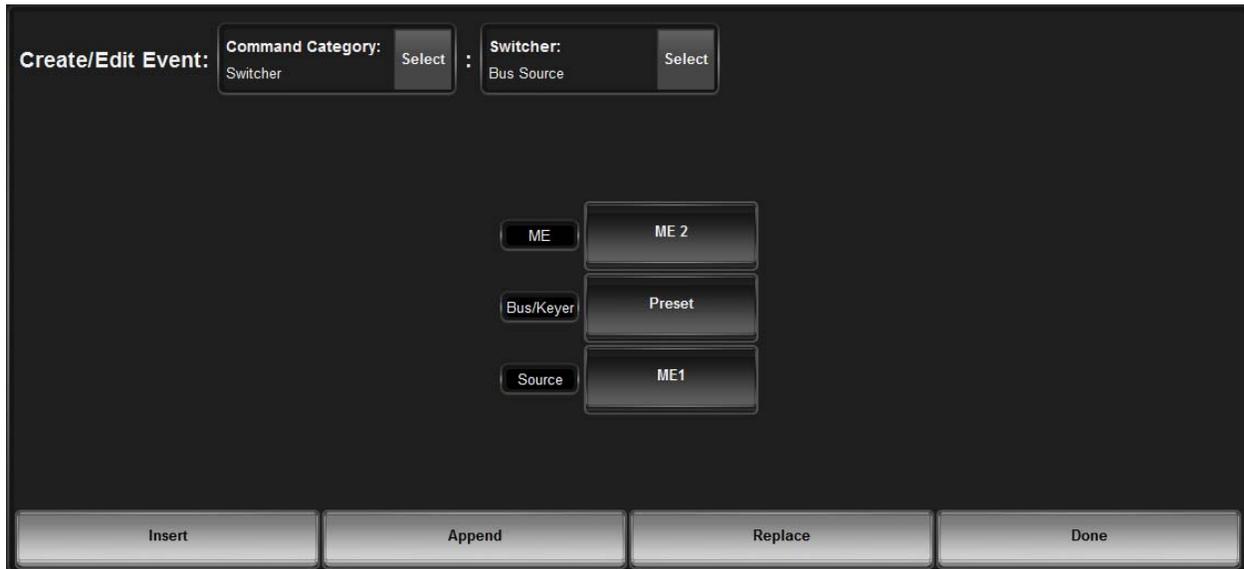
- Insert a Pause as before, by selecting Command Category, then Special and then Pause.
- Set the Pause to 2 frames.
- Confirm that the End event is selected in the Command List and then click Insert.



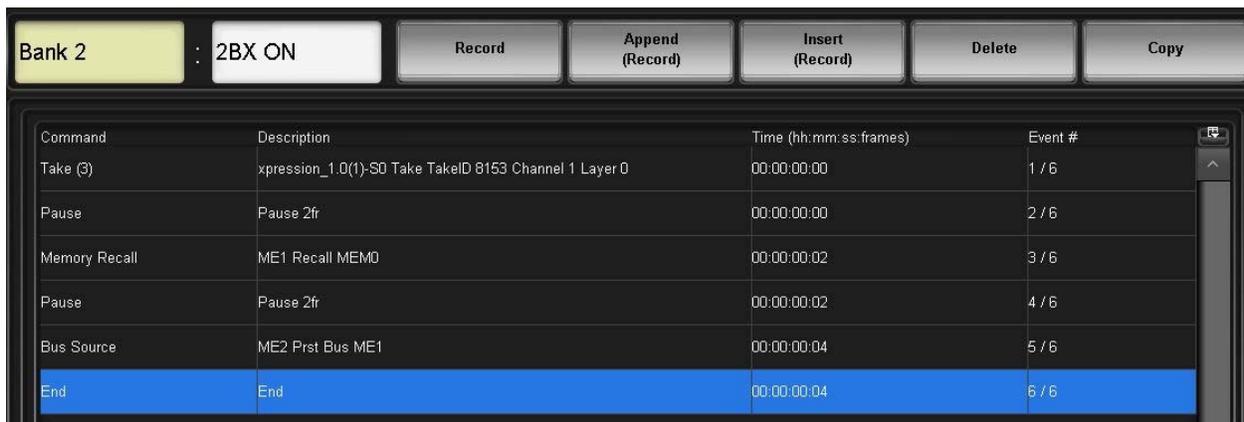
We want the two-box to load to Preview before it plays to Program.

- Select Command Category.

25. Select Switcher, and then select Bus Source.
26. Click the ME button and select ME 2.
27. Select Preset as the Bus/Keyer.
28. Select ME1 as the source.

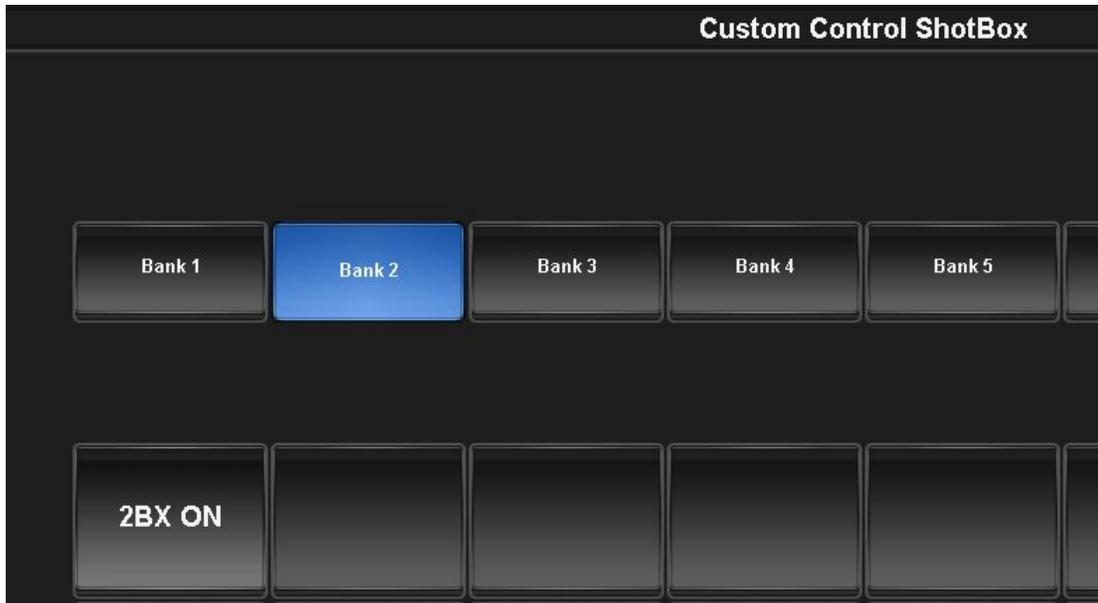


29. Click Insert.
30. Click Done.
31. Remember to type a name for your Custom Control on the button near the top of the interface, so that you can locate this Custom Control in the Shot Box.



Part 5 – Play Your Double-Box Custom Control

1. To run your custom control, select the Navigation Menu button at the Bottom right, and then choose Custom Control.
2. At the bottom left of the Custom Control interface, choose the ShotBox button.
3. The ShotBox appears and you can select the appropriate Bank.
4. Click the appropriate Custom Control button to play the double-box.



Tutorial 5 Animated Wipe with XPression Graphics

About Animated Wipes with XPression Graphics

Wipes are commonly used to open a program or to transition between segments. A wipe is a short animated graphic or clip that plays over a video source. As the wipe covers the current video source, there is a transition to the next video source. As the wipe ends, the next video source is revealed.



You can create a Custom Control to run an animated wipe from XPression. This effect cues and plays the animation, then cuts to the source you have selected in Preview.

Key concepts in the following tutorial:

- > Assign XPression as key source with a Custom Control command
- > Use pauses in Custom Controls
- > Timing pauses with an animated wipe
- > Transition video from Preview to Program with a Custom Control

Tutorial 5 Animated Wipe with XPression Graphics

Part 1 – Locate the Animated Graphic

1. Open XPression and access the Sequence interface. Open your own project or open:

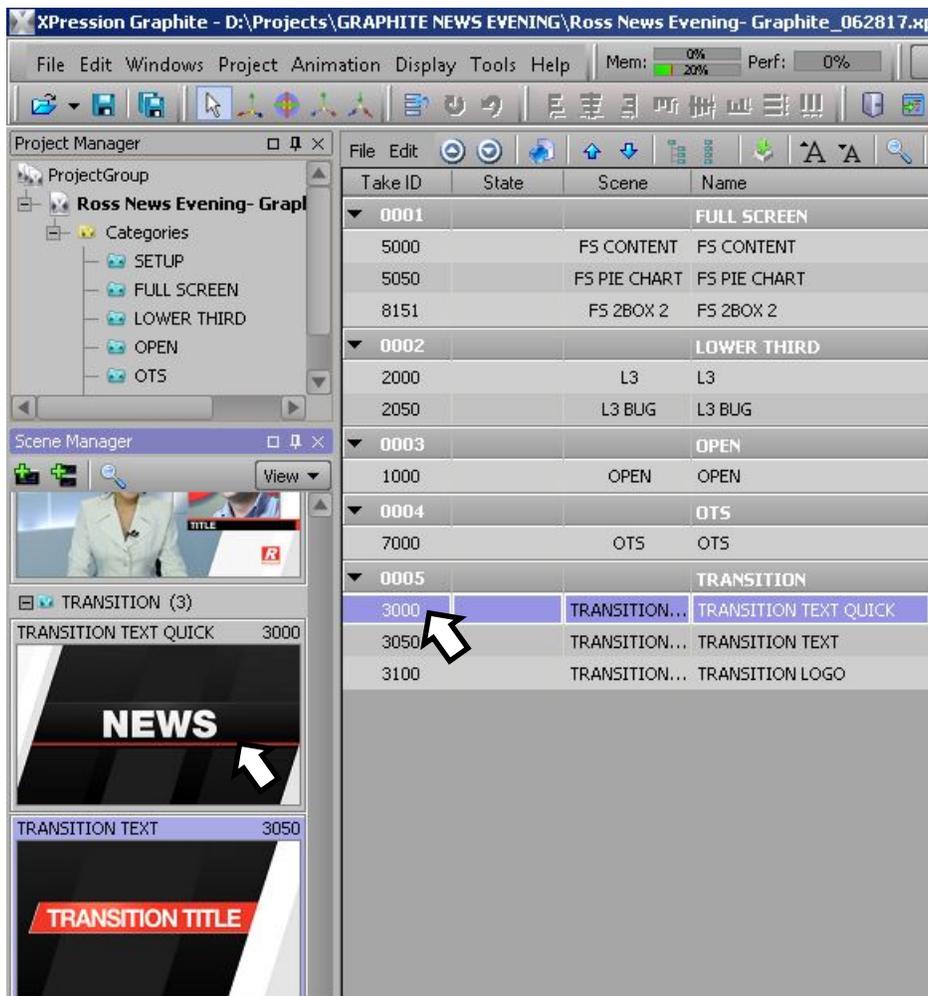
D:\Projects\ROSS NEWS EVENING – GRAPHITE

If you are not sure how to do this, refer to **Lesson 1, Load XPression Graphics**.

Make sure that there is an animated wipe graphic in the Sequence List. If you are using the ROSS EVENING NEWS project, you can use:

TRANSITION TEXT QUICK

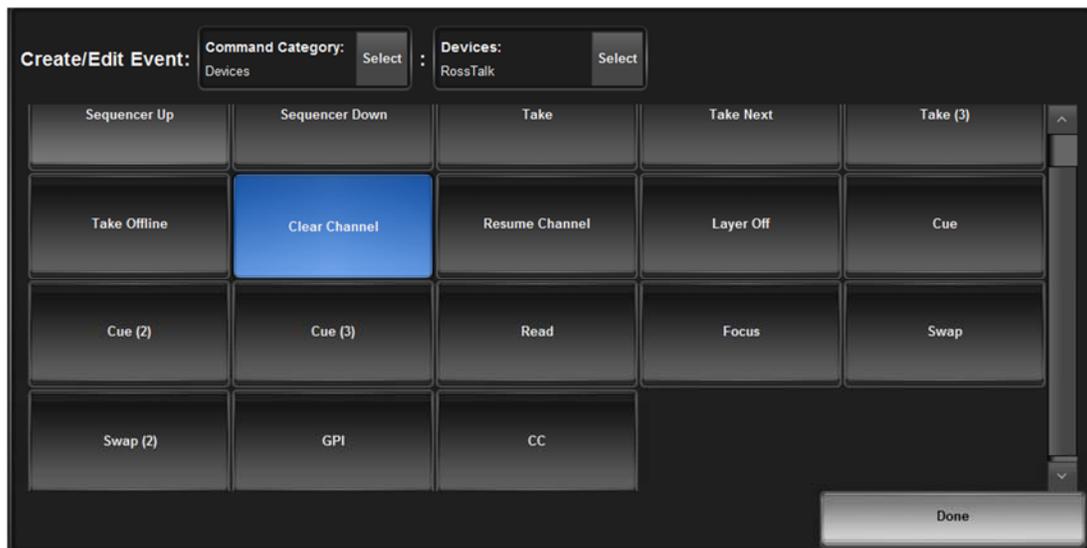
2. If the graphic is not in the Sequence List, click and drag the graphic from the Scene Manager to the Sequence List.



3. Make a note of the Take ID, the Framebuffer and the Layer number. All this information is in the row for this item in the Sequence list. You need this information later to set up the Custom Control.

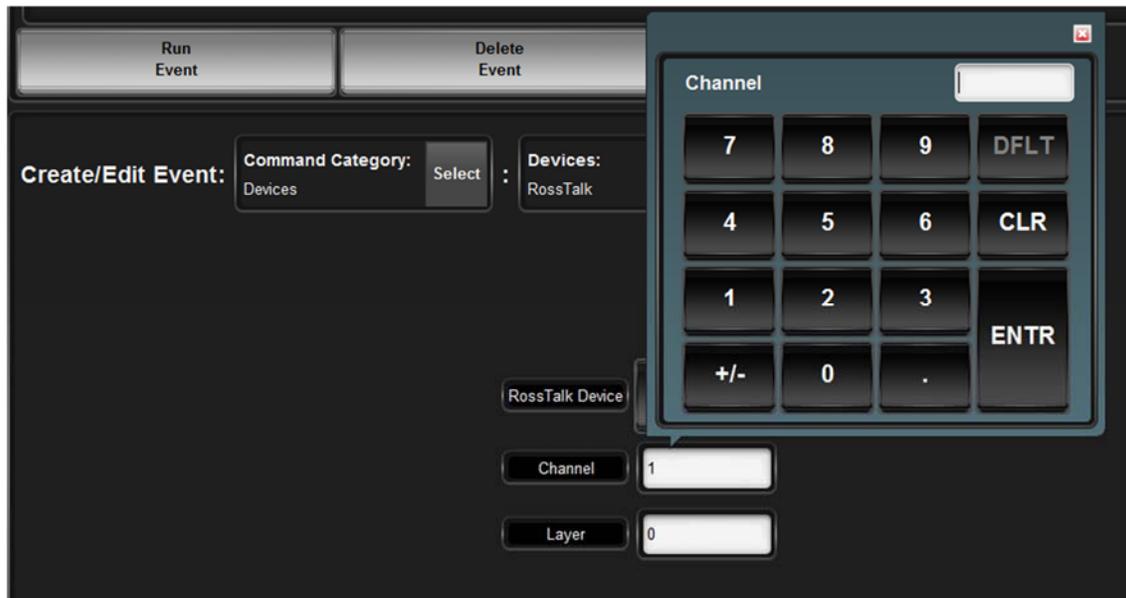
Part 2 – Begin Building the Custom Control

1. Access the DashBoard Custom Controls Editor. Select a Bank and an empty Custom Control and then click Modify Event List. If you do not know how to do this, refer to Tutorial 1.
2. You need a command that tells XPression to clear the channel. Select Devices.
3. Select RossTalk.
4. Then select Clear Channel.

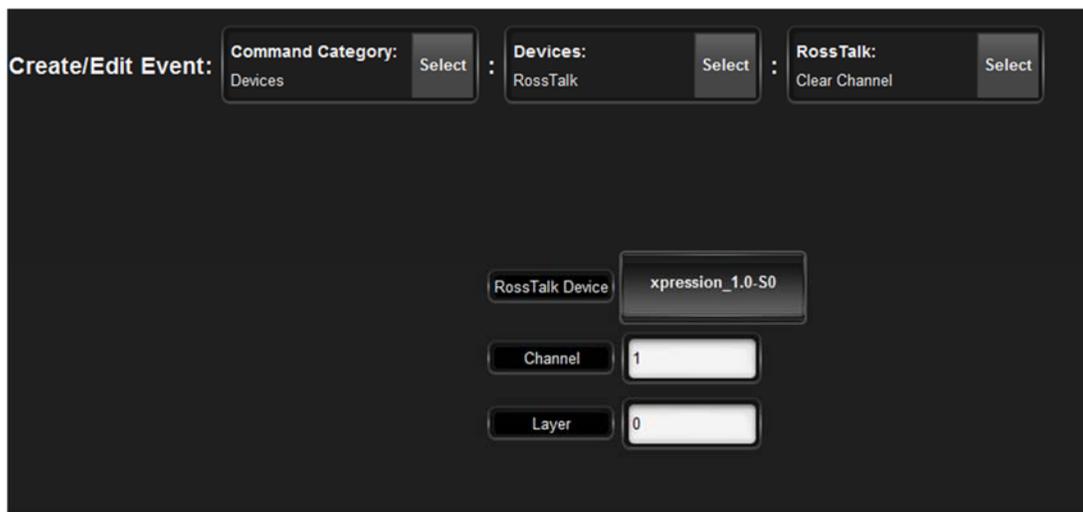


5. Click the Ross Talk Device Selection button.
6. From the Select Ross Talk Device dialog, click XPression.

7. Click the Channel field and then use the Channel Numeric Entry Pad to specify the channel (Framebuffer) you want to clear with this command. Typically, this is Channel 1, since most Graphite systems offer one XPression channel.



8. Click the Layer field and then use the Layer Numeric Entry Pad to specify the layer you want to clear with this command. Use the same layer number as the XPression graphic that you plan to use.

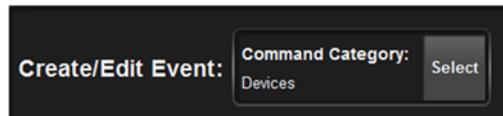


9. Click Insert. This command appears in the Command List at the top of this interface.
10. If you want to clear additional layers, simply change the Layer field entry and click Insert again.

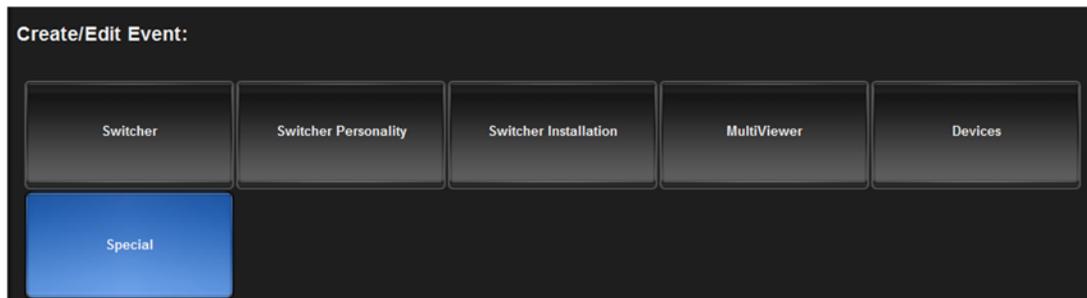
Part 2 – Add a Pause

Next, insert a pause to allow the key to clear properly.

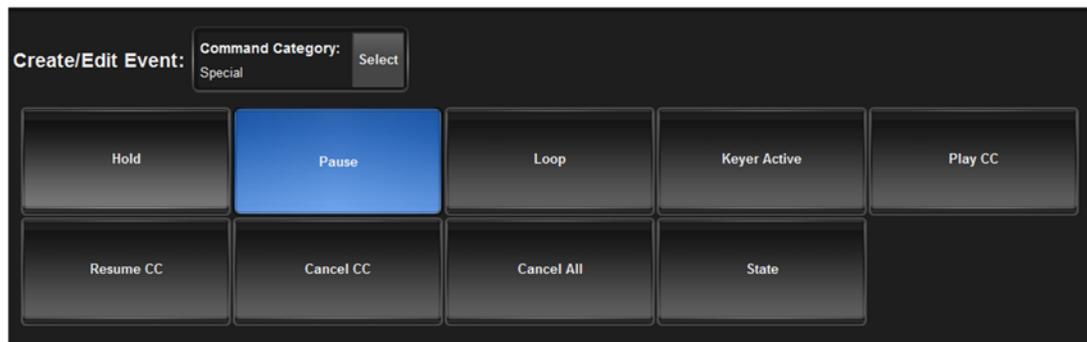
1. Click the Category Command Select button.



2. Click Special.



3. Click Pause.



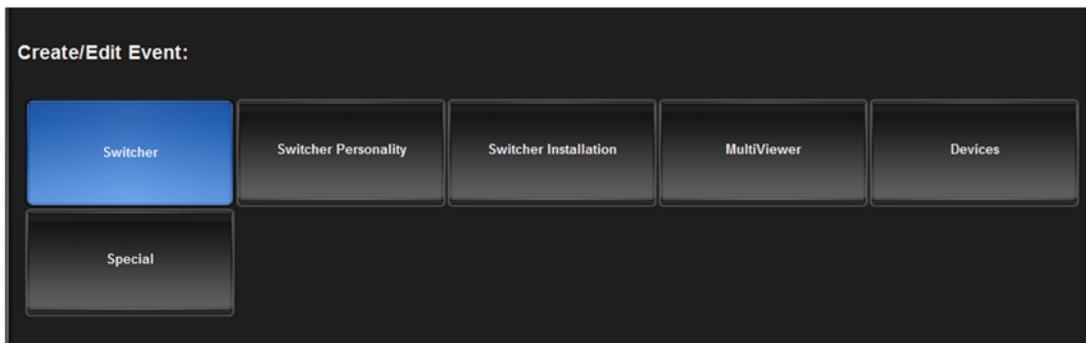
4. Change the Pause to 2 frames.
5. Make sure that the End event is selected in your Command list and then click Insert.

Part 3 – Assign the XPression Key Source to the Key

So far, we have a command to clear the channel and a pause to ensure that the channel clears. The next event to add to the command list assigns XPression as the key source.

1. Click the Command Category Select button.

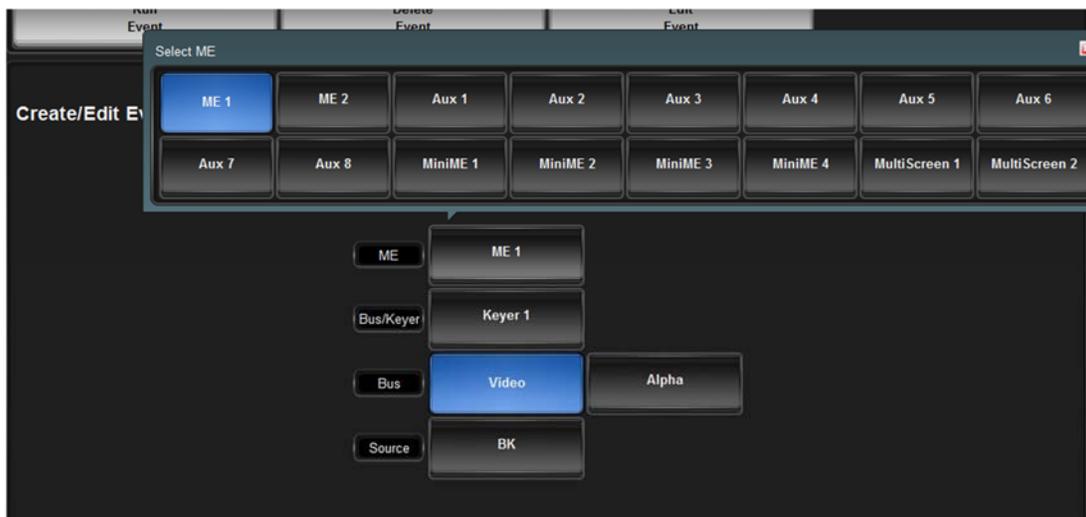
2. Select Switcher, since this command is an action for the switcher to perform.



3. Select Bus Source.

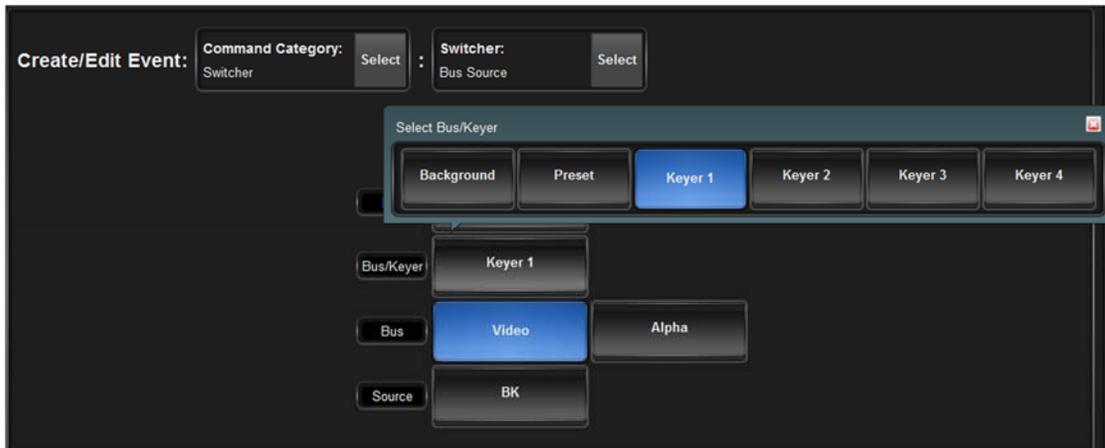


4. Click the ME selection button and then from the Select ME dialog, choose your Program ME.



5. Click the Bus/Keyer Selection button and choose a Keyer (1-4) for your XPression key.

Note *Keyers layer in order over the background. Keyer 1 is in front of the background, Keyer 2 is in front of Keyer 1 and so on. The best choice for a media wipe is Keyer 4 since its output renders in front of all other Keyers.*



6. Next to the Bus label, select Video.
7. Click the Source Selection button and choose XPression.

Note *The device labels in the Select Source dialog are specifically configured for your facility. Your XPression may have another name, such as CG 1 or Graphics.*

8. Make sure that the End event is selected in your Command list and then click Insert.

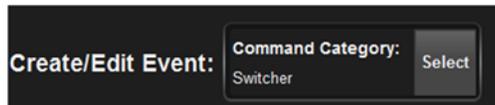
Part 4 – Add Another Pause

To allow the previous command to complete, add another pause by repeating the steps in Part 2 of this tutorial.

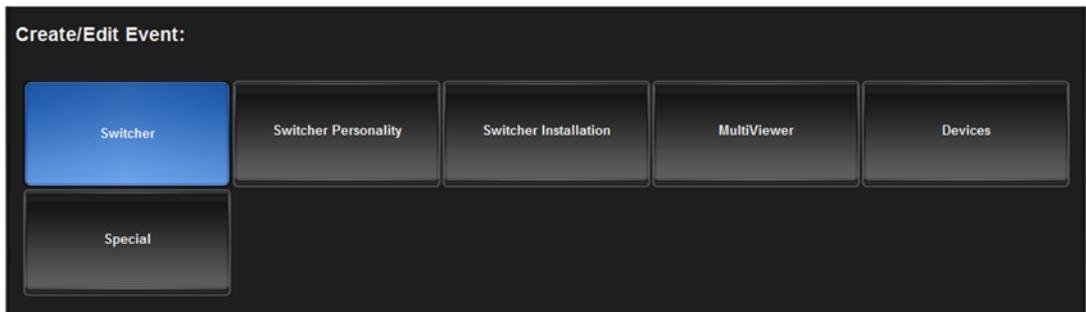
Part 5 – Cut On the Key

So far, this Custom Control includes commands to clear the channel and to specify that XPression populates a key. We also have pauses to allow these things to happen. Next, add a command to cut the key on.

1. Click the Command Category Select button.



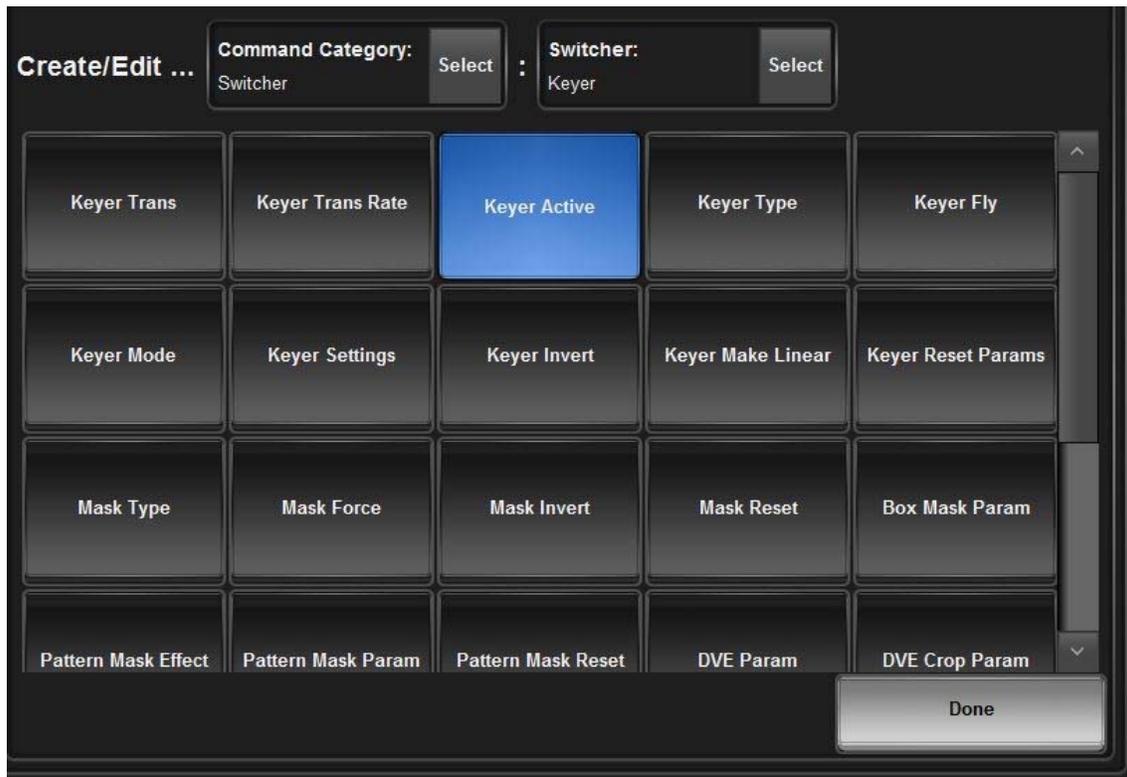
2. Select Switcher. This command affects the switcher.



3. Select Keyer.

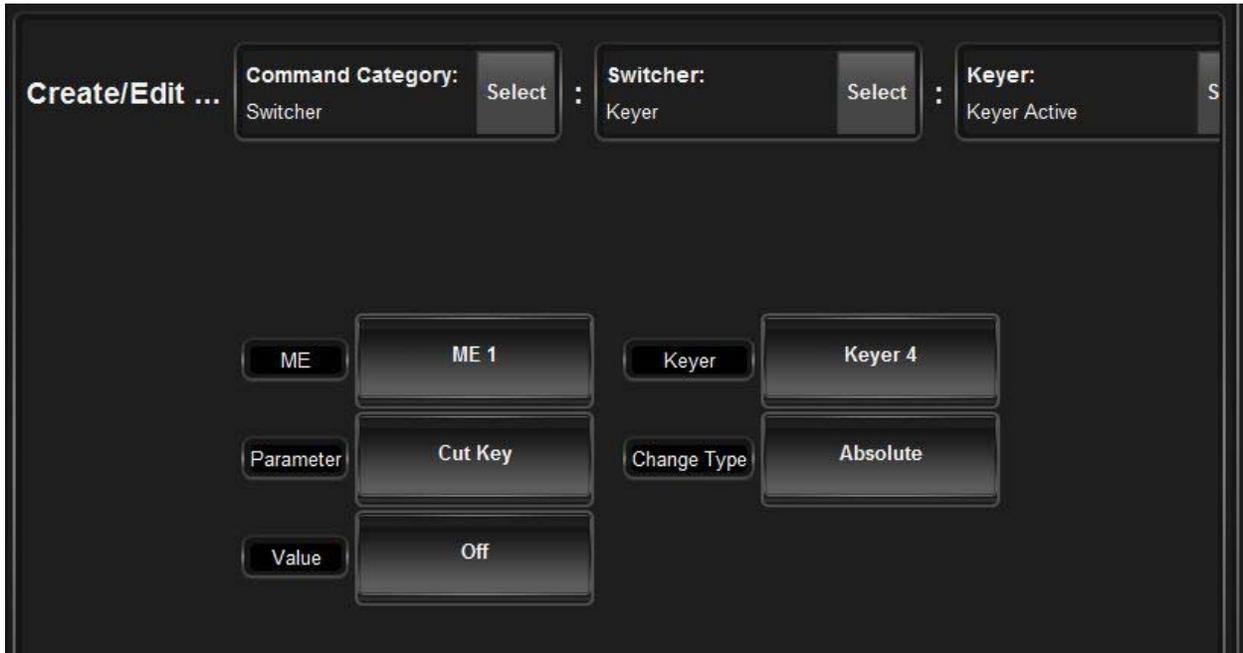


4. Select Keyer Active. You want to specify that the keyer is in the output when the XPression graphic plays so that the transition is visible.

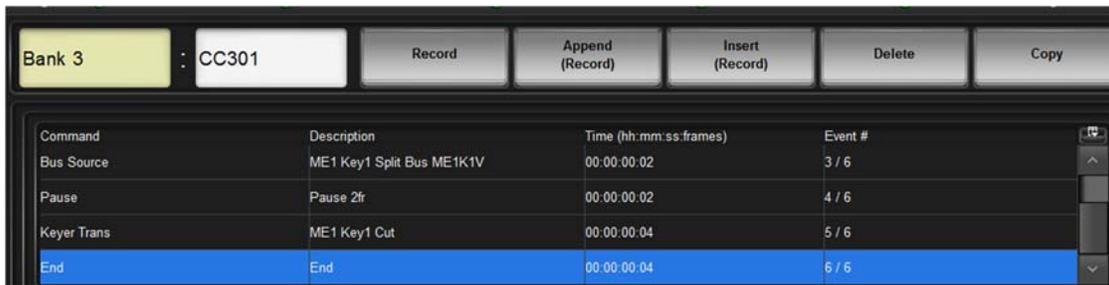


5. Click the ME Selection button and choose the Program ME.
6. Click the Keyer button, and then click to select the Keyer that you specified earlier for XPression.
7. Click the Parameter label, select Cut Key.
8. Click the Change Type Label and select Absolute.

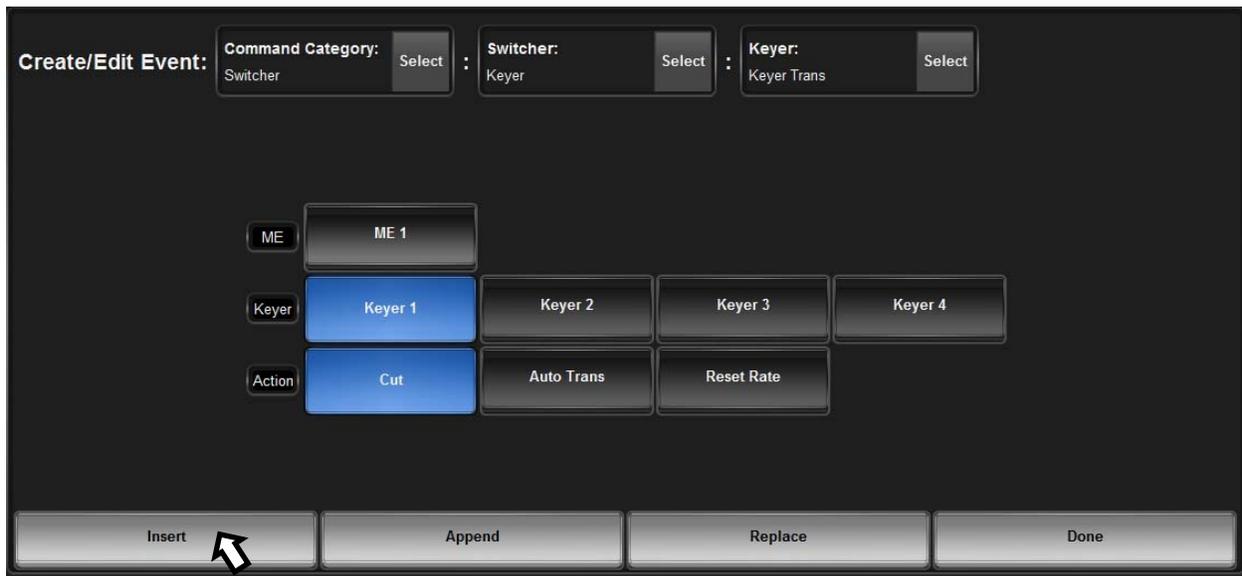
9. Click the Value Label and select On.



10. Make sure the End event is selected in the Command list.



11. Click Insert.



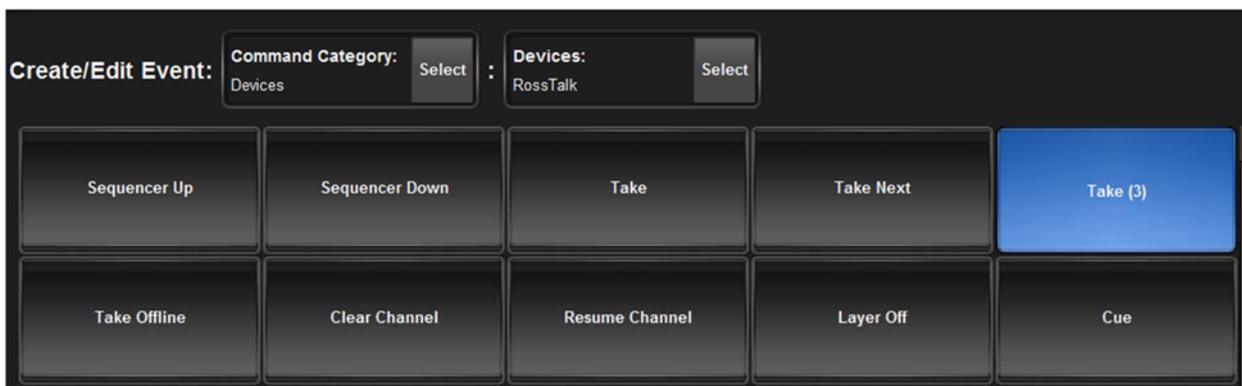
Part 6 – Add Another Pause

To allow the previous command to complete, add another pause by repeating the steps in Part 2 of this tutorial.

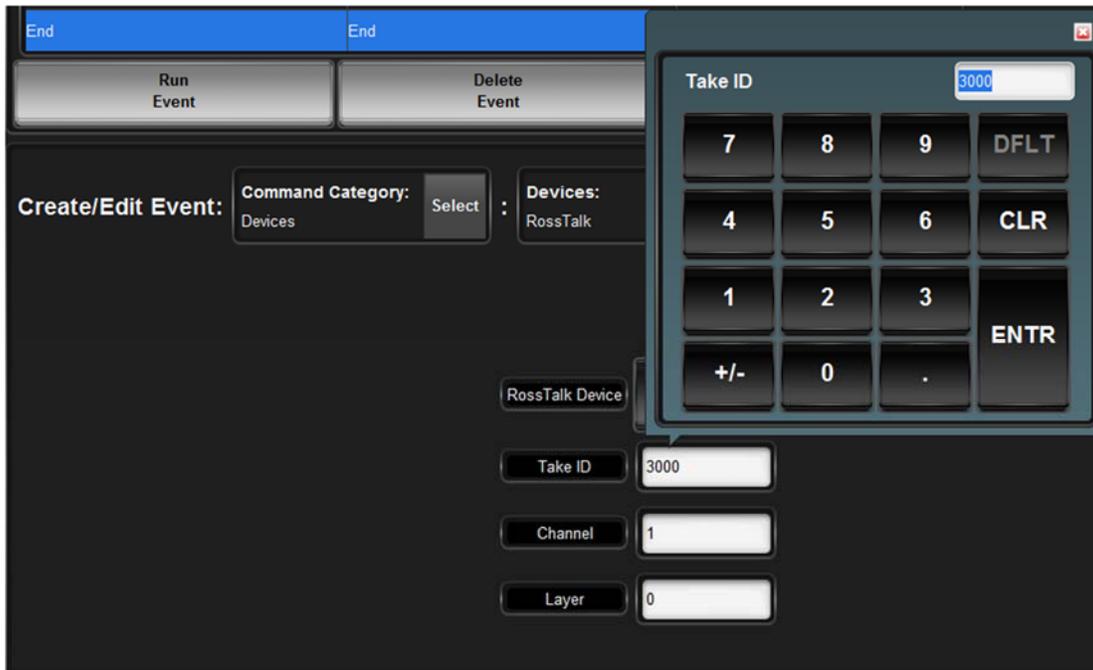
Part 7 – Call Up the Correct Graphic

So far, there are commands in this Custom Control to clear the XPression channel, specify a key for XPression and cut the key on, along with pauses to allow these things to happen. We also need a command to specify the XPression graphic to play.

1. Click the Command Category Select button.
2. Click Devices. We want to specify that this command acts on the XPression.
3. Click RossTalk.
4. Select Take (3). Take (3) allows you to make three specifications- Take ID, Channel and Layer.



- Click the RossTalk Device selection button. From the Select Ross Talk Device dialog, choose the XPression.
- Click the Take ID field and enter the Take ID for the transition or media wipe graphic. Remember the Take ID is in the XPression Sequence list in the left column.



- Click the Channel field and enter the XPression playout channel. Typically, this is Channel 1 unless your system has special options.
- Click the Layer field and enter the Layer number where the XPression scene plays in the designated channel. The Layer number is listed in the XPression Sequence list, to the right of the scene name.

Note You can see at a glance or modify Framebuffer (Channel) and Layer settings in the XPression Sequence interface. With the scene selected in the Sequence list, look at the Take Item Inspector, near the bottom of the interface and click the Take Item tab.

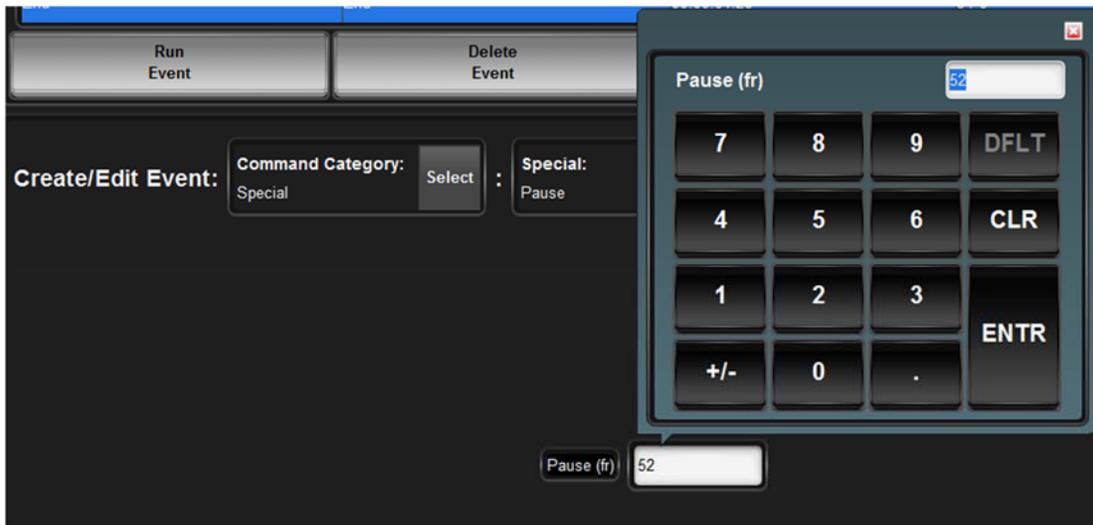
- Confirm that the End event is selected in the Command list and then click Insert.

Note To load multiple graphics on the same channel, assign them to different layers in XPression. Use the same settings in this part of the tutorial. Simply change the Layer number and click Insert again to add commands.

Part 8 – Add a Pause to Allow the Program Video to Cut

Add a pause for the duration of the XPression graphic from its start until it is full screen. When it is full screen you can cut to the next program video source without the cut being visible.

1. Click the Command Category Select button and click Special.
2. Click Pause.
3. Enter a duration in frames equal to about half of the total length of the graphic's animation.

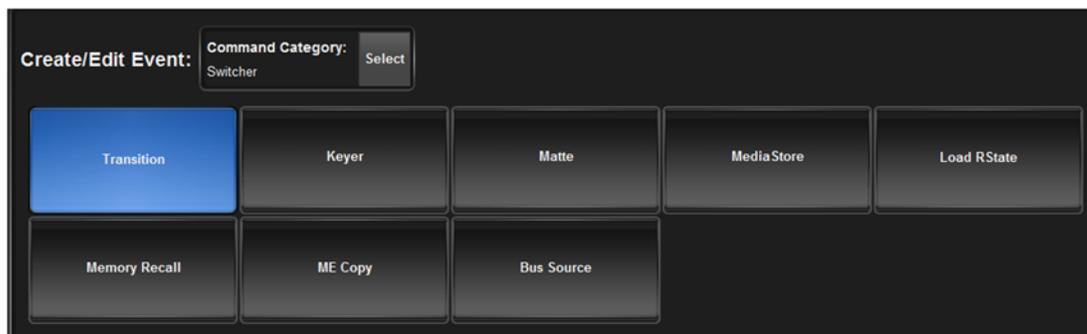


4. Confirm that the End event is selected in the Command List and then click Insert.

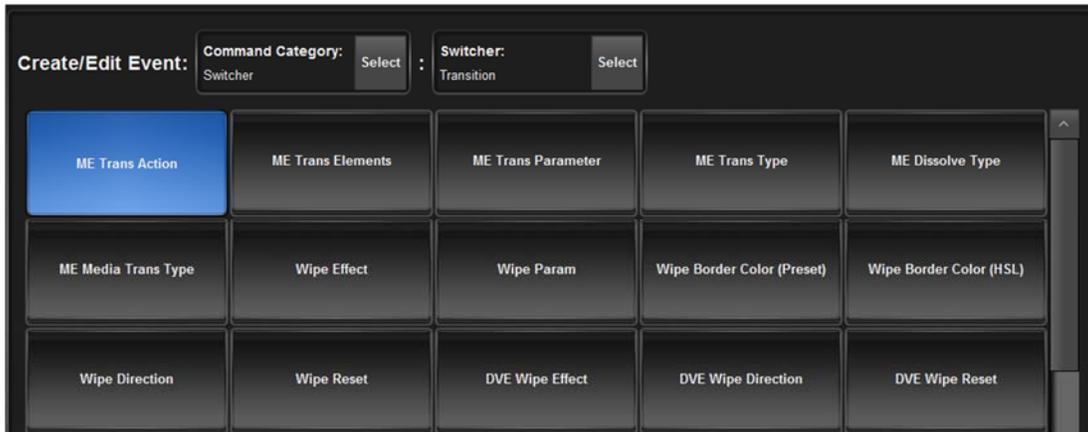
Part 9 – Transition Video

Next is the command to cut the underlying video.

1. Click the Command Category Select button and click Switcher.
2. Click Transition.



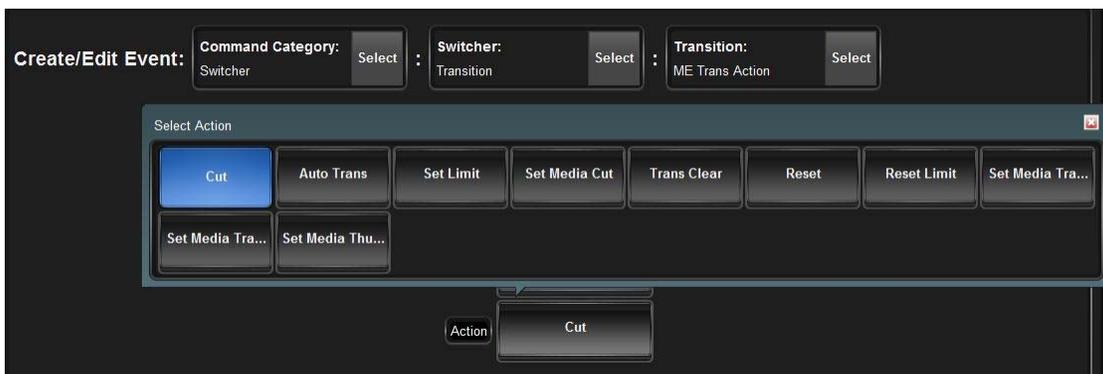
3. Click ME Trans Action.



4. Click the ME Selection button and choose the Program ME. In the example here, ME 2 is selected, but yours may be different.



5. Click the Action button and choose Cut.



6. Confirm that the End event is selected in the Command List and then click Insert.

Part 10 – Add a Pause to Allow the Animation to Finish

Repeat the steps in Part 8 of this tutorial, or use the Tip here.

RossTip!

You can not copy and paste events in the Command List, but you can use this trick if you want another command similar to one you already entered.

1. Click the command in the list that you want to copy.
2. Click Edit Event. You are not actually going to change this event, but now the settings for this event populate the Create/Edit Event area.
3. Click to select the End event in the Command List.
4. Click Insert. A copy of the previously selected command is now in the list.

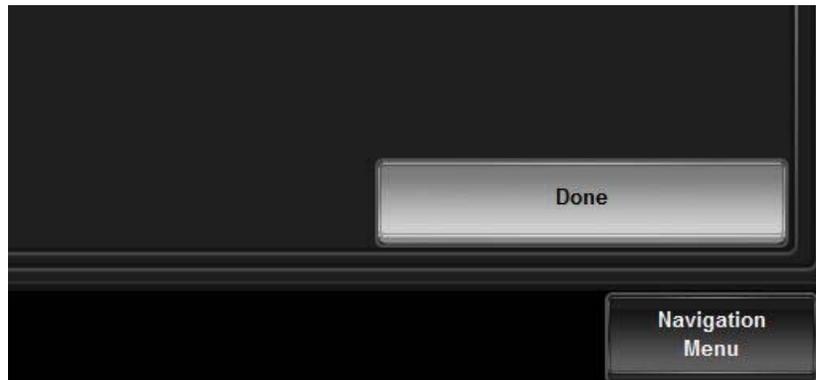
Part 11 – Cut the Key Off

Finally, when the transition is complete, we need to cut the key off.

1. Click the Command Category select button and click Switcher.
2. Click Keyer.
3. Click Keyer Active.
4. Click the ME Selection button and choose the Program ME.
5. Next to the Keyer label, select the Keyer that you cut on in an earlier command.
6. Next to the Parameter Label label, choose Cut Key.
7. Next to the Change Type label, select Absolute.
8. Next to the Value Label, select Off.
9. Confirm that End is selected in the Command List and then click Insert.

Part 12 – Complete this Custom Control

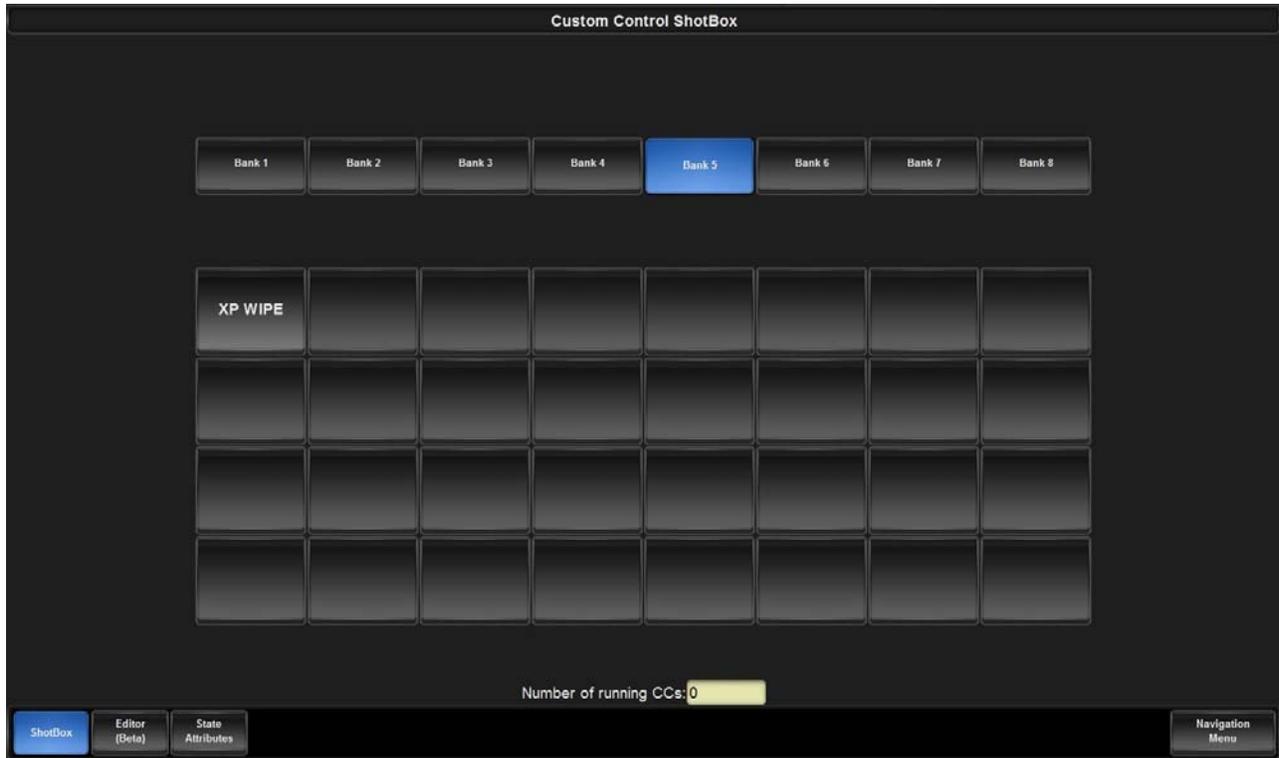
1. Click Done.



2. Select the Placeholder name for this Custom Control at the top of the interface and type a new name. The name you enter here appears on the virtual ShotBox button, so choose a name that indicates function, such as XP WIPE.



3. To test your Custom Control, click the ShotBox button at the bottom left. In the ShotBox open the Bank for this Custom Control. Make sure you have a video source selected for your Program ME and your Preview ME. Remember, you can do this either from the physical Control Panel or Dashboard's virtual Panel. Click the Custom Control button in the ShotBox to see your effect play.



Note *If the timing is not quite right, try adjusting the length of the Pause commands. Select a command in the Command List and then click Edit Event. Adjust the settings in the Create/Edit event area and then click Replace.*

Tutorial 6 Animated Wipes with a Media Wipe Transition

About Animated Wipes with a Media Wipe Transition

A Media Wipe is triggered directly from the transition area on your switcher. Unlike the animated graphic wipe described in the previous tutorial, a media wipe automatically transitions in front of all other sources including keys and background. You do not need to assign it to a key.

Media wipes may be video or a series of images (.tga or .png files that play in sequence to create animations) stored on a USB drive. A common workflow is to store all media needed for a specific program on a USB drive and insert the drive to the Graphite frame whenever you prepare for the program.

Media wipes may be media that you purchase or create with other applications. Or, you can export animated wipes from XPression as image sequences.

Key concepts covered in the following tutorial:

- > Create a media wipe (.tga series) from an animated XPression graphic
- > Access the wipe in Dashboard's Media Manager
- > Create a Custom Control to play a media wipe

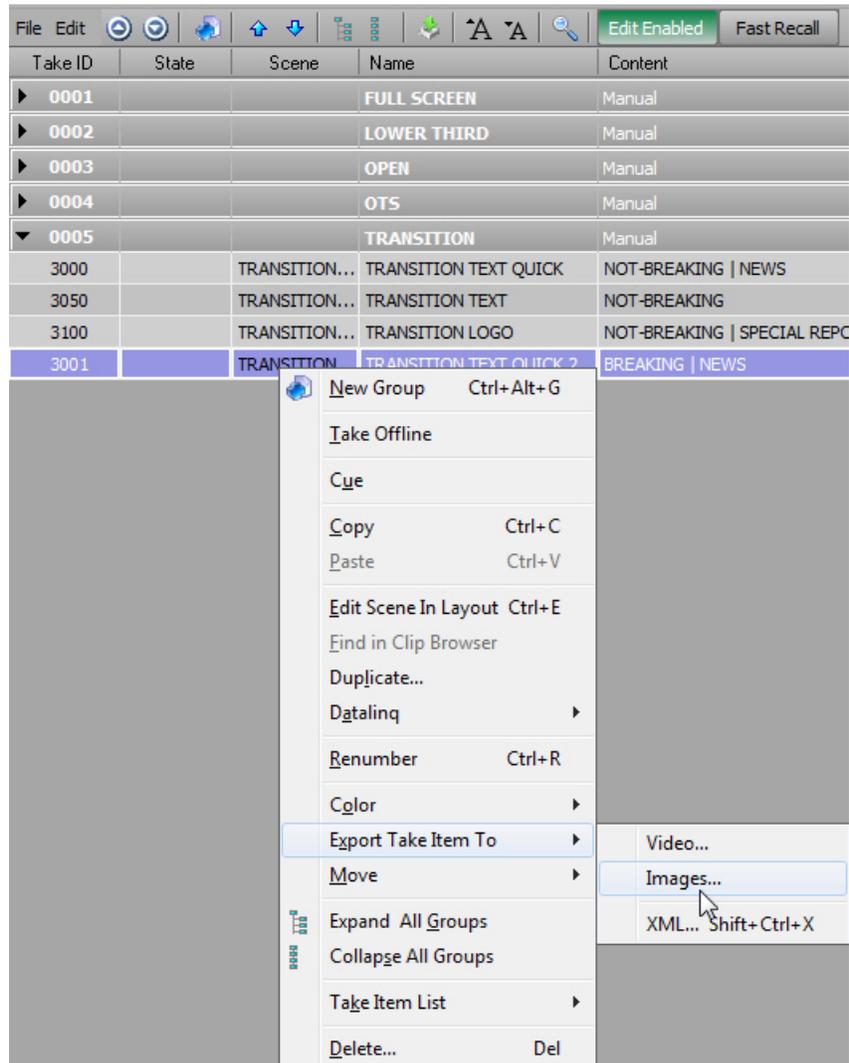
Tutorial 6 Animated Wipe with a Media Wipe Transition

Part 1 – Prepare the Media Wipe

You may have a media wipe that you can use for this tutorial already loaded on a USB drive. If not, follow the steps here to prepare one from an animated XPression graphic in the sample package on your system.

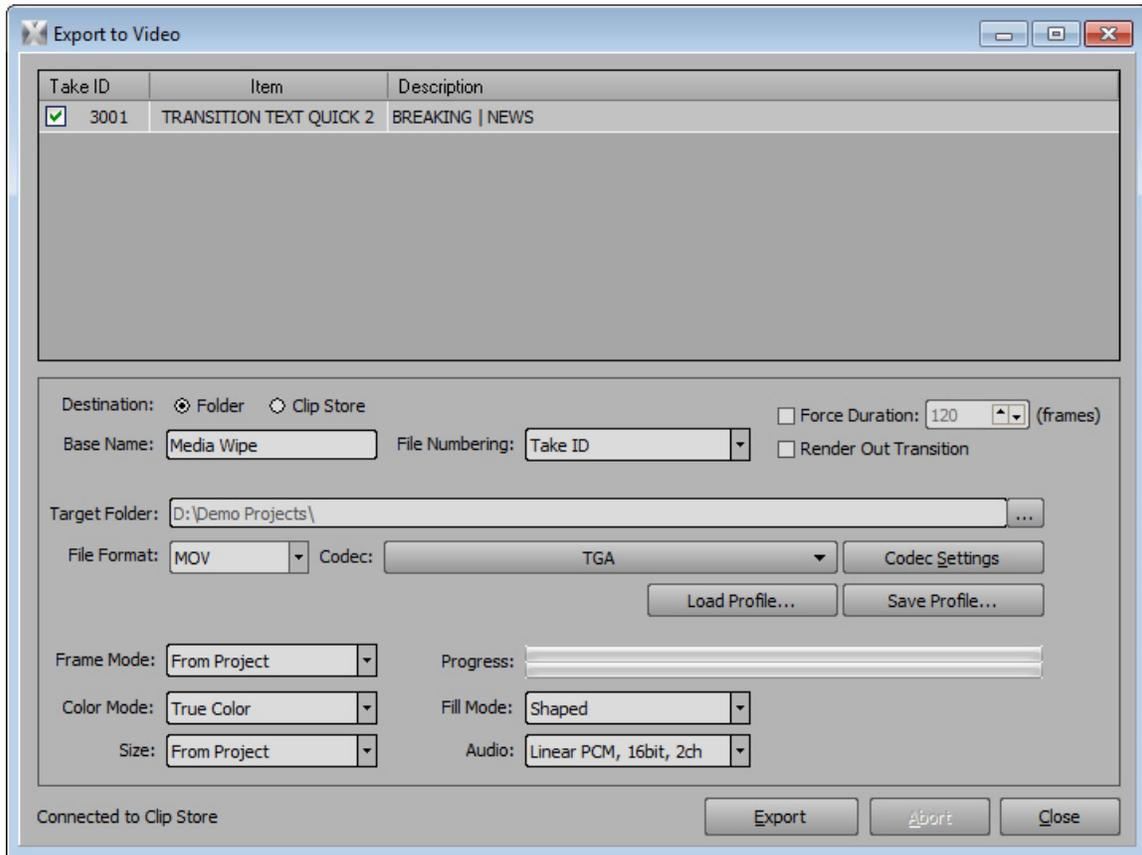
1. Open XPression.
2. Add a scene suitable as a wipe, such as Transition Text Quick, to the Sequence List. If the scene has any text or images that you want to replace, select the scene in the Sequence List and then make your changes in the Take Inspector. If you need to review this process, refer to Lesson 1, near the beginning of this manual.
3. Right-click the scene in the Sequence List.

- From the menu that appears, choose Export Take Item To>Images or Export Take Item To>Video.



- In the Export to Images or Export to Video window that appears, click the Browse button beside the Target Folder field. Locate a folder for your media. If you are creating an image series, add a sub-folder specifically for these images. Click the Folder in the Browse window and then click Select Folder. The full path appears in the Target Folder field.

6. Make selections from the File Format and Codec dropdowns to specify the type of file you want to create.



7. Check the other settings and make sure they are correct and then click Export.
8. Once the Export is complete, click Close to exit this window.
9. Locate the folder with your new .tga images and copy it to a USB drive.

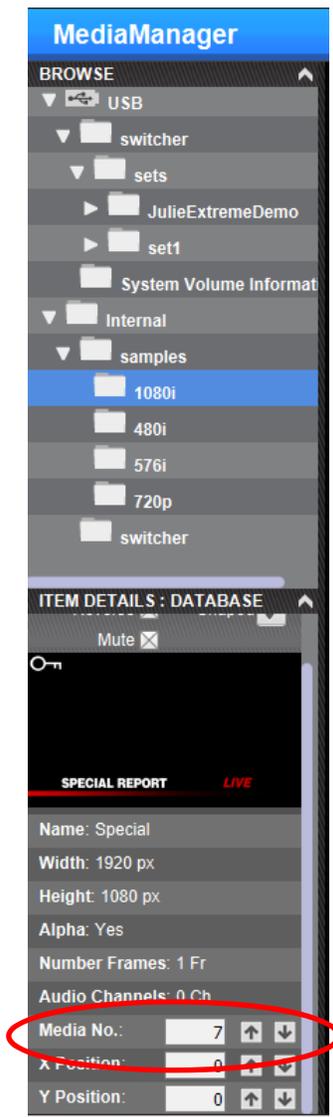
Note For convenience, you can use a third-party file transfer software, such as FileZilla to add files to the USB from another network location, without removing the USB from the Graphite frame. This workflow is explored in depth in the Carbonite Basic Training Manual.

10. Insert the USB drive into the USB port on your Graphite system.

Part 2 – Prepare to Access a Media Wipe Clip and Locate the Media Wipe Number

1. Make sure you have an appropriate animated wipe loaded on your Graphite system or on a USB inserted into the Graphite system.
2. Open DashBoard.

3. In DashBoard, to open the Media Manager, do one of these:
 - Click the Navigation Menu button at the bottom right of the screen and then select Media Manager.
 - In the Basic Tree View on the left, expand the Graphite entry and double-click Media Manager if you have not previously opened it in the current session or simply click it if you have already opened it.
4. On the top left side of the Media Manager interface, select the folder that contains your wipe. Then, click the wipe once to select it.
5. Look in the Item Details area, locate the Media Number and make a note of this number.



Part 3 – Start a New Custom Control and Enter a Command to Load the Media Wipe

1. Next access the Custom Control interface, select a bank and an empty Custom Control and then click Modify Event List. If you do not remember how to do this, refer to the basic Custom Control tutorial on page 62
2. Click the Command Category Select button.
3. Click Switcher.
4. Click Media Store.
5. Click Load.
6. Next to the MediaStore Channel label, select the channel (1-4) where you want to load the wipe. In this example, M1 is selected.
7. Next to the Location label, click Internal or USB to specify the location of the media wipe clip.
8. Click the Media Number field and enter the Media Wipe number that you located in the first part of this tutorial. In this example, the Media Number is 7.

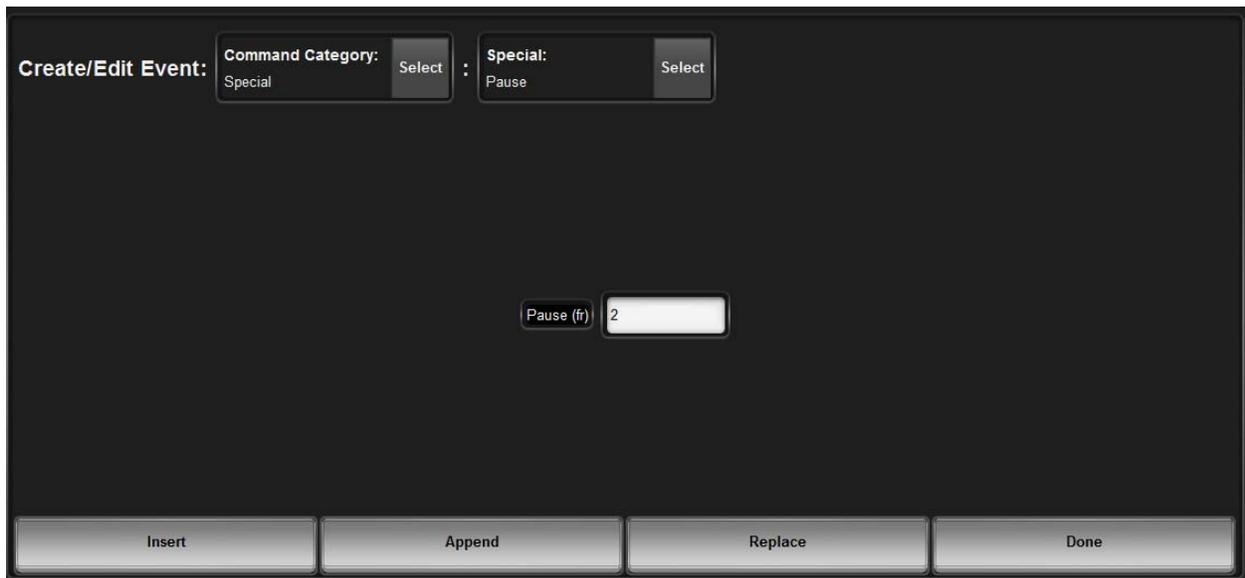
The screenshot shows a dark-themed interface titled "Create/Edit Event:". At the top, there are three dropdown menus: "Command Category:" with "Switcher" selected, "Switcher:" with "MediaStore" selected, and "MediaStore:" with "Load" selected. Below these are three rows of buttons. The first row is labeled "MediaStore Channel" and contains four buttons: "M1" (highlighted in blue), "M2", "M3", and "M4". The second row is labeled "Location" and contains two buttons: "Internal" (highlighted in blue) and "USB". The third row is labeled "Media Number" and contains a text input field with the number "7" entered.

9. Click the Insert button at the bottom of this interface. The command to load the media wipe to a media channel is inserted in the Command List near the top of the interface.

Part 4 – Add a Pause

Next, add a pause to allow the switcher to load the wipe.

1. Click the Command Category Select button.
2. Click Special.
3. Click Pause.
4. If the Pause is already set to 2 frames, then leave this setting. If not, click in the Pause field and change the value to 2 frames.

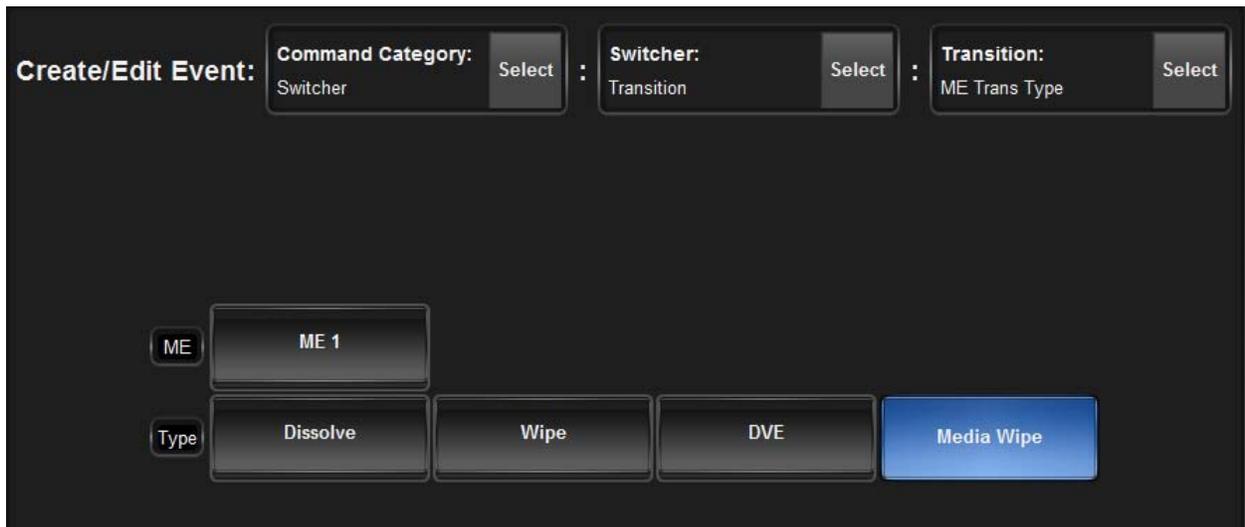


5. Confirm that the End event is selected in the Command List above and then click Insert to add the pause to the list.

Part 5 – Select the Wipe in the Transition Area

1. Click the Command Category Select button.
2. Click Switcher.
3. Click Transition.
4. Click ME Trans Type.
5. Next to the ME label, select the current Program ME, typically ME 2, where you want to run this transition.

6. Next to the Type label, select how you want the transition to happen. Choose Media Wipe.

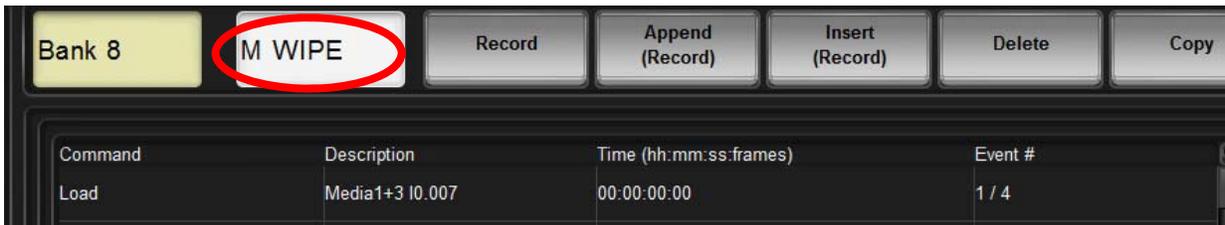


7. Confirm that the End event is selected in the Command List and then click Insert.

Part 6 – Add a Command to Play the Media Wipe

1. Click the Command Category Select button.
2. Click Switcher.
3. Click Transitions.
4. Click ME Trans Action.

5. The ME Trans Action settings appear.
 - Select the ME.
 - Set the Action to Auto Trans.
6. Confirm that the End event is selected in the Command list, and then click Insert.
7. Click Done.
8. Click the Custom Control Name button at the top of this interface and type a name for this Custom Control that indicates its function.



9. To test your new Custom Control, click the ShotBox button at the bottom left. Select the bank that has this Custom Control and click the Custom Control button with the name that you entered in the previous step.

Note *It takes some time for the Media Manager to load an animation for the first time in a session. To avoid delays during a broadcast, pre-load the animation in the Media Manager even if you plan to play it with Custom Controls. Once you have loaded it, you do not have to keep it in the Media Channel; it remains loaded in RAM, ready to be recalled.*

Tutorial 7 Chroma Key for “Green Screen” Video

About Chroma Keys

A chroma key creates transparency in all areas of an image or video that are a specified color. Any image or video behind the media assigned to a chroma key is then visible through the transparent area. A common use for this type of key is to have a presenter in front of a green screen and then apply the key, removing the color green, so that the presenter appears in front of a different background. However, a chroma key can be based on any color.

Graphite’s UltraChrome chroma key makes automatic adjustments, but some manual adjustments may be needed once the key initializes. For the best results, initialize the key first, and then identify the areas where you need to adjust the key.

For adjustments, there are two chroma key modes, Basic and Advanced. For either mode, the initial procedure is the same, but the advanced mode offers more fine-tuning options. Once we create a key, we can explore those options.

Key Concepts in this tutorial:

- > Create a chroma key with DashBoard Live Assist
- > Adjust a chroma key
- > Apply a mask to a chroma key
- > Create a Custom Control to trigger a chroma key

Tutorial 7 Create and Use a Chroma Key

Part 1 – Prepare a Source

1. In DashBoard, do one of these to open the Media Manager:

- Click the Navigation Menu Button and then choose Media Manager.

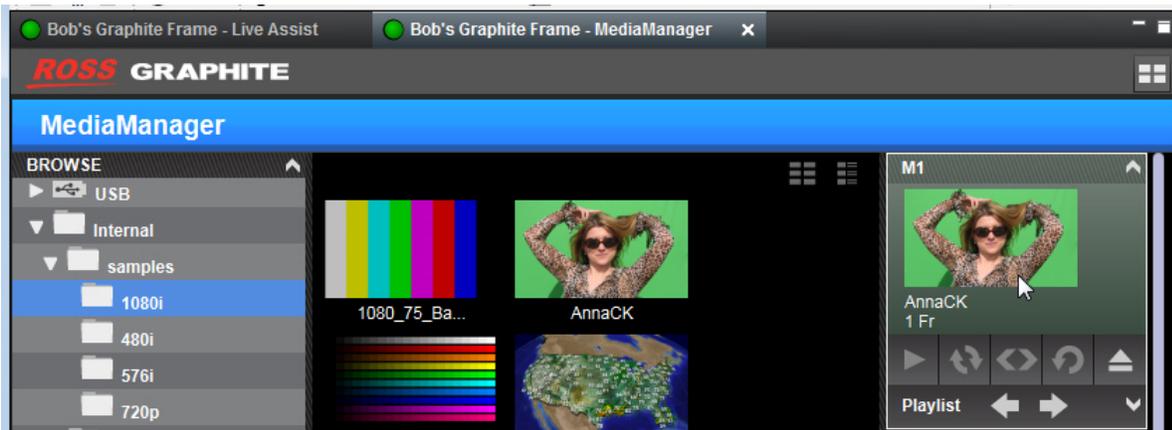


- In the Basic Tree view, expand the Graphite entry and then double-click Media Manager or click once if you have previously opened it in this session.

2. In the Media Manager, Browse tree, expand Internal>Samples and choose the sample folder suitable for your video format.



3. Drag the file Anna CK, or any other “green screen” video that you want to use to M1.



4. Look at the Item Details Pane and make a note of the Media Number.



Part 2 – Set up the Chroma Key

1. In DashBoard, do one of these to access the LiveAssist interface:
 - Click the Navigation Menu button and then choose Live Assist.



- In the Basic Tree view, expand the Graphite item. Double-click the Live Assist item in this list to initiate it if you have not used it previously in this session or just click it if it is already initialized.

- In the Live Assist interface, near the bottom left, select the ME that you want to use for this effect. In the example here, ME 1 is selected.



Note You can also use this procedure for a MiniME™. For more about MiniMEs, refer to the product documentation or Ross U training videos at rossvideo.com.

- Select the Key that you want to use. In the example here, Key 2 is selected.



- Click Key Fill button. The Key Fill Source window appears.



5. In this window, first select whether your source is a physical input, internal or an Aux Follows source. In our example, since we are using internally stored media, select Internal.



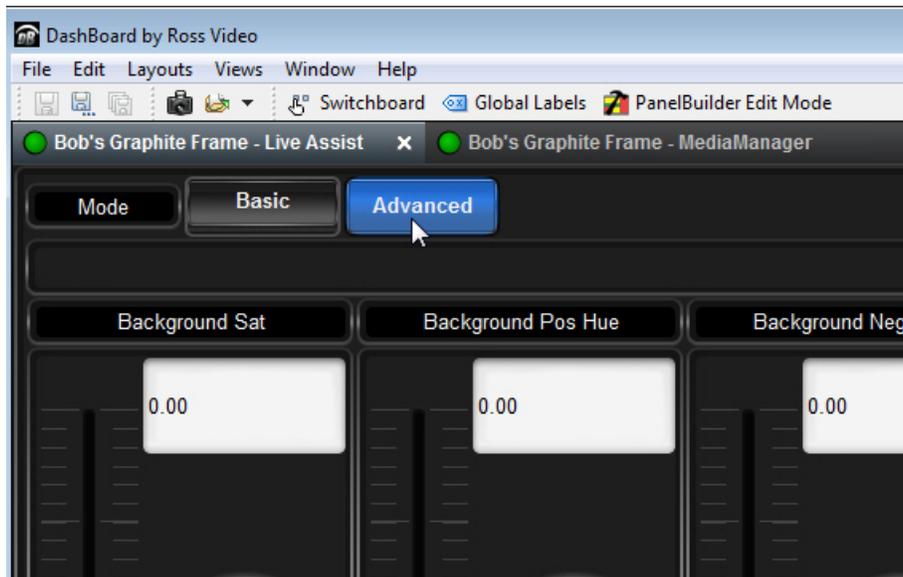
6. Select the source with our “green screen” video. In this example, M1 is selected, since we loaded the sample green screen video to Media Channel 1 in the Media Manager.



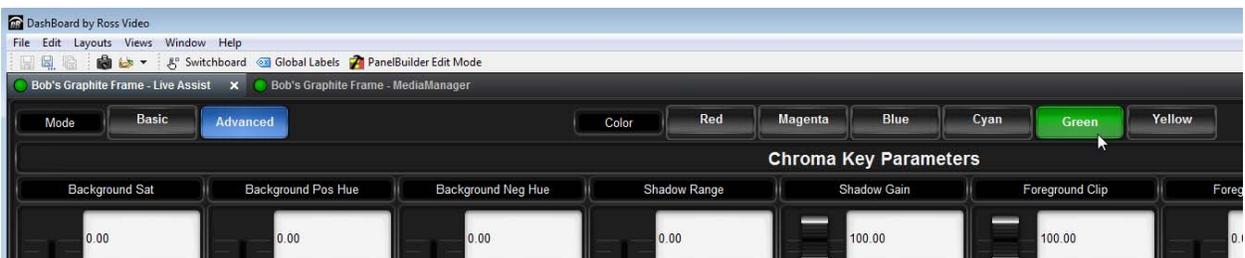
7. Next, click Chroma Key to indicate the key type.



8. Near the top left, click Advanced as the Mode setting.



9. From the Color buttons at the top, click Green since this is the color that we want to key out of the sample video.



10. Click Init to initialize the chroma key.



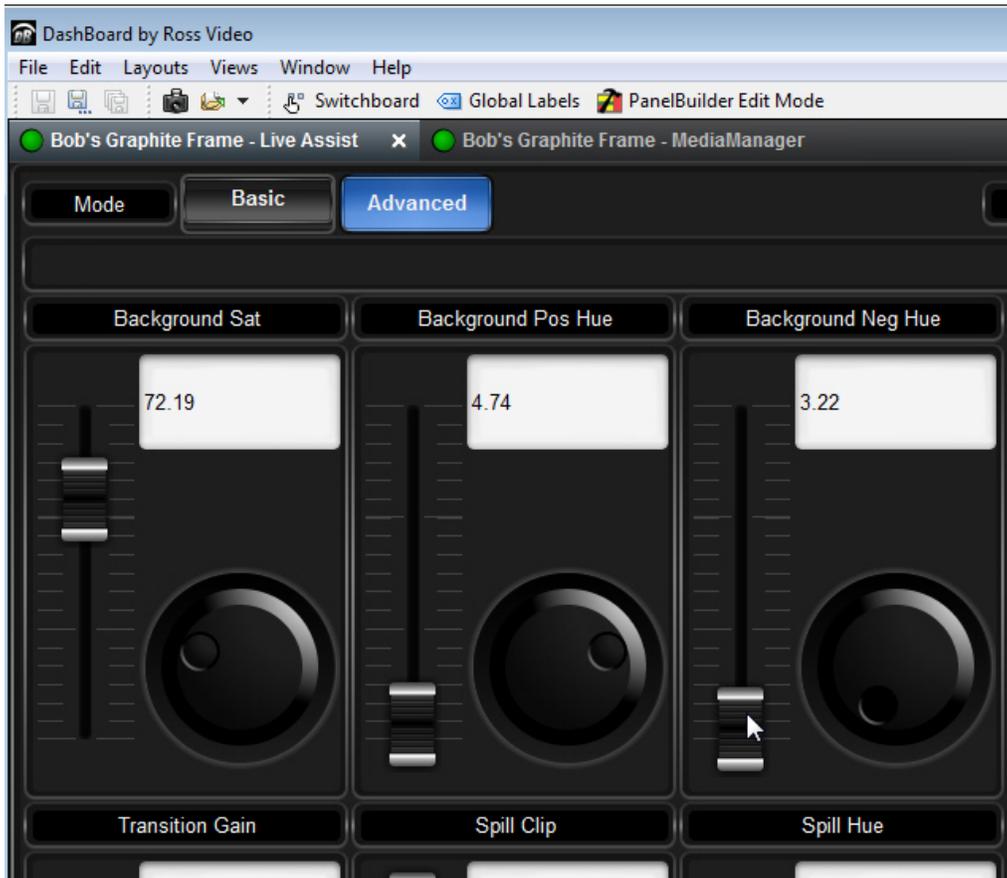
Part 2 – Set Parameters to Fine Tune the Chroma Key

Every time the key is initialized, the switcher resets all the Chroma Key parameters to their default settings. For the best appearance, manually adjust these parameters specifically for the video that you want to key.

1. Click the Additive Keying On or Off button. You can determine if you want more detail (ON) for a sharper image or less detail (OFF) to soften the edges of the chroma key and reduce “noise” resulting from certain lighting conditions or camera settings.



2. Use the Background Neg Hue slider to adjust the range of hues that are included in the Background, expanding counter-clockwise around the color wheel.



3. Use the Background Pos Hue slider to adjust the range of hues that are included in the Background, expanding clockwise around the color wheel.
4. Use the Background Sat slider to adjust the saturation range of the background color.
 - Increasing the saturation range value includes a wider range of saturation values to be included in the background.
 - Decreasing the saturation range value includes a narrower range of saturation values to be included in the background.
5. Use the Edge Softness slider to add or remove edge softening of the foreground image and alpha channel.
 - Increasing the softness value increases the amount of softness applied to the foreground edges and alpha channel.
 - Decreasing the softness value decreases the amount of softness applied to the foreground edges and alpha channel.

6. Use the Foreground Clip slider to adjust the foreground clipping.
 - Increasing the clip value removes lower-saturated colors from the Foreground image.
 - Decreasing the clip value includes lower-saturated colors in the Foreground image.
7. Use the Foreground Hue slider to select the central (base) color for the foreground.
 - Increasing the hue value moves counter-clockwise around the color wheel to select a base color.
 - Decreasing the hue value moves clockwise around the color wheel to select a base color.
8. Use the Foreground Reject slider to include or reject hues adjacent to the base color.
 - Increasing the reject value decreases the amount of adjacent hues that are included in the foreground.
 - Decreasing the reject value increases the amount of adjacent hues that are included in the foreground.
9. Use the Luminance Bkgd Luma slider to change the overall brightness of Shadow, Translucent, and Transition areas.
 - Increasing the background luminance value increases the brightness of Background, Translucent, and Transition areas.
 - Decreasing the background luminance value decreases the brightness of Background, Translucent, and Transition areas.
10. Use the Luminance Reflection slider to change the brightness of semi-transparent reflections (like reflections from glasses).
 - Increasing the reflections value increases the brightness of semi-transparent reflections.
 - Decreasing the reflections value decreases the brightness of semi-transparent reflections.

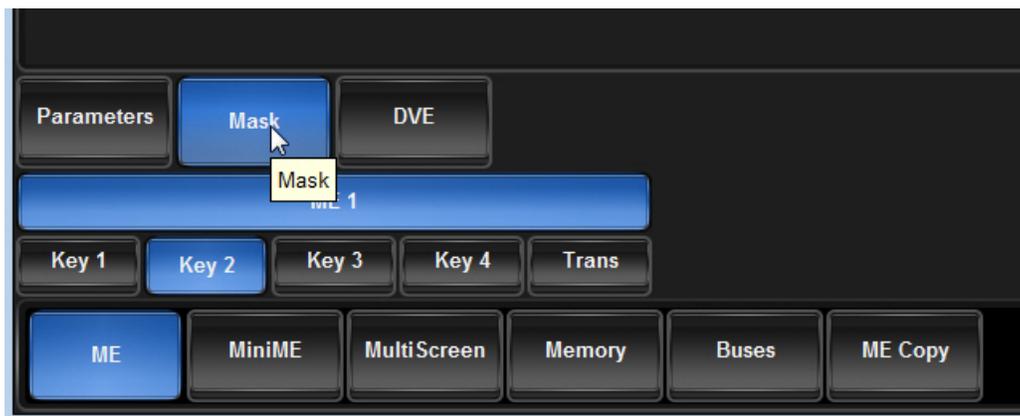
11. Use the Shadow Gain slider to adjust the shadow appearance.
 - Increasing the gain value creates darker shadows.
 - Decreasing the gain value creates lighter shadows.
12. Use the Shadow Range slider to adjust the range of the shadow colors.
 - Increasing the range value widens the shadow area by including lower-luminance background colors. The increased range comes because of colors moving from the translucent area to the shadow area.
 - Decreasing the range value narrows the shadow area by excluding high-luminance colors. These excluded colors move back into the translucent area.
13. Use the Spill Clip slider to adjust spill suppress clipping.
 - Increasing the clip value removes higher-saturated colors from spill suppress correction.
 - Decreasing the clip value includes higher-saturated colors in spill suppress correction. If your foreground image contains bright-colored areas that are suffering from background spill, decrease the clip value to have it corrected.
14. Use the Spill Hue slider to select the central, or base, color for spill suppress correction. If the color spill does not appear to be the same color as the background, use this control to define the hue that is "spilled" into the foreground.
 - Increasing the hue value moves counter-clockwise around the color wheel while selecting a base color.
 - Decreasing the hue value moves clockwise around the color wheel while selecting a base color.
15. Use the Spill Reject slider to include or reject adjacent hues to the base.
 - Increasing the reject value increases the amount of adjacent hues that are included in spill correction.
 - Decreasing the reject value decreases the amount of adjacent hues that are included in spill correction.
16. Use the Transition Gain slider to adjust the appearance of the Transition colors.
 - Increasing the gain value makes the transition area pixels more opaque.
 - Decreasing the gain value makes the transition area pixels more transparent.

17. Use the Translucency Gain slider to adjust the appearance of the translucent colors.
 - Increasing the gain value makes translucent colors appear more opaque.
 - Decreasing the gain value makes translucent colors appear more transparent.
18. Use the Translucency Range slider to adjust the range of the translucent colors.
 - Increasing the range value widens the translucent area by including more hues from the background range (the lower-end of the range is defined by the shadow range you just set).
 - Decreasing the range value narrows the translucent area by excluding hues.

Part 3 – Add a Mask to the Key

You can use a mask to reveal only a part of the chroma key video.

1. Click Mask.



2. Confirm that Pattern is selected, near the top of the interface.



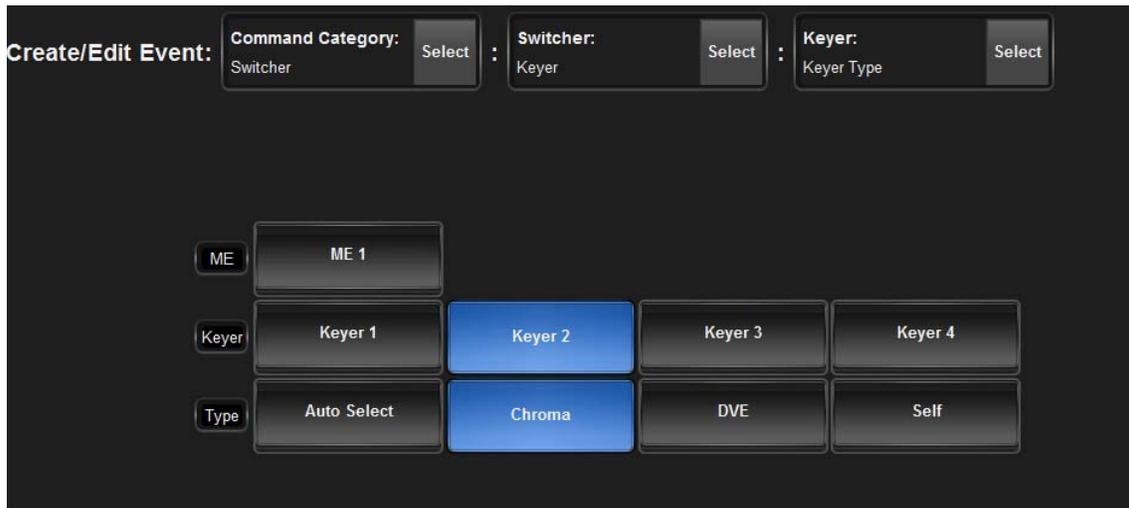
3. You can experiment with the controls to select a pattern, invert the mask so that the pattern reveals the video rather than obscures it, and modify the pattern with the various sliders.

Part 4 – Create a Custom Control

Now that you understand the steps to create a chroma key effect, you can build a Custom Control to do the same thing. Change the key that you have just built to something else and cut it off, so that after you build the Custom Control you can confirm that it really works. You can even change what is loaded to the Media channel in the Media Manager. This Custom Control will do everything.

If you have followed the tutorials from the beginning of this book, you are familiar with the steps for building Custom Controls. In this section, instead of each step detailed, you will find all the steps to build one command listed together. For example, click Command Category Select>Keyer means click the Command Category Select button and then click Keyer.

1. In DashBoard, open the Custom Control interface, choose a Bank and an empty Custom Control. Click Modify Event List.
2. Next, build a command to specify that Chroma is the keyer type. Click Command Category Select>Keyer>Keyer Type. Choose an ME, a Keyer and set type to Chroma as shown here. Click Insert.



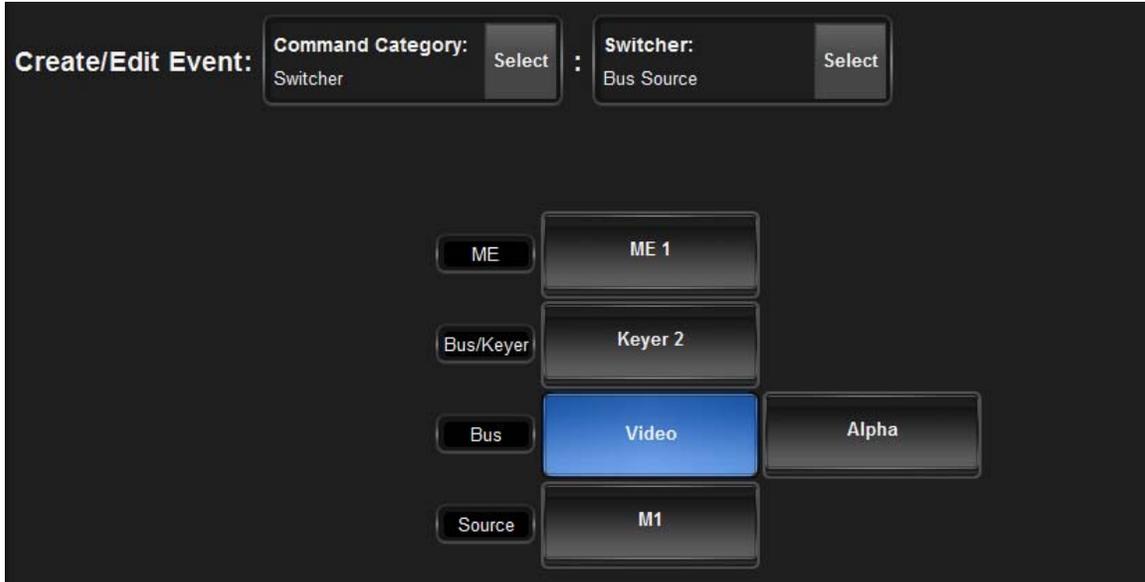
- The next command loads the video to the channel in the MediaManager. Click Command Category Select>Switcher>MediaStore>Load. Select a media channel and specify Internal if you are using the internally stored sample video. Use the same Media Number that you located in Part 1 of this exercise. Confirm that the End event is selected in the Command List and then click Insert.

The screenshot shows the 'Create/Edit Event' interface for the 'Load' command. At the top, there are three dropdown menus: 'Command Category' set to 'Switcher', 'Switcher' set to 'MediaStore', and 'MediaStore' set to 'Load'. Below these are three rows of buttons. The first row is 'MediaStore Channel' with buttons for 'M1', 'M2', 'M3', and 'M4'. The 'M1' button is highlighted in blue. The second row is 'Location' with buttons for 'Internal' and 'USB'. The 'Internal' button is highlighted in blue. The third row is 'Media Number' with a text input field containing the number '2'.

- The next command specifies the color to key out. Click Command Category Select>Switcher>Keyer>Chroma Keyer Color. Specify the ME, the Keyer choose Green for the Color. Confirm that the End event is selected in the Command List and then click Insert.

The screenshot shows the 'Create/Edit Event' interface for the 'Chroma Keyer Color' command. At the top, there are three dropdown menus: 'Command Category' set to 'Switcher', 'Switcher' set to 'Keyer', and 'Keyer' set to 'Chroma Keyer Color'. Below these are three rows of buttons. The first row is 'ME' with a button for 'ME 1'. The second row is 'Keyer' with buttons for 'Keyer 1', 'Keyer 2', 'Keyer 3', and 'Keyer 4'. The 'Keyer 2' button is highlighted in blue. The third row is 'Color' with a button for 'Green'.

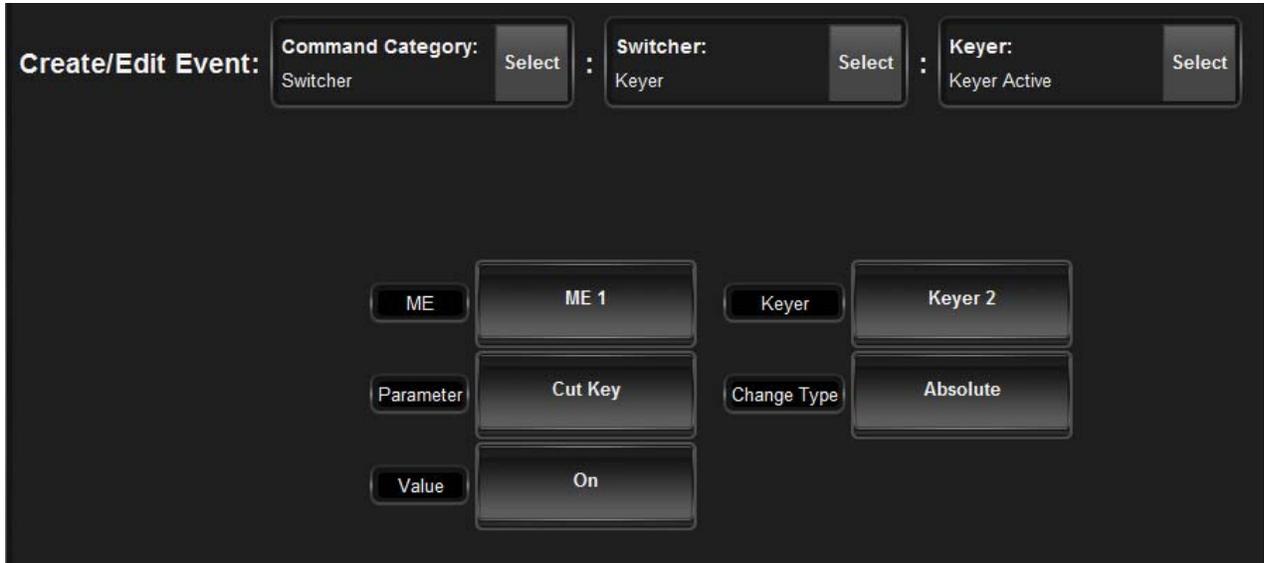
5. Now, we need a command to specify that the video loaded in the Media Manager is the source for this keyer. Click Command Category Select>Switcher>Bus Source. Specify the ME, the keyer, choose Video as the Bus and for source select the same media channel that you specified in the Load command, above. Confirm that the End event is selected in the Command List and then click Insert.



6. Remember that when you built a chroma key before, you had to click Init to initialize the chroma key? Let's build a command to do that in this Custom Control. Click Command Category Select>Switcher>Keyer>Chroma Key Init. Specify the ME and the Keyer. Confirm that the End event is selected in the Command List and then click Insert.



- Finally, you need a command to cut the key on. Click Command Category Select>Switcher>Keyer>Keyer Active. Specify the ME and the Keyer. Set Parameter to Cut Key, Change Type to Absolute and Value to On. Confirm that the End event is selected in the Command List and then click Insert.



- Click Done.



- Remember to name the Custom Control.



- Click the ShotBox button. Locate your new Custom Control and click to play it.

Tutorial 8 Custom Controls for Audio

About Audio and Custom Controls

Lesson 3 in this book is an overview of audio mixing with RAVE. Various tutorials familiarize you with DashBoard's Custom Controls. In addition to controlling graphics and mixer functions via Custom Controls, you can also control audio mixing. You can use Custom Controls for:

- Fader level
- balance/pan
- aux sends
- solo/mute/PFL
- Gain, and -20dB Pad settings
- Fader visibility and position in the user interface

Key tasks covered in this tutorial include:

- > Set a Fader Level
- > Mute or Unmute
- > Clear Pre-fade listen
- > Clear Solo

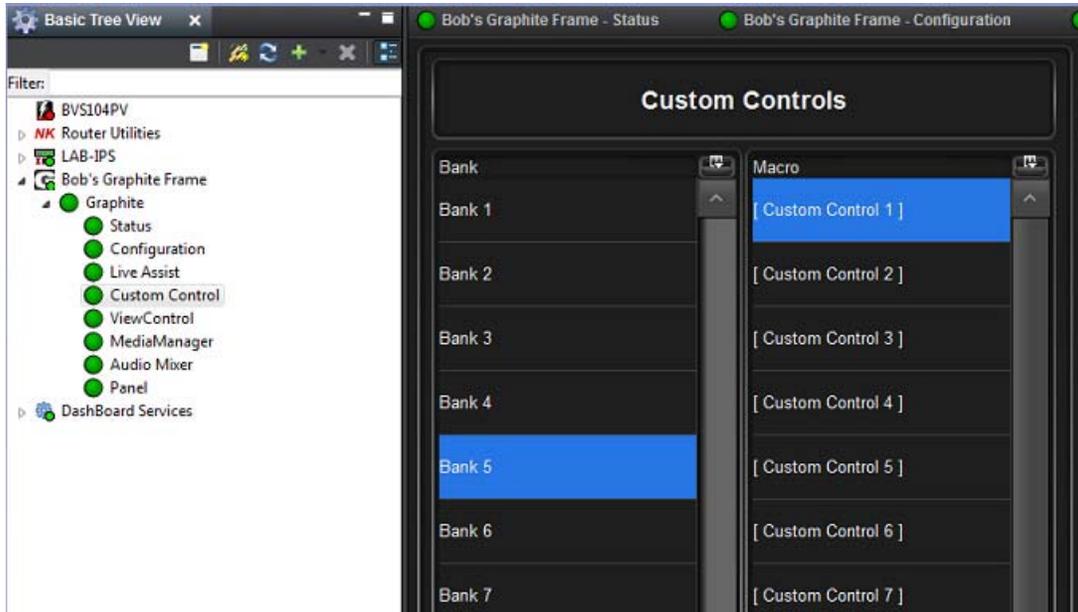
Tutorial 8 Custom Controls for Audio

Part 1 - Set a Fader Level to Bring Audio In:

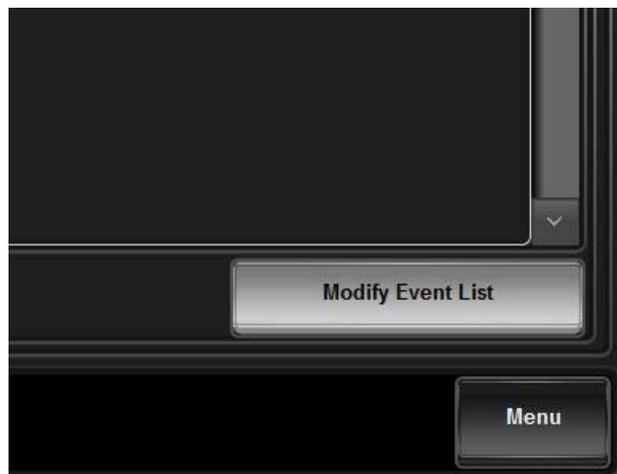
This Custom Control sets the volume for a specified audio source to a pre-set level in a specified output mix.

1. Access DashBoard. In the Basic Tree view, expand Graphite and double-click Custom Control.
2. In the Custom Control interface, click the Editor button at the bottom left to open the Custom Control Editor.

3. Select a bank from the left column. Try to choose a bank with none of its Custom Controls in use so that you can put all the audio controls in the same bank. From the right column, choose the first unused Custom Control. In the example here, Bank 5 and Custom Control 1 are selected.

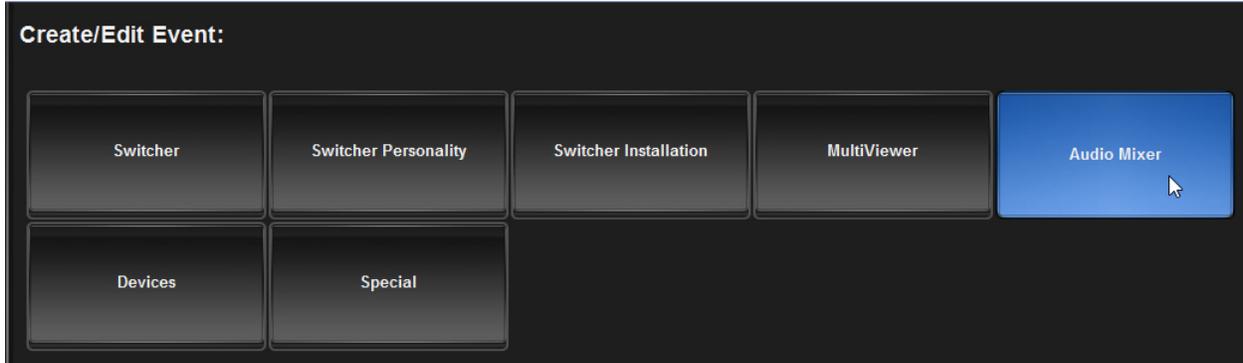


4. Click the Modify Event List button at the bottom right. If you do not see this button, you may need to click Done first to exit from a previous configuration.

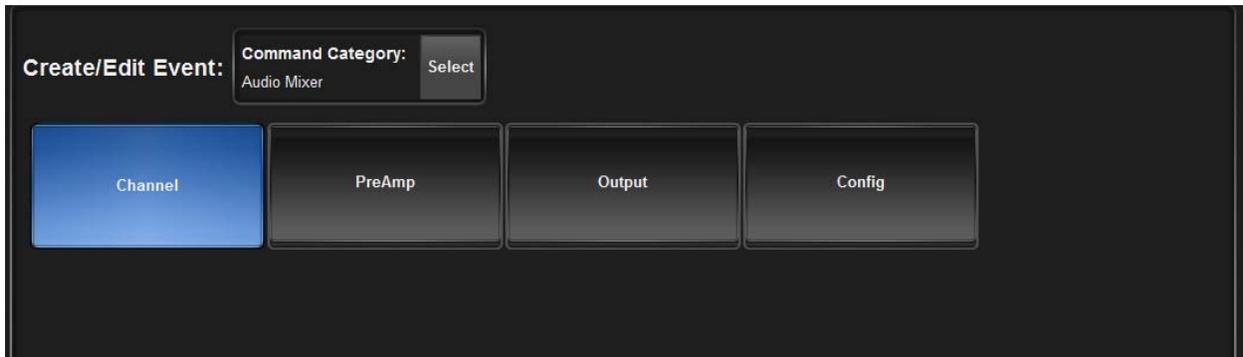


The Create/Edit Event section offers you the controls to configure what you want to affect and specify details. In this Custom Control, we want to affect the RAVE Audio Mixer, and we need to specify the channel and indicate that we are controlling the volume.

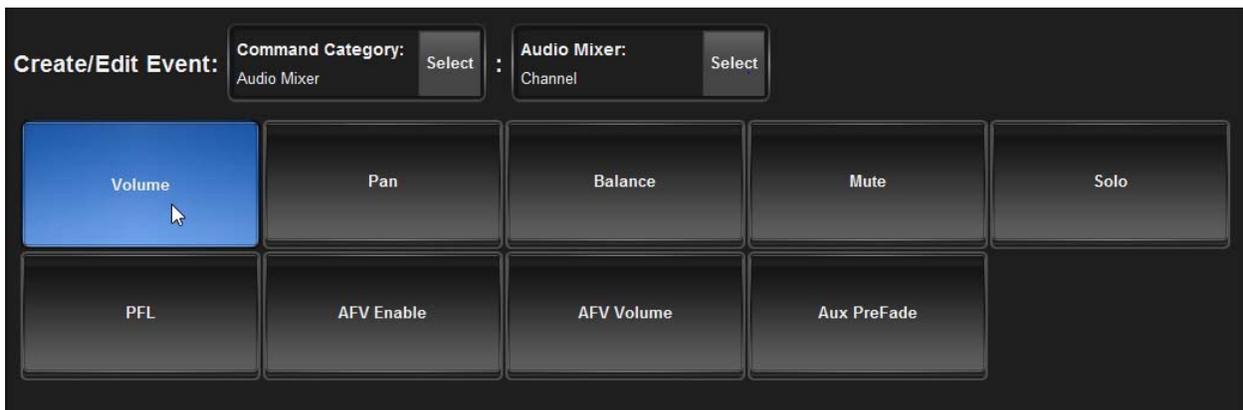
5. In the Create/Edit Event section, select Audio Mixer.



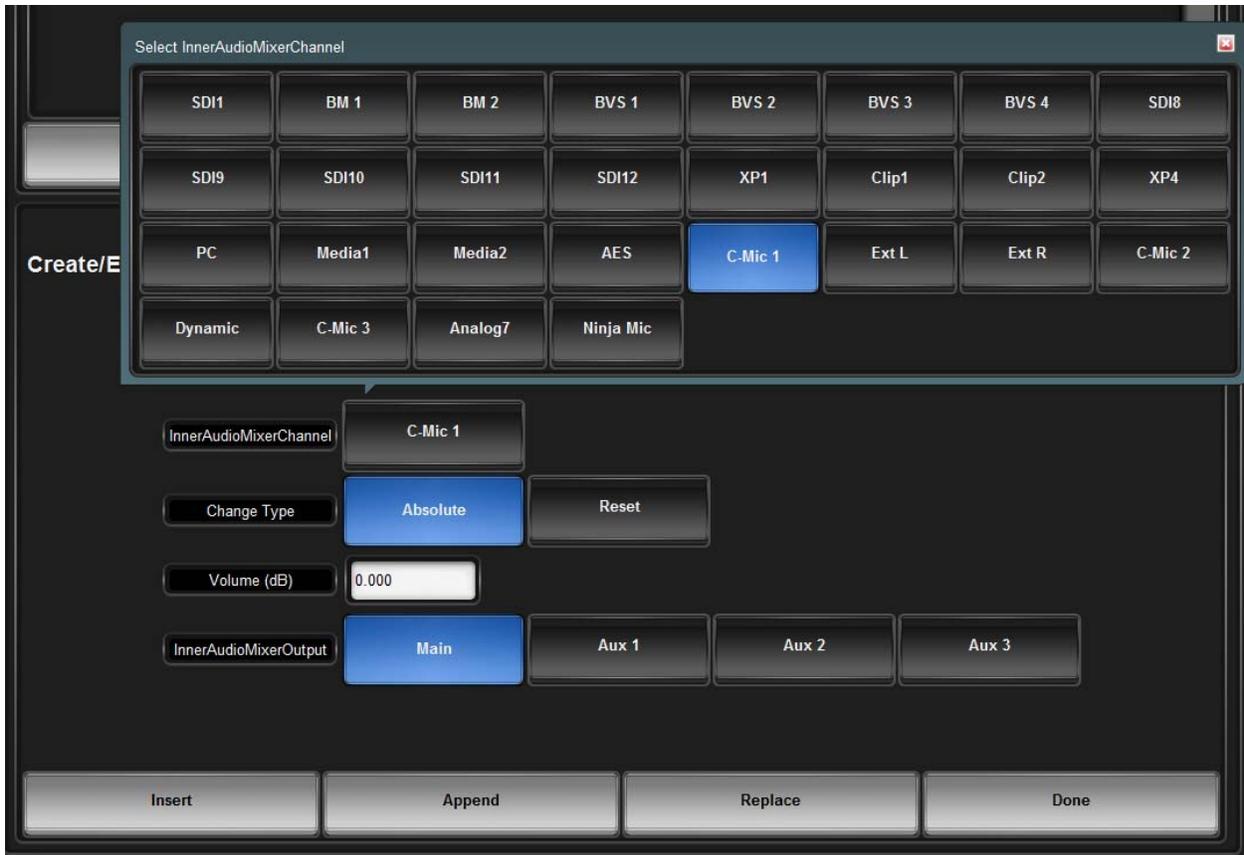
6. Select Channel.



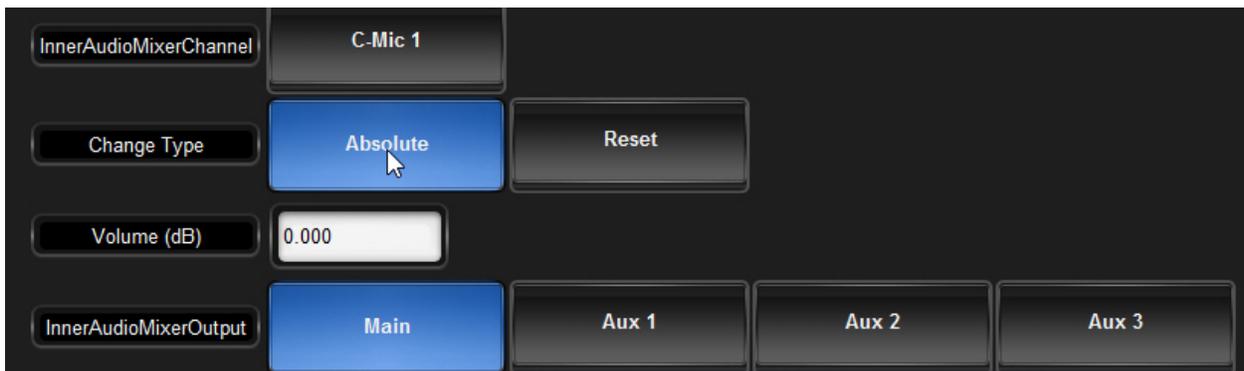
7. Select Volume.



- To select the audio channel you want to affect, click the button labeled Inner Audio Mixer Channel. The Select Inner Audio Mixer Channel dialog appears. You should see buttons labeled for all your audio input sources. Since these are specific to your facility, they may be different from the ones shown here. In the example shown here, we selected C-Mic 1.



- Set the Change type to Absolute.



Note Absolute means that the volume is to adopt a specific value. Reset means that the volume it to be set at the lowest level, -Infinity.

- To set the fader volume, click in the Volume field. A value keypad appears. Enter a decibel value and then click ENTR.

Note A value of 0 does not mean there is no volume. A value of 0 indicates unity gain (typically the nominal volume level) meaning that volume of the audio has not been changed from the source. To bring the fader all the way down, a value of -128 would be entered here. In this context, 128 equals infinity.

For this example, let's set the fader to -3dB by entering -3 in the Volume field.

- Finally, select a button next to Inner Audio Mixer Output to apply these settings to a specified output mix. You can select Main, Aux1, Aux2, or Aux3. For our example, we'll select Main. The settings only affect the specified output. For example, if you apply them to Main, the volume in the Aux outputs remains unchanged when this Custom Control is triggered.



12. Click Insert to insert the command into the Custom Control. The command appears in the Command list near the top, above the blue End command.

The screenshot displays a software interface for managing audio events. At the top, there are buttons for 'Record', 'Append (Record)', 'Insert (Record)', 'Delete', and 'Copy'. Below these is a table with the following data:

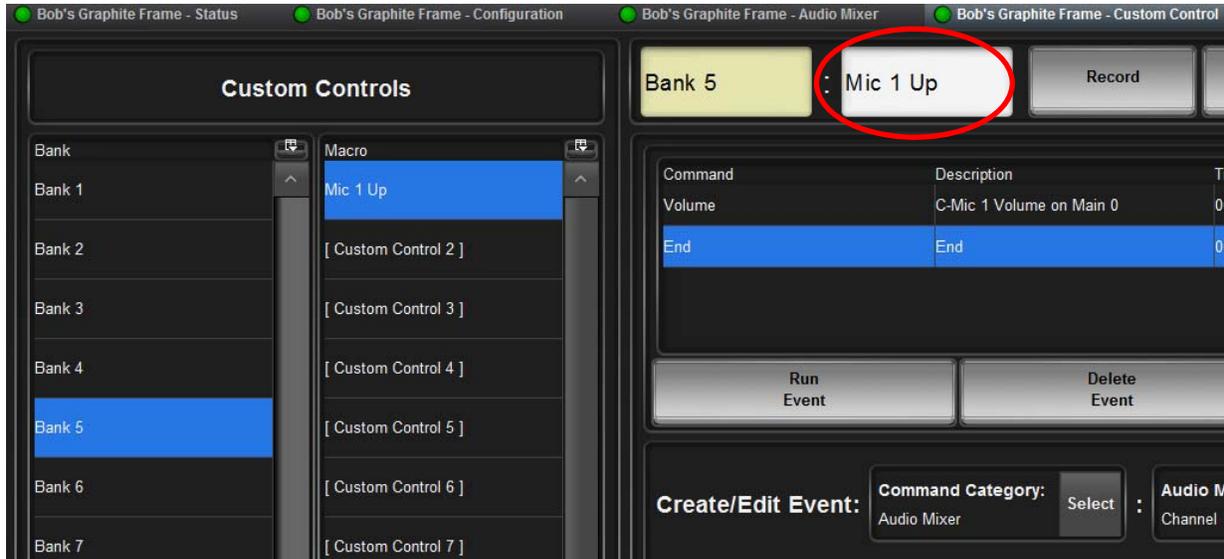
Command	Description	Time (hh:mm:ss:frames)	Event #
Volume	C-Mic 1 Volume on Main 0	00:00:00:00	1 / 2
End	End	00:00:00:00	2 / 2

Below the table are buttons for 'Run Event', 'Delete Event', and 'Edit Event'. The 'Create/Edit Event' section includes:

- Command Category: Audio Mixer (Select)
- Audio Mixer: Channel (Select)
- Channel: Volume (Select)
- InnerAudioMixerChannel: C-Mic 1
- Change Type: Absolute (selected), Reset
- Volume (dB): -3.000
- InnerAudioMixerOutput: Main (selected), Aux 1, Aux 2, Aux 3

At the bottom, there are buttons for 'Insert', 'Append', 'Replace', and 'Done'. A white arrow points to the 'Insert' button. A 'Navigation Menu' button is located in the bottom right corner.

- To rename the Custom Control, select the placeholder text on the button next to the Bank number and type a new name. Choose a name that is not more than eight characters and that indicates the purpose of this Custom Control. In the example shown here, the name is Mic 1 Up, to indicate that this Custom Control brings up Mic 1.



- Click Done at the bottom right.
- At the bottom of the interface, click Shot Box. Notice that the Shot Box for this Custom Control Bank now offers a button to bring up Mic 1 in our example here, or the source you specified in your own Custom Control.

Part 2 - Take an Audio Source Out

The previous Custom Control brought a source in to a mix at a pre-set decibel level. This control takes the same source out of the mix by assigning a decibel level of -128. Most of the steps here are the same as in the previous part of this tutorial except that you must pick a new Custom Control, choose Reset instead of Absolute for the Change type and enter a volume of -128 Db.

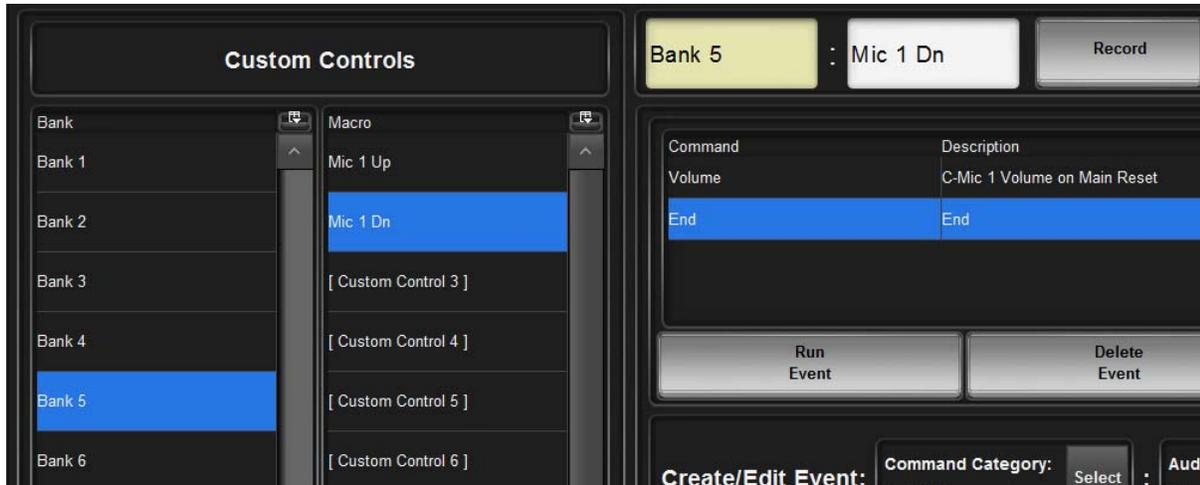
- In the Custom Control interface, click the Editor button at the bottom left to return to the Custom Control Editor.

2. Continue to use the same bank and choose a new unused Custom Control. If you began this tutorial with a completely unused Bank, choose Custom Control 2 for this control.
3. Click the Modify Event List button at the bottom right. If you do not see this button, you may need to click Done first to exit from a previous configuration.
4. In the Create/Edit Event section, select Audio Mixer.
5. Select Channel.
6. Select Volume.
7. Click the button labeled Inner Audio Mixer Channel. The Select Inner Audio Mixer Channel dialog appears. Choose the same input source as before, in this example C - Mic 1.



8. Set the Change Type to Reset.
9. Notice that now the Volume Value field is not present. You do not need to set a volume because Reset indicates -Infinity, as low as the volume can go.
10. Finally, select a button next to Inner Audio Mixer Output to apply these settings to a specified output mix. You can select Main, Aux1, Aux2, or Aux3. Let's select Main, just as before.
11. Click Insert to insert the command into the Custom Control. The command appears in the Command list near the top, above the blue End command.

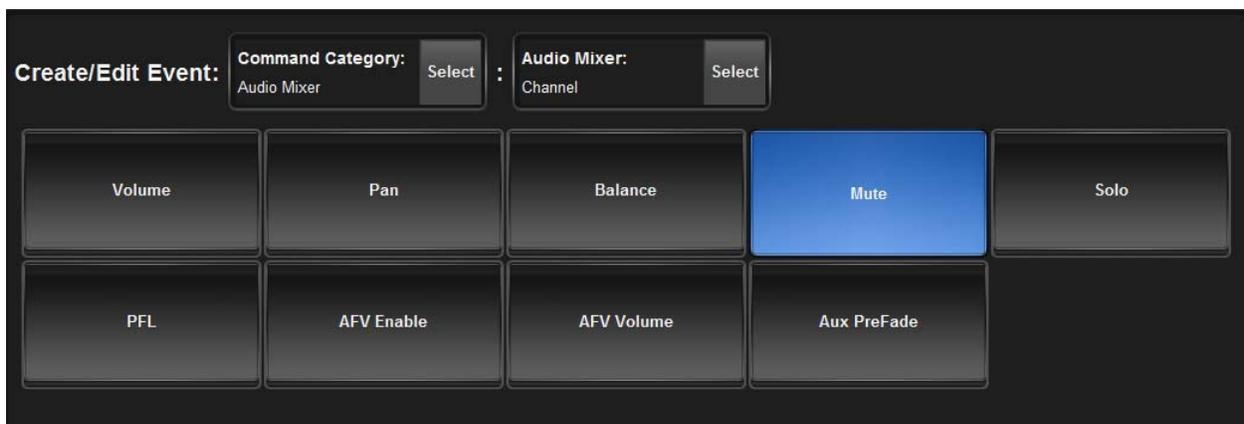
- To rename the Custom Control, select the placeholder text on the button next to the Bank number and type a new name. Choose a name that is not more than eight characters and that indicates the purpose of this Custom Control. In the example shown here, the name is Mic 1 Dwn, to indicate that this Custom Control brings Mic 1 down.



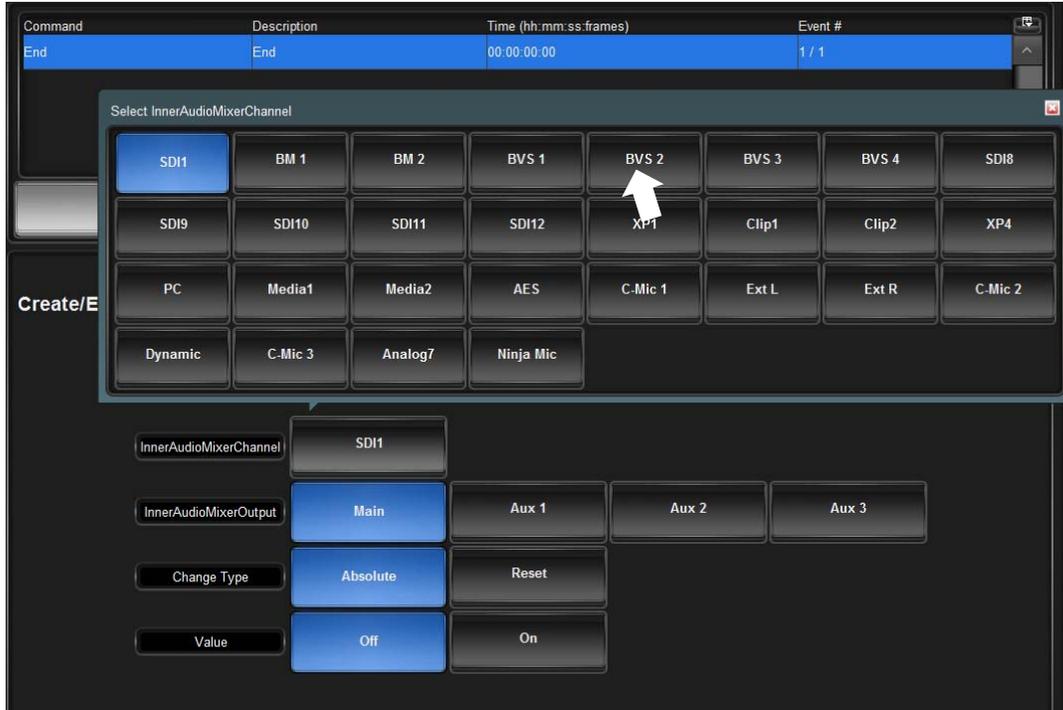
Part 3 – Mute or Unmute All

These Custom Controls mute or unmute all sources in a specified output.

- Continue working in Dashboard's Custom Controls interface. Pick a new Custom Control.
- If the Create/Edit Event area is not present, click the Modify Event List button.
- In the Create/Edit Event section, select Audio Mixer.
- Select Channel.
- Select Mute.



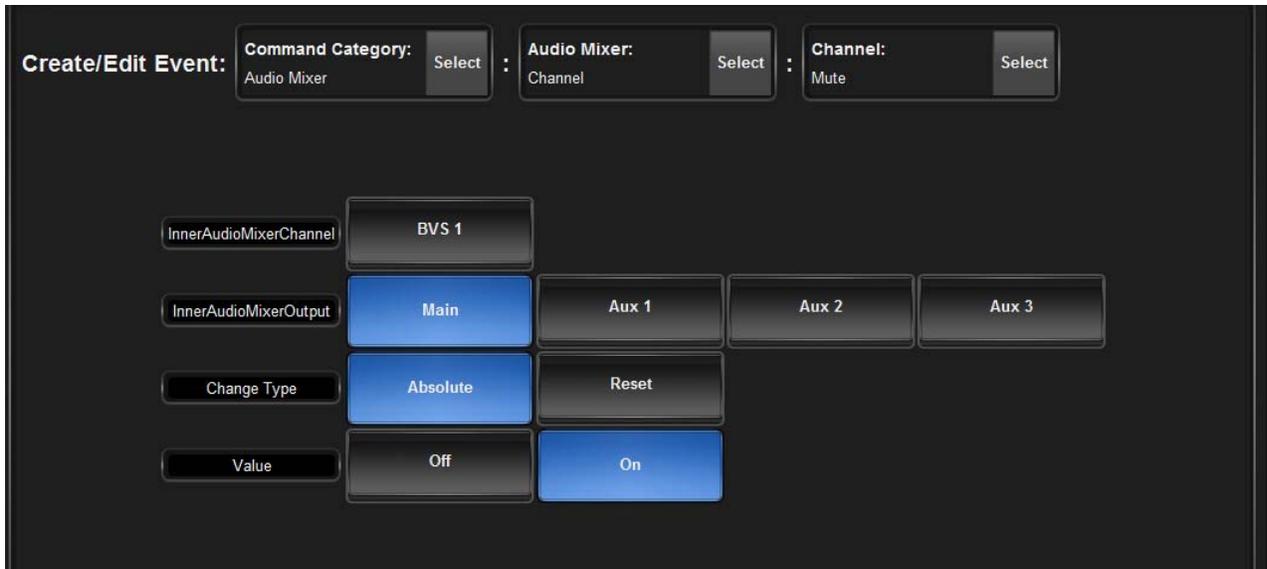
- To select the audio output channel that you want to affect with this Custom Control, click the Inner Audio Mixer Channel button. The Select Inner Audio Mixer Channel dialog appears. Click the channel that you want to mute. By default, the first source is selected as shown here. Instead of SDI 1, we select BVS 1, so in the next image, BVS1 appears on this button.



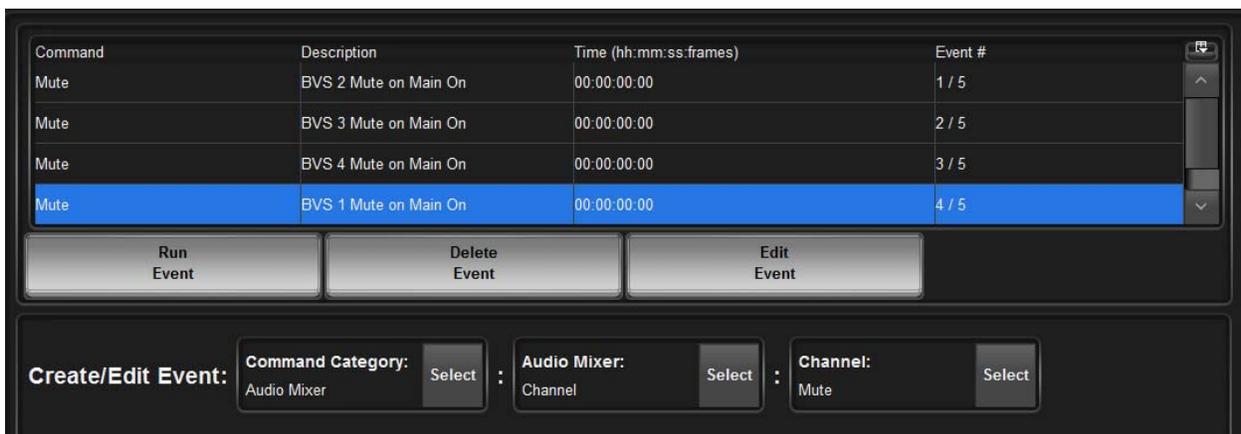
- To specify where the Mute is applied, select an output mix from the Inner Audio Mixer Output buttons. In our example, Main is selected.



8. Select Absolute as the Change Type.
9. To specify whether you are muting or unmuting the specified output mix, select On or Off. In this example, choose On.



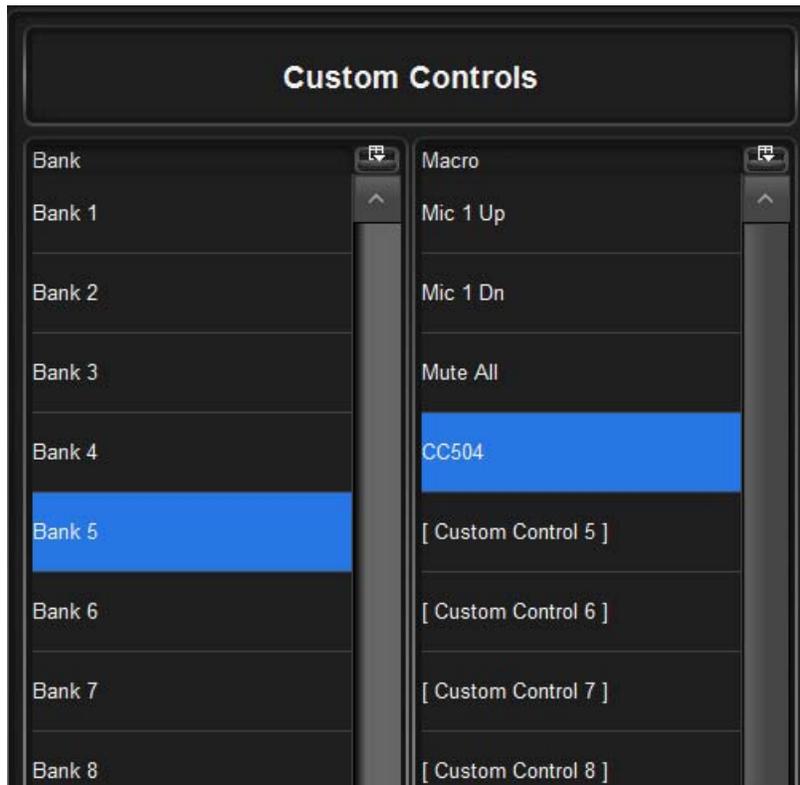
10. Click Insert to insert the command into the Custom Control.
11. Because we are creating a Mute All Custom Control, we need additional commands to mute the remaining active audio channels. Click the Inner Audio Mixer Channel button again to open the Select Inner Audio Mixer Channel dialog. Select a different active audio channel. Leave all your other settings as they are. Click Insert.
12. Repeat Step 11 for each active audio channel. Notice that the Command List near the top of the interface now has a Mute command for each audio channel.



13. Rename the Custom Control by entering Mute All in the Custom Control name field at the top of the interface.

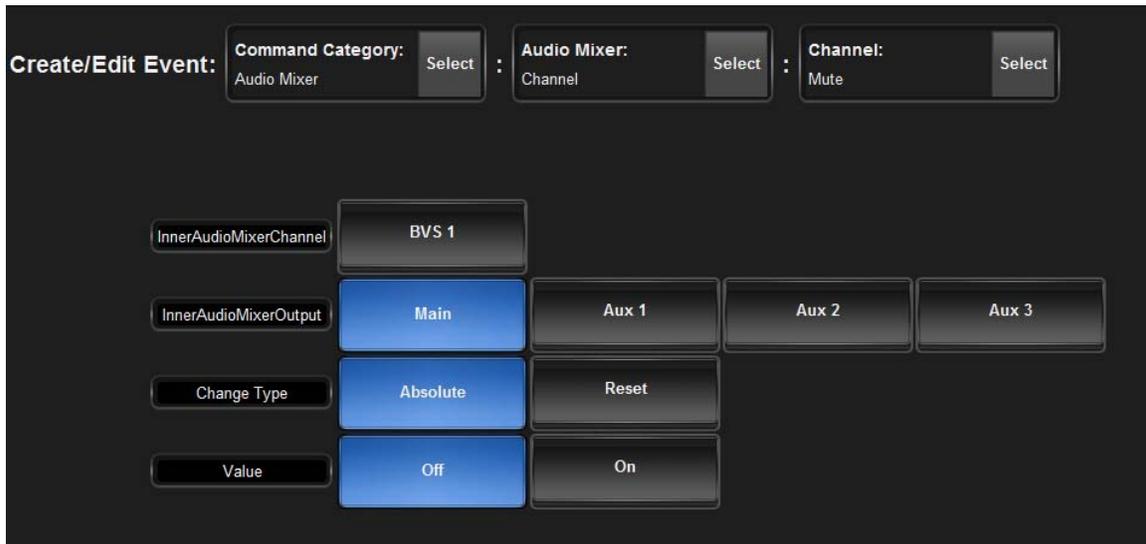


14. Click Done at bottom right.
15. Select a new, unused Custom Control to create an Unmute All Custom Control.



16. Repeat Steps 3 through 14, except:

- In Step 9, select Off instead of On



- In Step 13 name the Custom Control Unmute All.

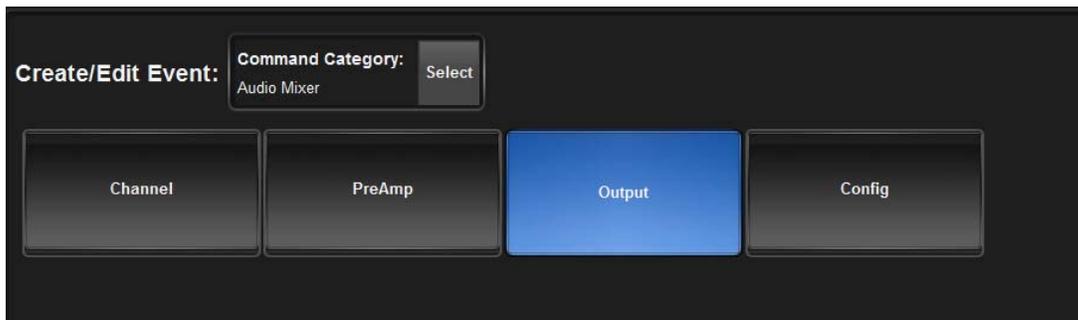
Part 4 - Clear Pre-Fader Listen

Pre-Fader Listen (PFL) is a monitoring mode that allows the audio mixer operator to audition the audio of a source in the Monitor mix as it is before fading. Thus, even if a source's fader is set to -Infinity in the mix, choosing PFL sends that audio to the Monitor mix in its pre-fader condition. The operator can hear it even if it is not audible in the output. One or several channels can have PFL enabled at once.

Typically, as an operator prepares for a program, he may enable PFL for individual channels at various times as he adjusts each channel. But, once it is time for the program to begin, the operator wants to clear the PFL setting from all channels. A single Clear PFL command disables PFL for all channels simultaneously.

1. Continue working in Dashboard's Custom Controls interface.
2. Click the Editor button at bottom left to open the Custom Control Editor if it is not already open.
3. Select a bank, preferably the same bank that has your other audio Custom Controls. Select an empty Custom Control.
4. Click Modify Event List at the bottom right if the Create/Edit Event controls are not present.
5. In the Create/Edit Event section select Audio Mixer.

6. Select Output.

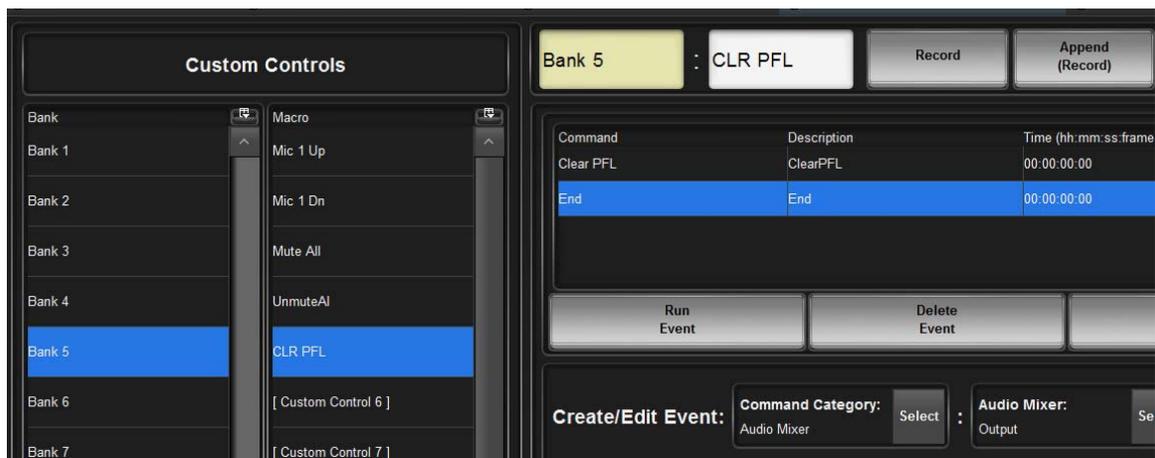


7. Select Clear PFL.



8. Click Insert to insert the command into the Custom Control.

9. In the Custom Control Name field at the top, enter Clear PFL



10. Click Done at bottom right.

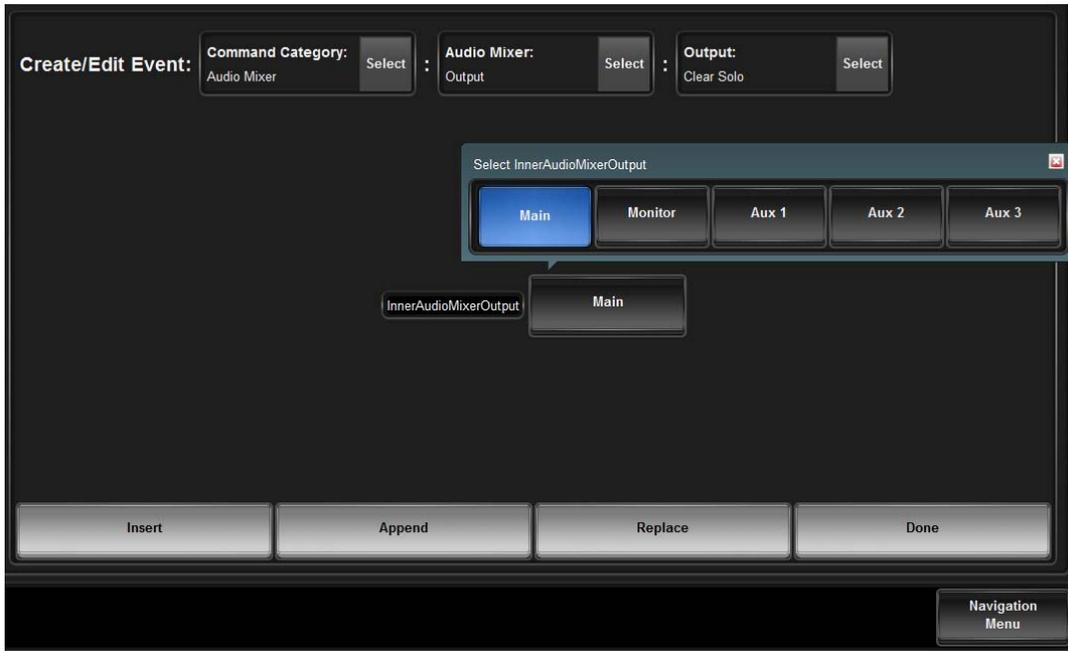
Part 5 - Clear Solo:

Solo is useful to isolate a single channel in a mix. When you solo a channel, all other channels are muted, as opposed to PFL where the other channels are not muted and the PFL signal is monitored through the Monitor mix. However, like PFL, this is a tool that the audio operator may enable for one or more channels during preparation, but needs to disable for all channels before a program begins.

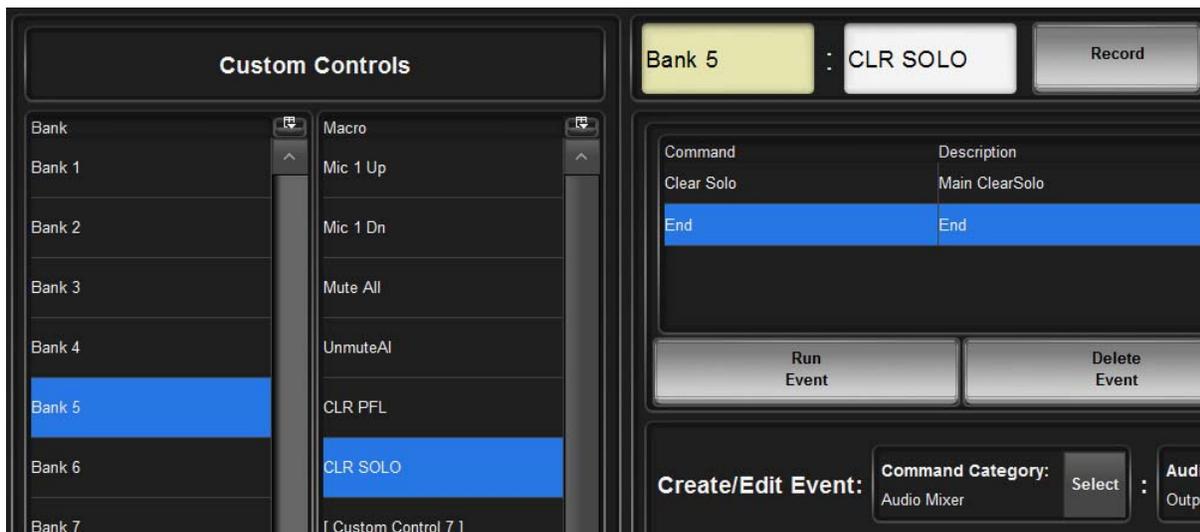
1. Continue working in Dashboard's Custom Controls interface.
2. Click the Editor button at the bottom left to open the Custom Control Editor if it is not already open.
3. Select a bank, preferably the same bank that has your other audio Custom Controls. Select an empty Custom Control.
4. Click Modify Event List at the bottom right if you do not see the Create/Edit Event area.
5. In the Create/Edit Event section select Audio Mixer.
6. Select Output.
7. Select Clear Solo.



- Click the Inner Audio Mixer Output button. From the selection dialog that appears, choose the output where you want to clear Solo settings. In the example shown here, we clear Solo in the Main output.



- Click Insert to insert the command into the Custom Control.
- In the Custom Control Name Field at the top of the interface, type CLR SOLO.



- Click Done at the bottom right of the interface.

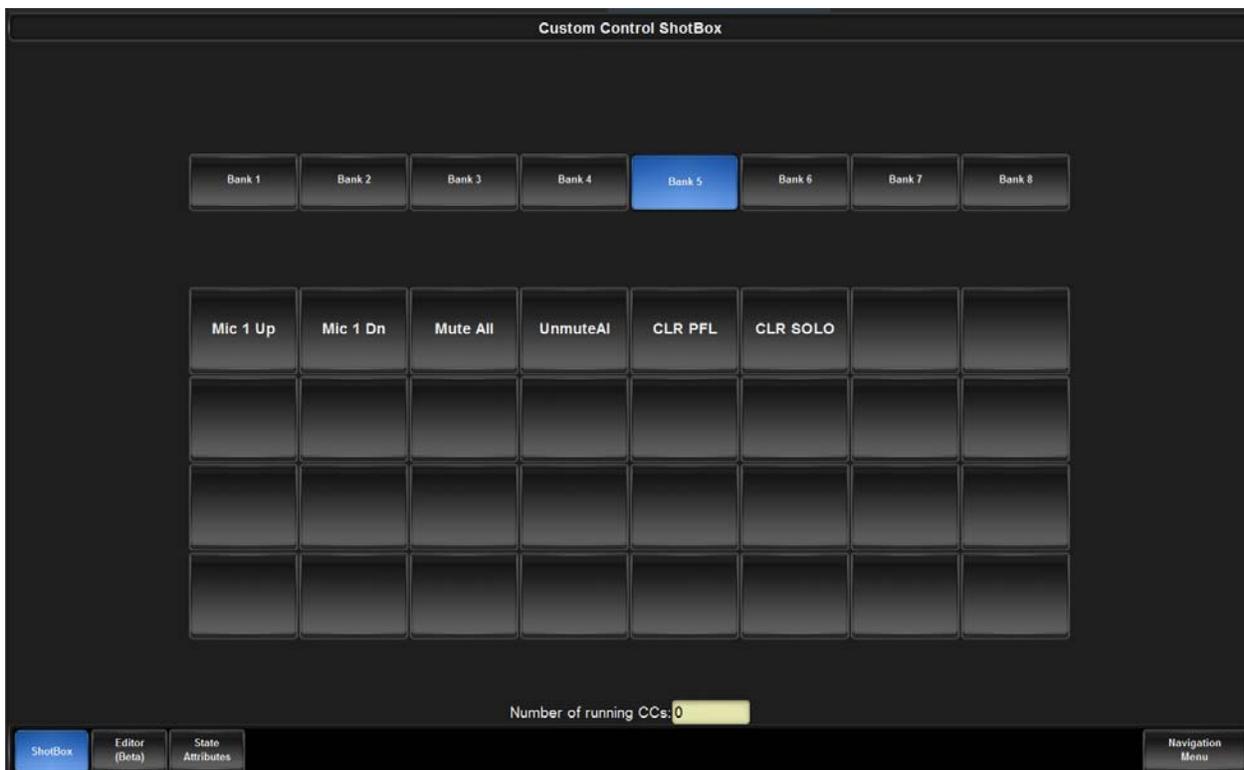
Part 6 – Use Your Audio Controls

Now you have all your Custom Controls for audio in one convenient place.

1. Click the Shot Box button, near the bottom of the DashBoard Custom Control interface.



2. The Shot Box should open to the Bank with your audio controls, since you have been working in this bank. If not, select the Bank from the top row of buttons. Now with a single click, you can complete common audio mixer tasks.



Complex Audio Controls

To streamline your workflow, you can create Custom Controls for other audio tasks that you perform on a regular basis. By now, you probably understand that any Custom Control may include one, several or many commands. Also, you can create memories in DashBoard's Panel application to control audio.

Tutorial 9 Show Open Sequence

About Creating and Running a Show Open Sequence

Typically, at the beginning of a show, several events occur quickly, but in a predictable sequence that does not change from day to day. You can take advantage of the predictable sequence to ease the pressure of performing the events rapidly by creating a Custom Control.

Similar situations include a throw to break or an end-of-show sequence. Custom Controls are useful for any of these.

In this example, create a playlist in the XPression Sequence interface that includes graphics and server clips. Then, create a Custom Control to:

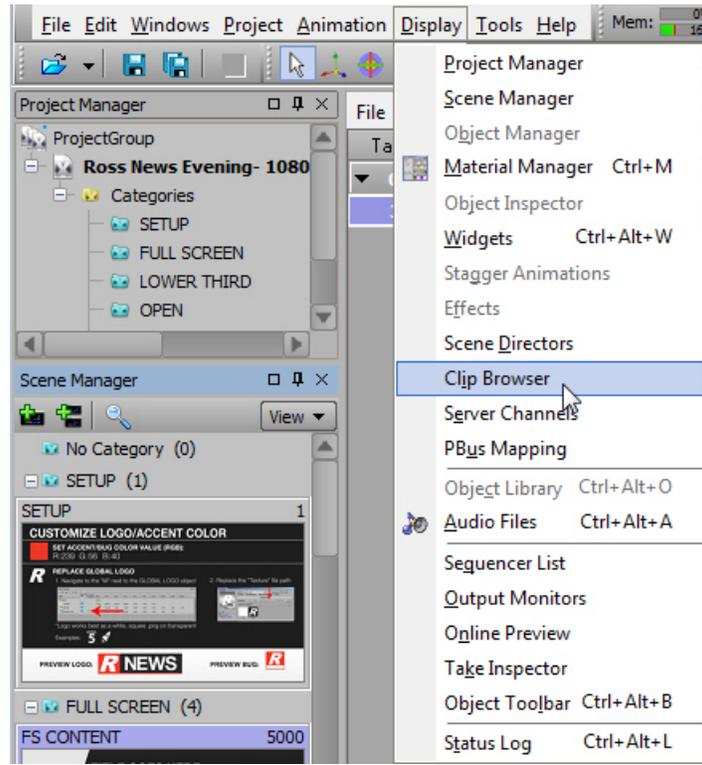
- play the show open animation
- reveal the first server item in the playlist
- play that item with a lower third graphic

Tutorial 9 Show Open Sequence

Part 1 – Build the XPression Graphics Playlist

1. Open XPression and open a project. You can use your own project or the XPression demo project ROSS EVENING NEWS. If you are unsure about how to do this, refer to Lesson 1, Load XPression Graphics for Playout.
2. Press F4 or click the Sequence tab if you are not already in the Sequence interface.

- From the Main Menu, click Display>Clip Browser. Drag the Clip Browser from its Title Bar and position it below the Sequence List so that you can easily add clips to the list.



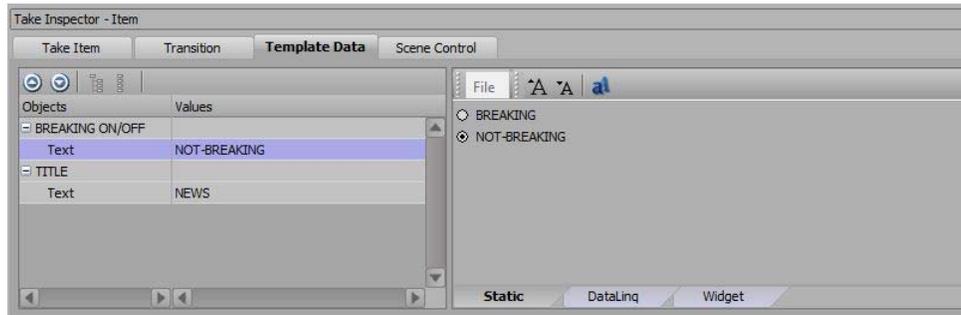
- For this tutorial, you can work with the existing playlist in the Sequence List area of your project, create a new group within an existing playlist or delete all the items in the playlist and build a new one. Add the following to the playlist:
 - TRANSITION TEXT, from the Scene Manager
 - 6 PM OPEN, from the Clip Browser
 - LW3, from the Scene Manager

Note Your open animation can be either a server clip or an XPression graphic. In this example, we use an animated graphic from the included demo project.

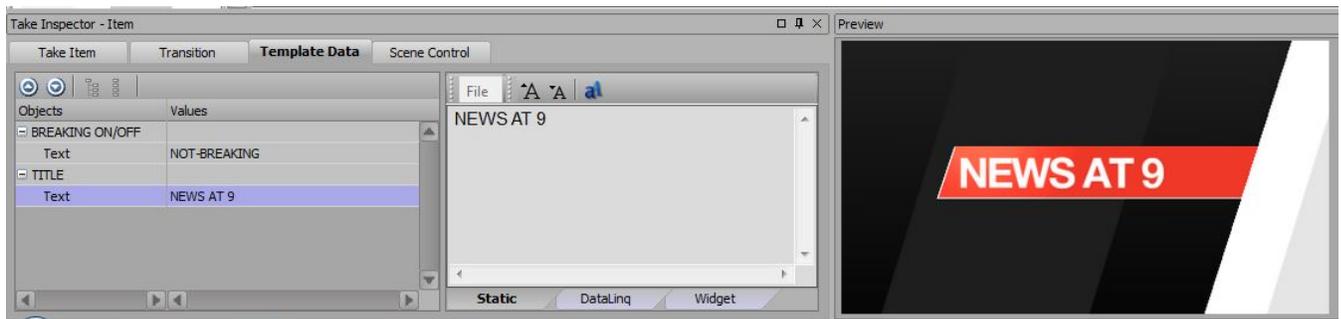
- Select TRANSITION TEXT in the Sequence List. In the row for this item, notice the Take ID, the Layer number and the Output Framebuffer. You will need this information later.

Take ID	State	Scene	Name	Content	Transition In / Out	Layer	Output
0035			Group 4	Manual			
3050		TRANSITION...	TRANSITION TEXT	NOT BREAKING TRANSITION TITLE	Cut / Cut	200	Framebuffer 1

- In the Take Inspector choose the Template Data tab.



- In the Objects table, expand the BREAKING ON/OFF item and select Text. Click the NOT-BREAKING radio button, to the right.
- Expand the TITLE object and select Text. In the field to the right, change the text to NEWS AT 9. Observe your changes in the Preview area, to the right of the Take Inspector.



- Select L3 in the Sequence List.

Take ID	State	Scene	Name	Content	Transition In / Out	Layer	Output	Start	End	Duration	...
0035			Group 4	Manual							
3050		TRANSITION TEXT	TRANSITION TEXT	NOT-BREAKING NEWS AT 9	Cut / Cut	200	Framebuffer 1	00:00:00.00	00:00:08.40	00:00:08.40	
0001		<clip>	6pm Open-21B21919-857A...	6pm Open-21B21919-857A-456F-A614-54EB66823...	Cut / Cut		Server Chan 1	00:00:00.00	00:00:06.29	00:00:06.30	
2000		L3	L3	UPPER FLAG TITLE GOES HERE SUBTITLE	Cut / Cut	10	Framebuffer 1	00:00:00.00	00:00:02.11	00:00:02.11	

- In the Take Inspector, expand each object, select the Text object and replace the placeholder text in the field to the right.
- If desired, drag additional scenes from the Scene Manager to the Sequence List and modify them in the Take Inspector.
- Click File>Save Project.

Part 2 - Begin a New Custom Control

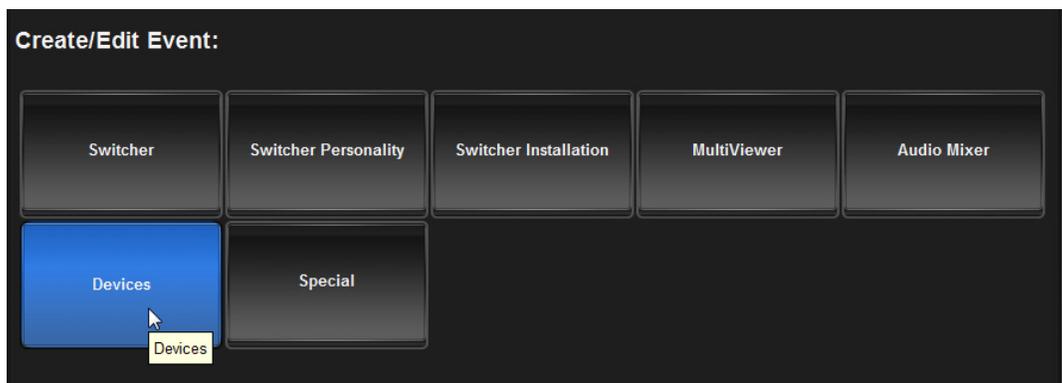
Next, let's begin a Custom Control to cue the first item in the XPression playlist and then advance through the other items in the list.

In DashBoard, access the Custom Control Editor interface, select a Bank and an empty Custom Control and then choose Modify Event List. If you don't remember how to do this, refer to the first tutorial, and then continue with this tutorial.

Part 3 - Clear Graphics Channels

The first command in this Custom Control clears the XPression channel so that it is ready to play the first graphic for the show open.

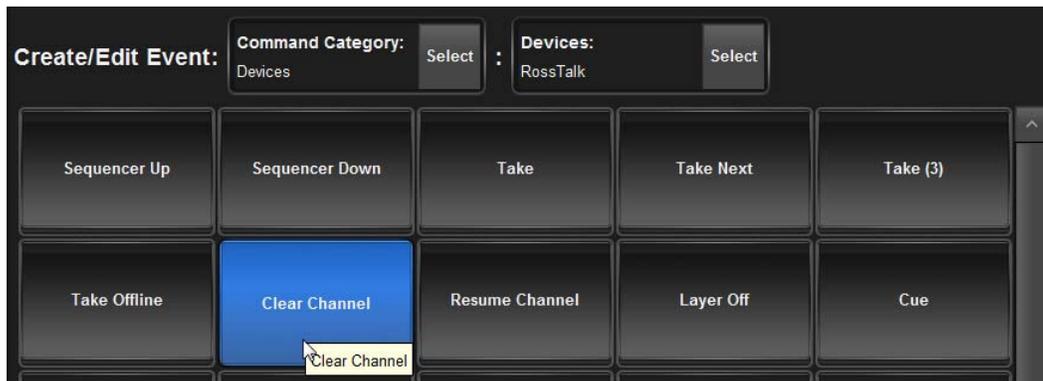
1. Click Devices.



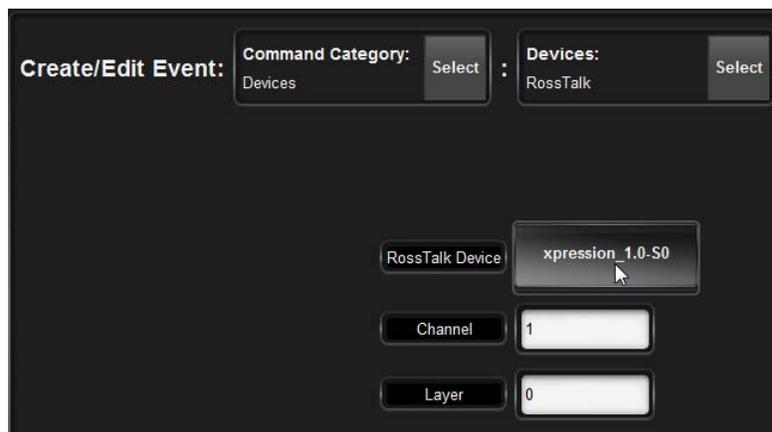
2. Click RossTalk.



3. Click Clear Channel.



4. Click the RossTalk Device button and from the dialog that appears, select the XPression.

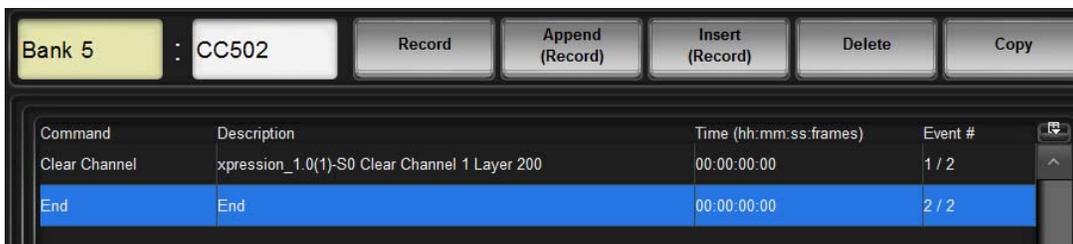


5. Click the Channel field and enter 1 if it is not already entered. Remember, your XPression graphics are set to play on Framebuffer 1, so this is the channel that you need to clear.

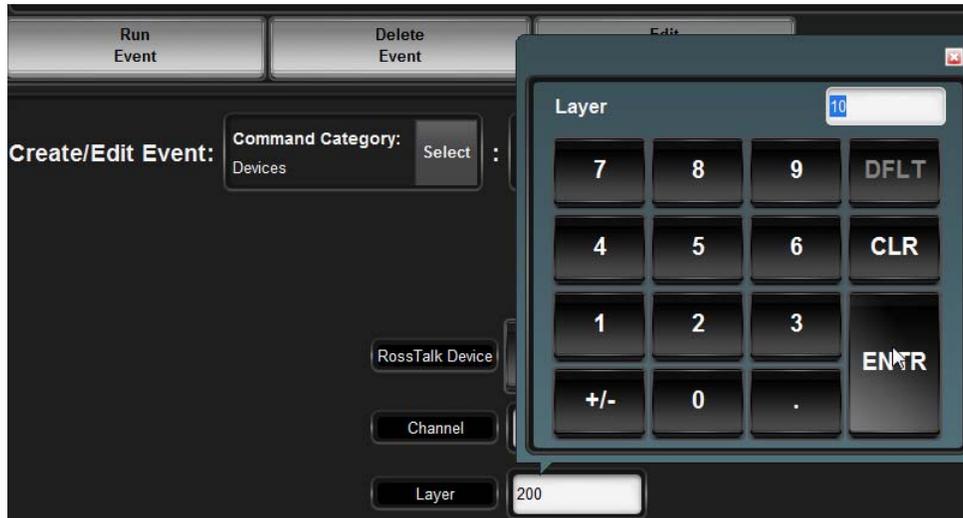
- Click the Layer field and enter 200. You want to clear this layer because the opening graphic is assigned to this layer.



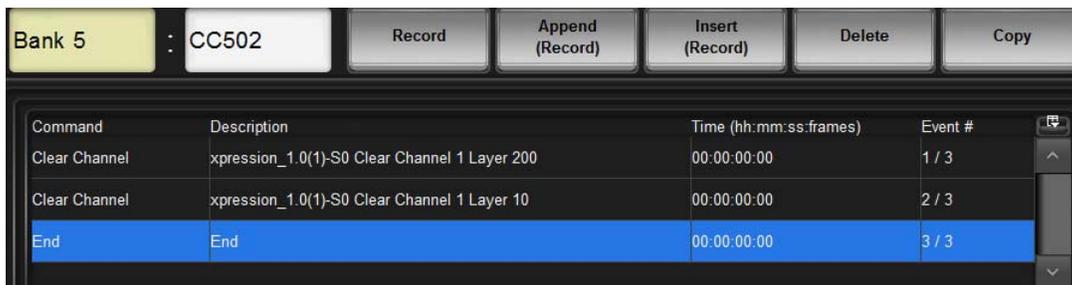
- Click Insert. This clear command appears in the Command list near the top of this interface.



- Remember that your XPression playlist includes other graphics that may be assigned to play on other layers, so those layers need to be cleared too. In our example, the LW3 graphic is assigned to layer 10. Click the Layer field again and change the value to 10.



- Click Insert. Another Clear command appears in the Command List.



Note *There may be additional layers that you want to clear if your facility typically plays graphics on other layers and you do not want those graphics to appear with the show open. There may be some layers that you specifically do not want to clear, such as layers displaying a logo bug or other item that you want to persist in the layout.*

Part 4 – Set Focus in the XPression Playlist

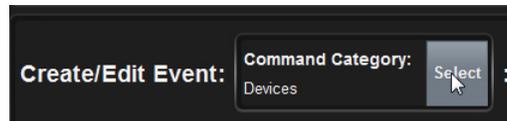
Even though this Custom Control includes a command to play the first graphic in the XPression Sequence list, if another item in the list is already selected, this selection remains and determines how other commands, such as Take Next, function. So, it is important to make sure that the first item in the playlist is selected.

1. Click the Command Category Select button.
2. Click Devices.
3. Click RossTalk.
4. Click Focus.
5. Choose the XPression as the as the RossTalk device and enter the Take ID of the first item in the XPression Sequence List.
6. Confirm that the End command is selected in the Command List and then click Insert.

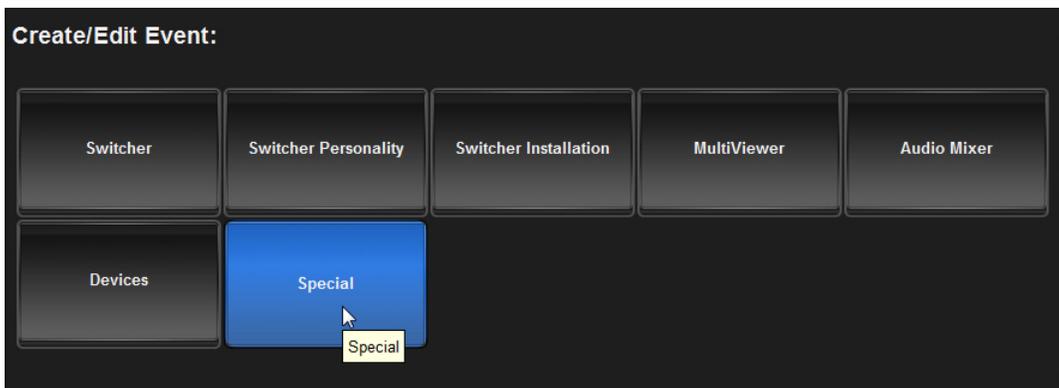
Part 4 – Insert a Pause

To allow the clear commands to effectively clear the XPression channel, insert a 2 second pause command.

1. Click the Command Category Select button.



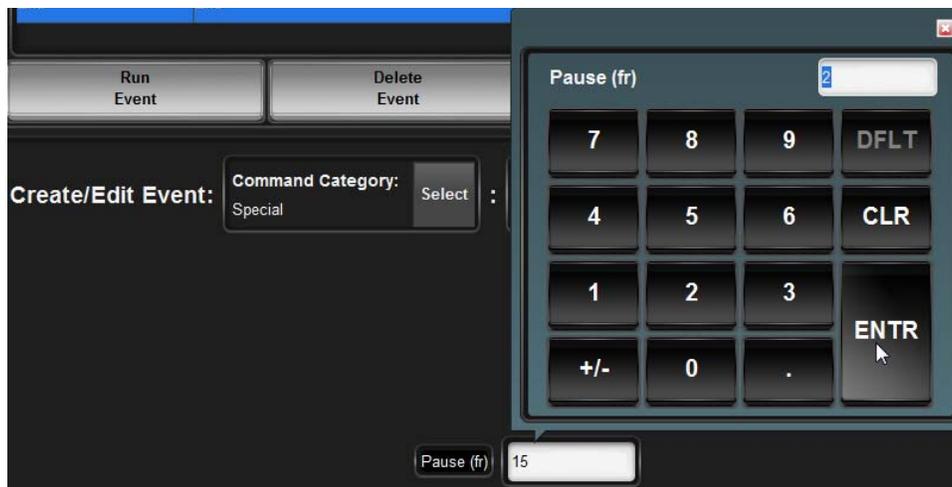
2. Click Special.



3. Click Pause.



4. Click the Pause field and use the numeric dialog to enter a value of 2 frames.

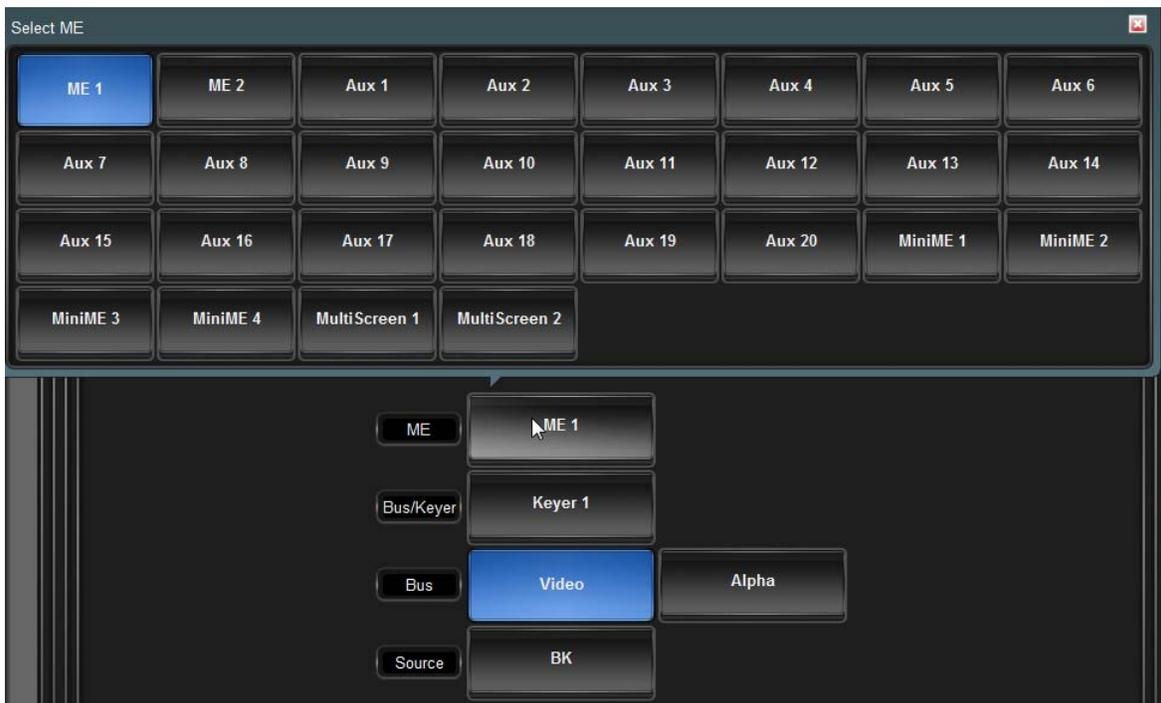
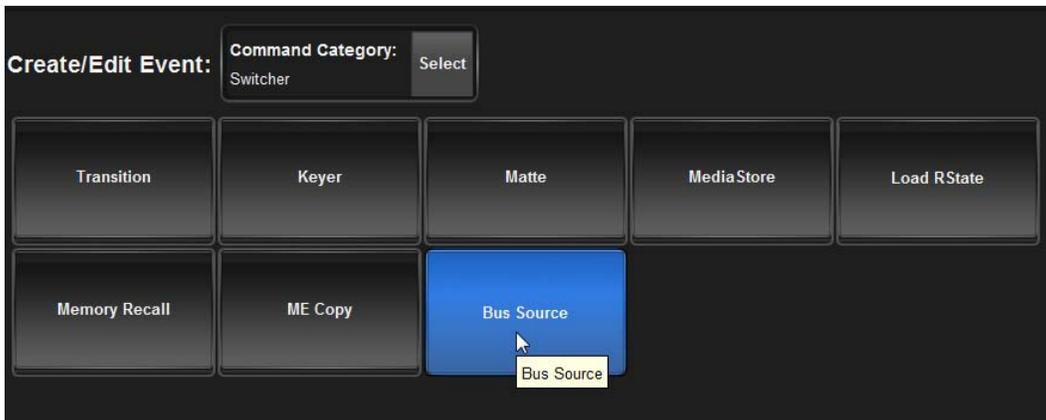


5. Confirm that the End event is selected in the Command List and then click Insert.

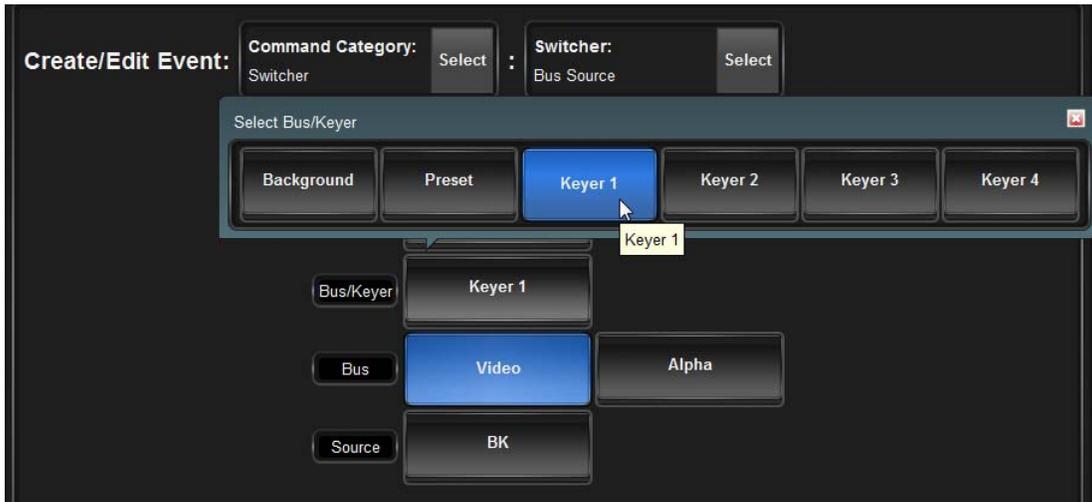
Part 5 – Assign XPression as the Key Source

The next command assigns XPression as the key source.

1. Click the Command Category Select button.
2. Click Switcher.
3. Click Bus Source.
4. Click the ME selection button and select your Program ME, typically ME 2.



5. Click the Bus/Keyer selection button and choose a key (1-4) for your XPression graphics.



6. Leave Bus set to Video.



7. Click the Source selection button and choose XPression as the source for this key.



8. Confirm that the End event is selected in the Command List and then click Insert.

Part 6 – Specify Key Type

Since Keyer 1 is for XPression graphics, its Key type should be Auto Select. This Key type allows images or animations with alpha (transparency) to appear in front of video with the video visible in the transparent areas of the graphic.

1. Click the Command Category Select button.
2. Click Switcher.
3. Click Keyer.
4. Click Key Type.
5. Select the Program ME and choose Auto Select for the Keyer.

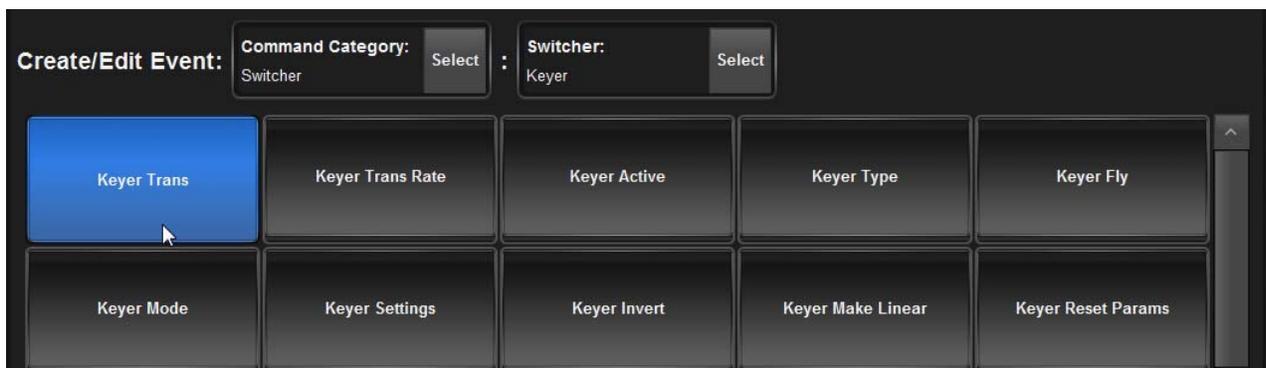
Part 6 – Insert Pause

Repeat the steps in Part 4 to insert another 2-frame Pause command.

Part 7 – Cut the Key On

Next, we want to insert a command to cut the key on.

1. Click the Command Category Select button.
2. Click Switcher.
3. Click Keyer.
4. Click Keyer Active.



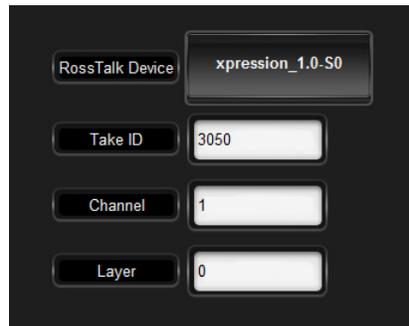
5. Click the ME selection button and choose the Program ME.
6. Set the Keyer to the Keyer with XPression assigned as its source.
7. Set Parameter to Cut Key. Set Change Type to Absolute. Set Value to On.
8. Confirm that the End event is selected in the Command List and then click Insert.

Part 8 – Insert Pause

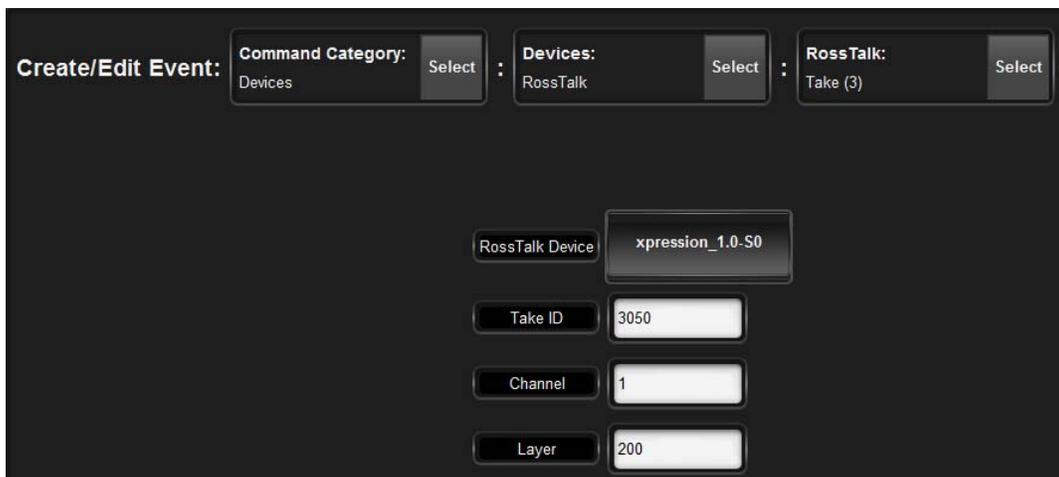
Repeat the steps in Part 4 to insert another 2-frame Pause command.

Part 9 – Cue the Open Animation

1. Click the Command Category Select button.
2. Click Devices.
3. Click RossTalk.
4. Click Take (3).
5. Click the Ross Talk Device button and from the dialog that appears, select XPression.
6. Click the Take ID field and use the number pad that appears to enter the Take ID found in the XPression Sequence List for the TRANSITION TEXT graphic or another graphic that you have in the Sequence for your show open.



7. Click the Channel field and enter the Framebuffer number for this graphic. You can find this number in the Sequence List in the Output column.
8. Click the Layer field and enter the Layer number for this graphic. This number is in the Sequence list in the Layer column.



9. Confirm that End is selected in the Command List and then click Insert.

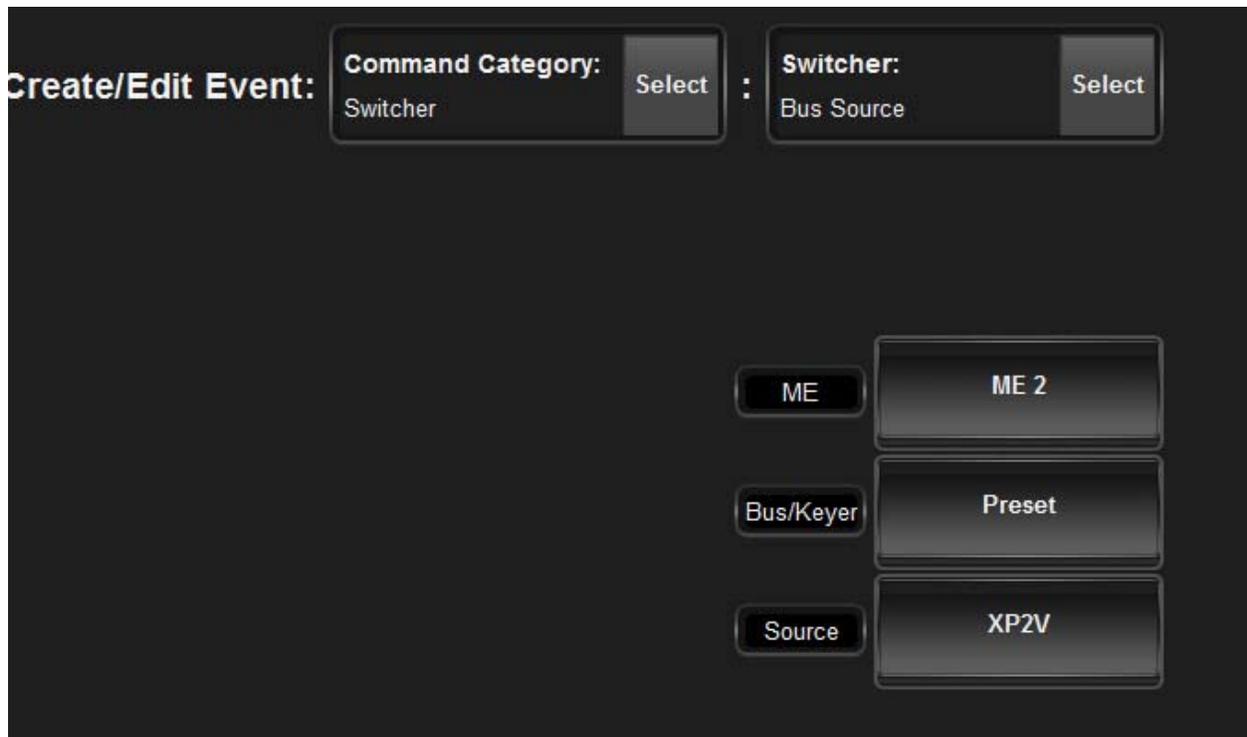
Part 10 – Insert a Pause

Repeat the steps in Part 4 to insert another 2-frame Pause command.

Part 11 – Specify the Clip Server as a Source

The next command cues a clip to play in Preview so that it transitions as the animation finishes.

1. Click the Command Category Select button.
2. Click Switcher.
3. Click Bus Source.
4. Click the ME selection bus and choose the Preview ME.
5. Click the Bus/Keyer selection button and choose Background.
6. Click the Source button and choose your clip server channel. In this example, XP2V is selected, but your facility may have a different naming system.



7. Confirm that End is selected in the Command List and then click Insert.

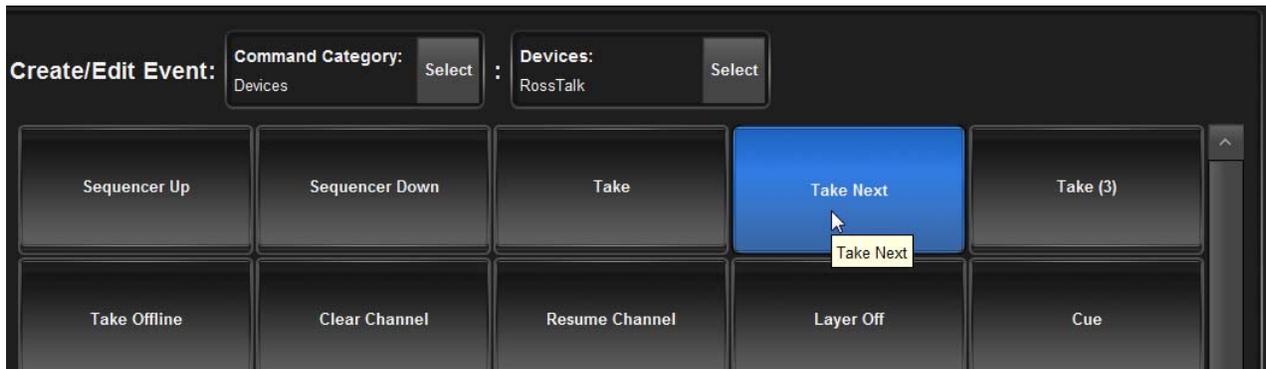
Part 12 – Insert a Pause

Next, add a pause to allow the clip to finish playing as the next item opens and plays.

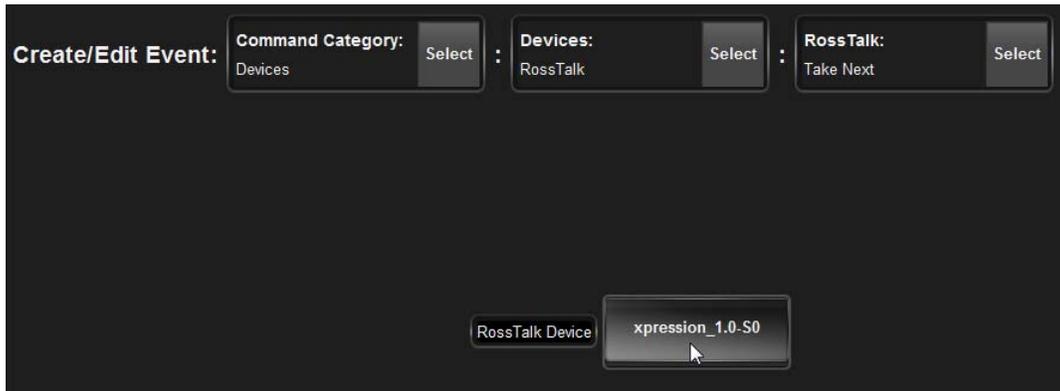
1. Click the Command Category Select button.
2. Click Special.
3. Click Pause.
4. You want this pause to be about 8 seconds, or almost the full length of the animation. This may be different if you are using your own graphic and it is a different length. Remember, the Pause is expressed in frames, so consider the frame rate for your video standard to determine the value for the Pause.
5. Confirm that the End event is selected in the Command List and then click Insert.

Part 13 – Take the Clip

1. Add a Take Next command to play the clip.
2. Click the Command Category Select button.
3. Click Devices.
4. Click RossTalk.
5. Click Take Next.



6. Click the Ross Talk Device selection button and choose XPression if it is not already selected.



7. Confirm that the End event is selected in the Command List and then click Insert.

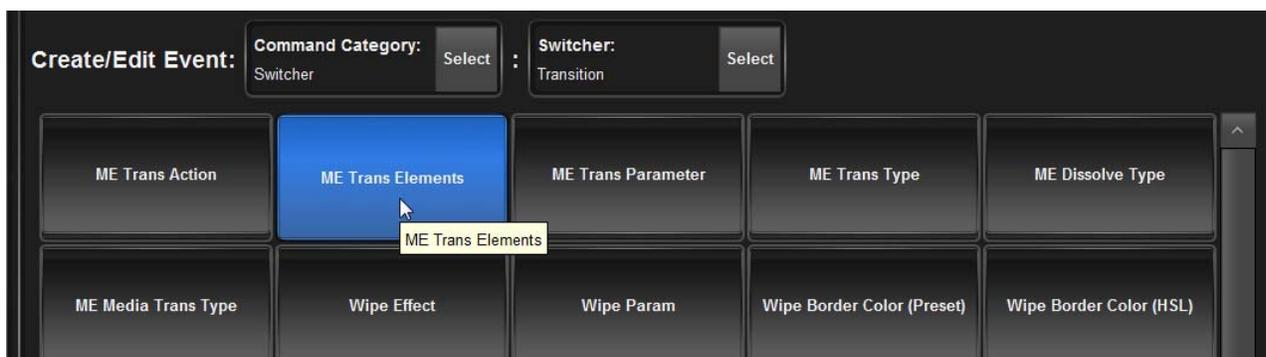
Part 14 – Insert a Pause

Repeat the steps in Part 4 to insert another 2-frame Pause command.

Part 15 – Transition to the Video and Graphic

Now you need a command to play a background and the key that you set up, then transition on the first clip.

1. Click the Command Category Select button.
2. Click Switcher.
3. Click Transition.
4. Click ME Trans Elements.



5. Click the ME selection button and choose the Program ME.

6. Click the Elements button and select Background and the key that has XPression as its source, Key 1 in this example.



7. Confirm that the End event is selected in the Command list and then click Insert.

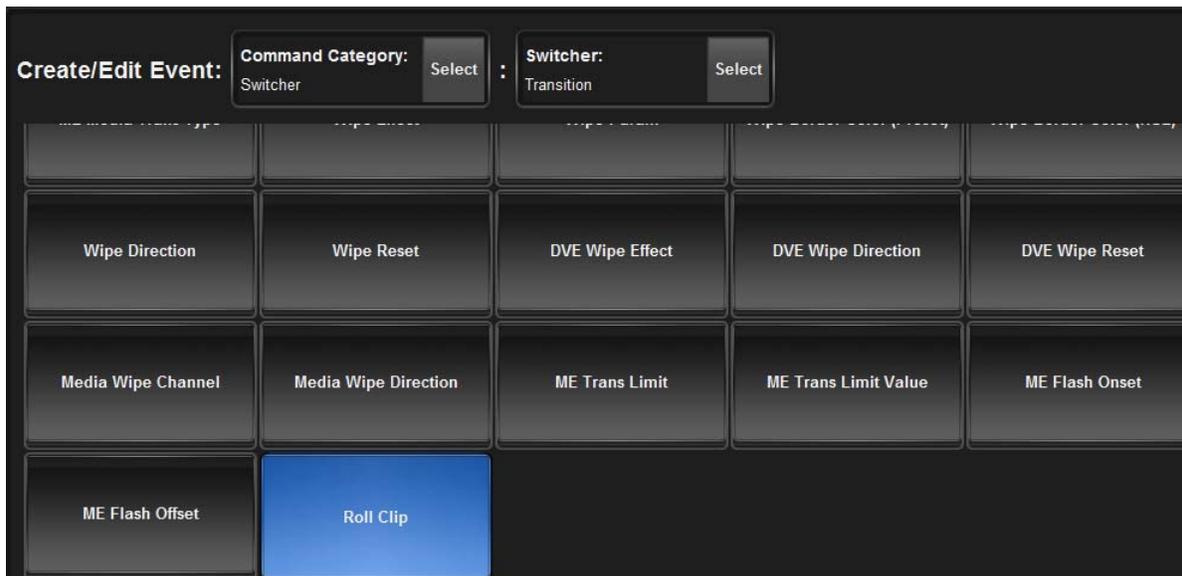
Part 16 – Transition the Effect

1. Click the Command Category Select button.
2. Click Switcher.
3. Click Transition.
4. Click ME Trans Action.
5. Click the ME selection button and then choose the Program ME.
6. Click the Action selection button and then choose Cut.
7. Confirm that the End event is selected in the Command list and then click Insert.

Part 17 – Add a Roll Clip Command

You want to make sure that Roll Clip is turned on for the Program ME. Let's include a command for that.

1. Click the Command Category Select button.
2. Click Switcher.
3. Click Transition.
4. Click Roll Clip.



5. Click the ME selection button and choose the Program ME.

6. For the Value setting, click On.



7. Confirm that the End event is selected in the Command List and then click Insert.

Part 18 – Insert a Pause

Repeat the steps in Part 4 to insert another 2-frame Pause command.

Part 19 – Cue and Take the First Lower Third

1. Click the Command Category Select button.
2. Click Devices.
3. Click Ross Talk.
4. Click Take Next.
5. For Ross Talk Device, select XPression if it is not already selected.
6. Confirm that the End event is selected in the Command List and then click Insert to add this command to the list.

Part 20 – Complete this Custom Control

1. Click Done.
2. In the Custom Control Name field at the top of this interface, replace the default name with a name that indicates the function of this Custom Control, for example OPEN SEQ.
3. To play the Custom Control, click the ShotBox button at the bottom of the interface. Select the Bank where you created this Custom Control and then click the button with the name of this Custom Control.

Learn More, Do More

Thank you for using this training manual. At Ross Video, we want to always act in your best interest and understand your requirements.

In this section:

- Learn More, Do More
- Contact Support
- We Want to Hear from You
- Ross Products

Learn More, Do More

Ross Video is committed to your continued learning and success.

- Ross University is an extensive collection of online video tutorials that cover many of the features and operations of our products:
 - > <https://www.rossvideo.com/support/ross-university/>
- The User's Guide and other documentation for this product are helpful resources. You can find the latest versions on our website:
 - > <https://www.rossvideo.com/support/documentation/>
- Our expert product trainers are available for onsite training suited to your needs. For more information or to book a training, send your request to:
 - > services@rossvideo.com
- Would you like high-end, custom graphics to support your production? Let our team of designers bring your vision to life or consider online purchase of graphics templates. Visit Ross Rocket Surgery online at:
 - > <https://www.rossvideo.com/services/creative/>
- Need additional, mobile production facilities for a specific event? Consider Ross Mobile Production:
 - > <https://www.rossvideo.com/solutions/mobile-production/mobile-services/>

Contact Support

Our products come with technical support for the life of your Ross product:

- 1-844-652-0645 in North America (toll free)
- +800 1005 0100 Internationally (toll free)
- Email techsupport@rossvideo.com

We Want to Hear from You

Have any ideas or comments to share? Please use the contact form here:

<https://www.rossvideo.com/contact-us/general-inquiries/>

Ross Products

Did you know that Ross offers a full range of production technology products including:

- Production Switchers
- Control Systems
- CG & Graphics Systems
- Media Asset Management
- Robotic Camera Systems
- Newsroom Computer Systems
- Cameras
- Video Servers
- Routing Systems
- Replay Systems
- Signal Processing
- Social Media Management
- Master Control Systems
- Live Event Management
- Multi-Viewers
- Virtual Sets and Augmented Reality

Our products are used throughout the world for professional broadcast, sports, live events, houses of worship, education, mobile production, corporations and legislative assemblies.

For the latest information, please visit our website.

<https://www.rossvideo.com>

We would be delighted to help you do more!

Index

- add
 - mask to chroma key, 149
 - pause to a Custom Control, 117
- animated wipe, 113
- audio
 - clear pre-fade listen, 167
 - clear solo, 169
 - configure the GUI, 43
 - Custom Controls, 155
 - customize auxilliary output, 55
 - customize monitoring, 52
 - mix with RAVE, 39
 - mute or unmute all, 163
 - set levels, 43
 - set to follow video, 51
 - signal flow, 42
 - terms and concepts to know, 41
- browser
 - clips, 23
- chroma key, 139
 - add mask, 149
- clear solo, 169
- clip
 - media wipe transition, 131
- Clip Browser, 23
- Clip Edit window, 25
- Clip Store
 - set path, 22
- clips
 - workflows, 21
- Code of Ethics, 2
- Command Control
 - Take Graphic and Cut Key, 79
- Control Commands
 - XPression, 69
- Control Panel(physical)
 - comparison to DashBoard Panel, 93
- Crash Record
 - from XPression, 29
- customize auxilliary audio output, 55
- Custom Control
 - add pause, 117
 - audio, clear solo, 169
 - chroma key, 150
 - clear pre-fade listen, 167
 - command to assign a key source, 117
 - command to call up a graphic, 123
 - command to transition video, 125
 - cut key on command, 120
 - double-box, 91
 - mute or unmute all, 163
 - naming, 90
 - play from ShotBox, 90
 - set an audio fader level, 155
 - Show Open, 173
- Custom Controls
 - about, 62
 - audio, 155
 - play from ShotBox, 111
- DahBoard Panel
 - comparison to physical panel, 93
- DashBoard
 - audio mix, 39
- double box, 91
- edit
 - Clip Store settings, 22
- encode video, 32
- Ethics
 - Ross Code of Ethics, 2
- export
 - animated graphic as clip or images, 131
- fader level
 - audio, 155
- graphic
 - call up in a Custom Control, 123
- graphics
 - access XPression, 11
 - add text, 12

- load, 12
- green screen, 139
- load graphics, 12
- mask
 - add to chroma key, 149
- media
 - locate number, 133
- Media Manager
 - locate media number, 133
- media wipe, 131
- memories
 - about, 66
- memory
 - save and effect, 103
- modify graphics, 12
- monitor
 - clip server channels, 26
- monitor audio
 - customize, 52
- mute or unmute all
 - Custom Control, 163
- name
 - Custom Control, 90
- number, for media
 - locate in Media Manager, 133
- pause
 - add to a Custom Control, 117
- physical Control Panel
 - comparison to DashBoard Panel, 93
- play
 - Custom Controls from ShotBox, 111
- pre-fade listen
 - Custom Control, 167
- RAVE
 - audio set to follow video, 51
 - audio signal flow, 42
 - configure the GUI, 43
 - customize audio monitoring, 52
 - customize auxilliary audio output, 55
 - set levels, 43
- RAVE Audio Mixer, 39
- Record Client window, 29
- Ross
 - Code of Ethics, 2
- save
 - effect as memory, 103
 - switcher settings to a memory, 66
- sequence
 - show open, 173
- Server Channel window, 26
- set
 - audio fader level, 155
- ShotBox
 - access and play Custom Controls, 111
- shotbox commands
 - about, 62
 - for XPression, 69
- Show Open sequence, 173
- solo, clear, 169
- text
 - add or modify in graphics, 12
- transition video
 - in a Custom Control, 125
- two box, 91
- video
 - transition in a Custom Control, 125
- Video Coder
 - XPression, 32
- wipe
 - XPression graphic, 113
- workflow
 - clips, 21
- XPression
 - access graphics, 11
 - assign as key source in Custom Control, 117
 - call up graphic in a Custom Control, 123
 - Clip Browser, 23
 - Clip Edit window, 25
 - Clip Store, 22
 - Control Commands for, 69
 - Custom Control
 - Take Graphic and, 79
 - Take Graphic and Cut Key.
 - export animated graphic as clip or images, 131
 - graphic for a double-box, 91
 - record clips, 29
 - Server Channel window, 26
 - shotbox command setup, 69
 - Video Coder, 32
 - wipe, 113