

Chapter Seven: Switcher



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The Switcher is the core component for producing live video. With the Switcher, you can switch between the Video Toaster's video sources, play clips, load and display still images or CG pages, use special effects, key graphics, and more.

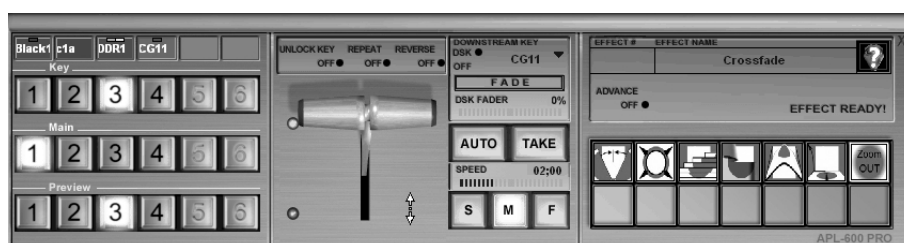


Figure 7.1. The Switcher with 6-input skin.

The Switcher begins your work with special effects; for example, you use the DSK to superimpose text or graphics over video transitions. These events can be captured in real-time to your video drives. You can also feed to a tape deck or video projectors and you can stream live to the Internet from the Switcher.

You will work most effectively with the Switcher if you're fairly organized. Prepare your special effects, graphics, clips, and so on, and arrange them in a folder where they are displayed onscreen, or place them on the desktop, so you can get to them easily and quickly.

Switcher and ToasterVision

ToasterVision lets you view your Switcher actions. The ToasterVision panel reflects the Switcher bus by offering you a Main mode, a Program Out mode, a Preview mode, and a Key mode. Remember that you can open more than one ToasterVision monitor, so you can watch more than one mode at a time.

7.2 VIDEO TOASTER [2]

ToasterVision monitors the video selected on the different video busses. You can use ToasterVision to monitor the video on Program Out, Main, Preview, Key, and DownStream Key. When you open multiple ToasterVision windows, you use more system resources.



NOTE

When you launch the Switcher, it overrides all other Video Toaster panels.

INTERFACE

The Switcher gives you three choices for skins: you can display the Switcher with six channels for your Main, Preview, and Key busses, or you can display larger versions with 16 or 24 channels. You change your skin by right-clicking over the interface near the T-bar and selecting the skin you want from the menu. You can also click on the **S** in the right corner of the panel.

The bank of buttons across the Switcher are called busses. The Switcher has a Main bus, a Preview bus, and a Key bus. The row of inputs above the Switcher busses are patch bays. The patch bays display the names of the inputs for each numbered channel.

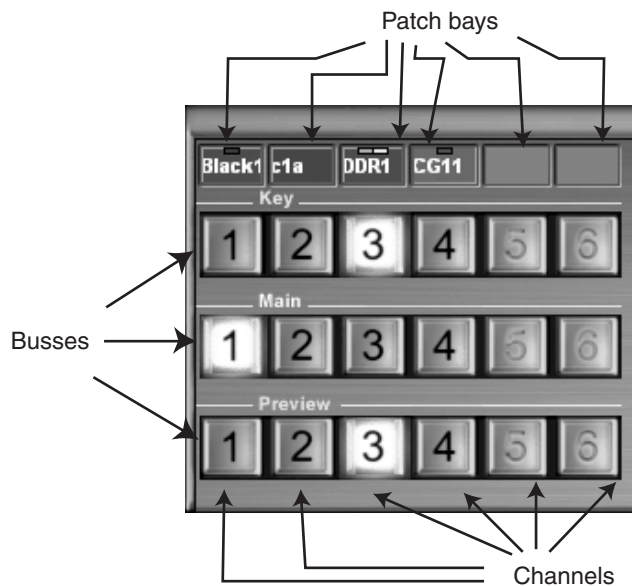


Figure 7.2. Patch bays, busses and channels on the Switcher.

MAIN BUS

The source that sits on the **Main** bus is LIVE. The source can be anything that you've patched to the Switcher, ranging from a live camera feed to a CG title page. So, whatever sits on the Main bus rides out to your audience.

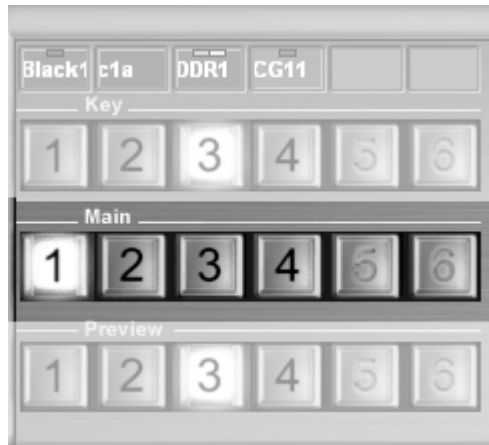


Figure 7.3. The Main bus is where your LIVE source sits

You select the Main source by clicking its channel number in the Main bus. With ToasterVision open, you can see the Main source playing on the monitor when you choose MAIN or PGM OUT on the ToasterVision panel.

PREVIEW BUS

The source that sits on the **Preview** bus is next-in-line to go LIVE. Select your preview source by clicking on its channel number in the Preview bus. You can see the source for the Preview bus on a ToasterVision monitor only when the mode is set to PREV.

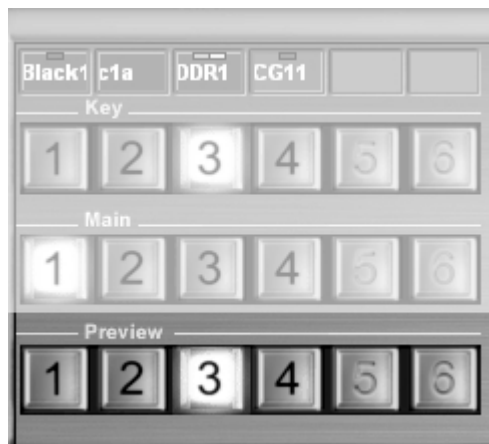


Figure 7.4. The Preview bus is for the source next-in-line to go LIVE.

Note that you can view only two sources at any one time: Main or Preview. When you select a different source for Main, any previous channel becomes inactive. You don't lose the source on that channel, but you cannot view it anymore. The same is true for a Preview source. You can use a hardware patch if you want to view other preview sources. The hardware patch is discussed later in this chapter under *Using Multiple Cameras*.

When you double-click on a source in the Preview bus, you perform an automatic transition to that source.

KEY BUS

The **Key** bus lets you overlay or key one video source on another when you use the Video Toaster keyers or titles. The Key bus usually follows the Preview bus, and uses the Preview source as the key that you see through to the Main source.

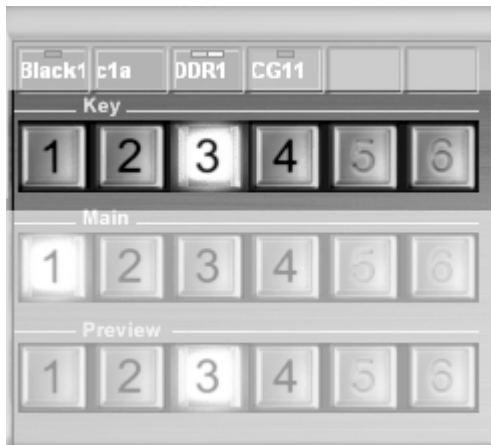


Figure 7.5. The Key bus lets you overlay one source on another.

The only way to have three separate sources for Main, Preview, and Key is for one of those sources is a computer-generated source (the Background Generator, Character Generator, DDR, or Aura). For example, if you wanted the independent Key to be a video, you would use a video file on the DDR. You must select **Unlock Key**, above the T-bar and then you can make the Key bus independent from the Preview bus. Note that when you apply a transition while using the Key bus, the Keyer turns off when the transition completes. If you want to maintain graphics or titles over your video, you must use downstream keying with the DSK.

If your source on the Key bus is a video, then the Preview bus must be that same source; unlocking the Key bus will not make the video source independent.

To use the Key bus and the Keyer

- 1** Load two video sources into the Switcher. Place one on the **Main** bus; you'll use the second later. For this example, load DogCU2.rtv into a DDR (You can find DogCU2.rtv in the CONTENT folder); it's green screen footage with a dog.
- 2** Place the DDR on the **Preview** bus. The **Key** bus should also be active and following the **Preview** bus.
- 3** Open a ToasterVision monitor in **PGM Out** mode and open a ToasterVision monitor in **Key** mode.
- 4** Select the Pacifica Keyer from the main menu. Click the **Chroma Key** button, then right-click on the color selection tile and hold. The cursor becomes an eyedropper.
- 5** Holding the right mouse button, drag the eyedropper over the ToasterVision monitor in **Key** mode that shows your green screen footage. Release the right mouse button to select the green screen color.
- 6** In the **PGM Out** ToasterVision, you should see the Main footage through the Preview footage.
- 7** Click on the second video source to place it on the **Main** bus. When you place the new source on the **Main** bus, keying ends.

To use the Key bus and the Keyer with Unlock Key

- 1** Follow step 1 from the Task above.
- 2** Place the two video sources on the **Main** and **Preview** busses.
- 3** Select **Unlock Key** and place the DDR on the **Key** bus.
- 4** Select the Pacifica Keyer from the main menu. Right-click on the color selection tile and hold. The cursor becomes an eyedropper.
- 5** Holding the right mouse button, drag the eyedropper over the ToasterVision monitor in Key mode that shows your green screen footage. Release the right mouse button to select the green screen color.
- 6** In the **PGM Out** ToasterVision, you should see the Main footage through the Key footage.
- 7** Click on **Auto** to transition between Main and Preview. The Key footage sits on top while you fade between the Main and Preview footage. (You can, of course, use a DVE to transition.)

ADDING SOURCES TO THE SWITCHER

The easiest way to add a source to the Switcher is to drag and drop onto a channel in the Switcher. You can drag and drop sources from most Video Toaster panels.

You can choose from several other methods to patch a source into the Switcher. You can click the right mouse button on a patch bay and select from a list of available sources. If you double-click on an empty channel, you launch the Virtual BoB and drag the input into the Switcher.

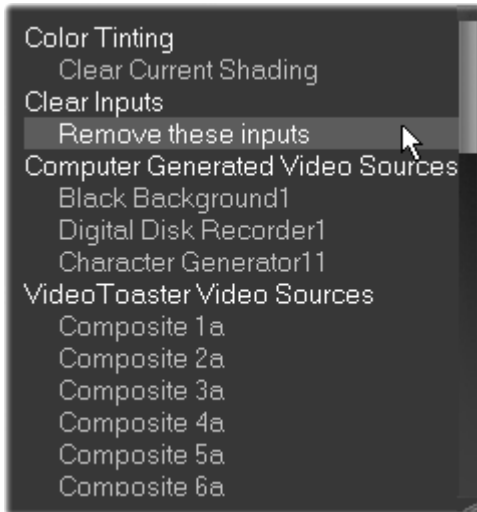


Figure 7.6. Sources available from the Switcher patch bays.



NOTE

A Warning symbol on a channel indicates that the source is not available. For example, if you close the Background panel and that panel was patched to the Switcher, you would then see a warning sign in the corner of that input.



When you add a source to the Switcher, it is automatically placed on the Preview bus. You can change this action, though. On the Preferences panel, choose the **New Modules** option and you can choose not to place new sources on the Preview bus. The new sources will go into an available channel, but won't activate any bus.

BLACK SOURCE

The Switcher offers a Black Background that you load and use to fade to and from black. To add a Black Background, right-click on a channel and choose **Black Background**. If you need quick access to the black source, use one of the following keyboard shortcuts:

B: Hit B to set Black as the preview source.

Shift+B: Hit SHIFT+B to fade immediately to Black.

BUS DOTS

The busses use color-coded dots. The panel for your source will also reflect this color-coding scheme.

- A red dot shows the source on the Main bus
- A green dot shows the source on the Preview bus
- A yellow dot shows the source on the Key bus
- A purple dot shows the source on the DSK



Figure 7.7. Bus dots indicate which inputs sit on the Program, Preview, and Key bus.

Thus, if you add a composite source and select the Preview bus, you'll notice a green dot beside the input name in the patch point. The composite input on the breakout box panel also shows a green dot to indicate that it sits on the Preview bus of the Switcher.

DELETING SOURCES

You will eventually want to delete some of your sources. You use the DELETE key on the keyboard to get rid of sources patched to the Switcher.

To delete sources

- 1 Select the patch tag of the source in the patch bay of Switcher.
- 2 Keep the mouse over the Switcher and press the DELETE key on the keyboard.
- 3 A confirmation message appears that asks "Remove patches from Switcher?" Click on **Remove** to delete or click on **Cancel** if you've changed your mind.



WARNING

To protect your program out, you cannot remove an input that is active on the Switcher—that is, any input on the Main, Preview or Key bus.

SELECTING MULTIPLE SOURCES

You can select multiple sources from the Virtual BoB. Drag a rectangle around a group of inputs, or use SHIFT or CTRL as you click to select.

To select multiple sources

- With the left mouse button, draw a rectangle around the inputs and drag them onto the Switcher.
- SHIFT-click on inputs to select a contiguous range of inputs.
- CTRL-click on inputs to select from inputs that are not contiguous and if you want to select items in a specific order.

After you select your inputs, drag and drop them into the Switcher. When you drag and drop multiple selections, they are added to the Switcher in the order that you selected them. The first item goes immediately to the Main bus, and the second goes to the Preview bus. Remember that if you want to select component inputs, you must verify that YUV is the title over the inputs in the Virtual BoB.

If you have a bunch of digital inputs, for example several backgrounds from different background generators, you can drag and drop their tags onto the desktop then multi-select the tags on the desktop to drop into the Switcher.

Moving Your Sources

You can shuffle the placement of your sources on the Switcher by dragging the patch point to a different channel (drag and drop). When you change the order, the bus attached to your source stays with the source, if there is one. So if you had a camera in channel 1 that sat on the Main bus, and you moved the camera to channel 5, it would still be on the Main bus.



NOTE

By default, the Switcher will always map the current Main, Preview, and Key selections to the visible busses. Thus when you close the Switcher and open it again, you will see the sources that you last used already set to Main, Preview, and Key.

T-BAR AND TRANSITIONS

A transition is a special effect used when you switch between video on the Main bus to video on the Preview bus. The T-bar lets you manually engage transitions.

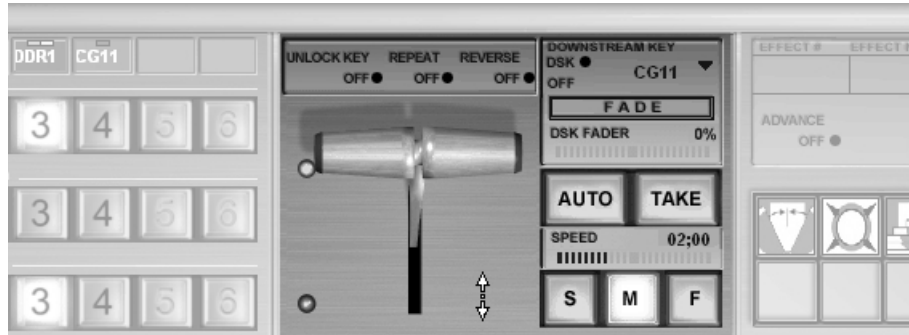


Figure 7.8. The T-bar and transition areas

DISSOLVE

The most common transition, and the default for Video Toaster, is the dissolve. With no effects loaded in the Effects bus, when you move the T-bar, you dissolve between sources.

Move the T-bar by clicking your mouse button over the bar and holding as you drag. You can move the T-bar as slowly or as quickly as you like, and you can do a partial dissolve by releasing the mouse at an intermediate point.



HINT

Double-click on the Tbar to jump back to the “zero” position, which is when the Tbar sits at the top.

T-BAR OPTIONS

Unlock Key

The **Unlock Key** option tells the Switcher to detach the Key bus from the Preview bus. Use **Unlock Key** when you want the Key bus to be independent from the Preview bus, otherwise the Key bus tracks with the Preview bus. For example, if you want to place blue screen footage on the Key bus and you want to change the background footage that it affects, you would use **Unlock Key**.

Repeat

The **Repeat** option repeats the T-bar action. If you use a DVE with the T-bar, the DVE action repeats non-stop.

Reverse

The **Reverse** option lets you reverse a DVE by playing it backwards. Note that some DVEs will not show any significant difference.

AUTO AND S-M-F

Auto triggers the T-bar to apply the current transition at a selected speed. The default transition that you apply is the dissolve effect, and Auto applies the dissolve at the default medium speed. You choose one of the **S-M-F** buttons to select a different speed (Slow, Medium, or Fast).

The **Auto** button illuminates and stays illuminated while the auto action happens. When the action stops, the light goes off.



HINT

Use the SPACEBAR on your keyboard as a shortcut to engage Auto.



Hint

You can hold SHIFT and click **Auto**, or you can hit the SPACEBAR, when the T-bar is at its midpoint to back out of a fade. You can also use this key combination while a transition is running.



Figure 7.9. Auto, Take and S-M-F buttons beside the T-bar.

Speed Gauge

The **Speed** gauge lets you manually adjust transition speed. It works in seconds, so a speed of 0.5 means that you want the transition to occur in a half second, which is a quick transition. A speed of 4.0 means you want the transition over four seconds, which is a pokey transition.

- Drag the mouse to the right to increase speed
- Drag the mouse to the left to decrease speed

TAKE

The **Take** button performs an instant cut between the Main bus and Preview bus. A cut is simply a jump from one source to another, for example from one camera shot to a different camera shot. Remember that to cut between your selected shots, the shot you want to be next must be on the Preview bus. You can also perform an instant **Take** between two inputs, without worrying about the Preview bus, by selecting a different input for the Main bus.



Hint

Pressing either Enter on the keyboard will perform a Take.

To use the Switcher

To work with the Switcher, you must have a few sources available. Your sources can be live feeds, like cameras, attached to the BoB; your sources can be recorded feeds, like VCRs, attached to the BoB, or your sources can be files on your video drive that range from video clips to CG graphics.

- 1 Right-click on an open channel and choose **Black** from **Computer-generated** sources. Click on the **Main** bus for the Black Source.
- 2 Load a camera into the first channel of the Switcher. Choose the **Preview** bus for this source.
- 3 Load a second camera into the next available channel.
- 4 Click the **Auto** button to fade up from Black to the first video source.
- 5 Place the second camera on the **Preview** bus and click the **Take** button to cut between the two cameras.
- 6 Place the Black source on the **Preview** bus and use the T-bar to dissolve to Black.

DSK

DSK stands for Downstream Key—a key source that is placed over your video downstream from your switching. Downstream means that your text or graphics stay on a top layer while video transitions occur underneath. For example, the *Live* designation over a news broadcast is a downstream key. The broadcast may show different people talking and different views of an event; the scenes change and the *Live* text hovers in place.

With a DSK, you can do whatever you want to your video—perform dissolves, use DVEs for switching, add chroma or luma keying—and the DSK source, such as a title, sits over everything that happens.

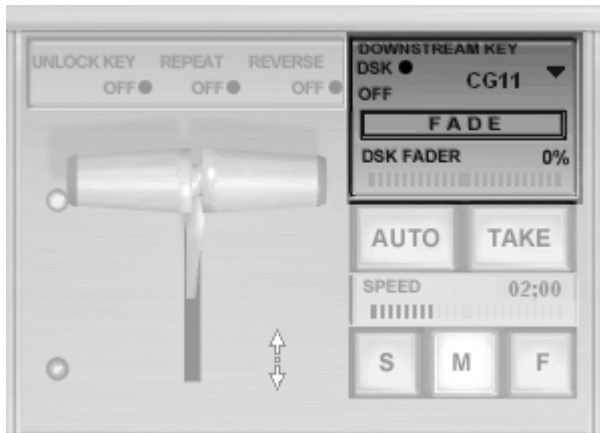


Figure 7.10. The DSK on the Switcher maintains text or graphics over video.



NOTE

The DSK is a completely separate function from the Key bus. You can use the Key bus for chroma and luma key effects while you use the DSK to maintain titles or graphics over your video.

DSK SOURCES

The source for the DSK must be a computer-generated source. You can use the Character Generator, the Background Generator, the Digital Disk Recorder, or Aura VT as sources, but you cannot use live video or a feed from a VTR.

The benefit of using the DDR as a downstream key is that you can still use the Character Generator as a Switcher source and change text and graphics while your DSK layer remains. With Aura VT, you can play a looping animation in Aura's preview, and use that as a downstream key.

To bring up the DSK

- 1 Click on the main menu to open a computer-generated source. For this example use the Character Generator (CG). Load a page into the CG.
- 2 On the Switcher, load video sources in the Main bus and the Preview bus.
- 3 Click on the down arrow beside **DSK** and choose CG from the menu.
- 4 Activate the DSK by choosing **DSK**.
- 5 Use the **Take** and **Auto** buttons to switch at will between the video sources in the Switcher. The CG should sit over each video source and the transitions between the sources.
- 6 End the DSK by choosing **DSK Off**.

The **Fade** button lets you fade the DSK source on top of your video, or if you are through with it you can Fade off.

To fade DSK onto video

- 1 Click on the down arrow to choose the DSK source from the menu.
- 2 Click on the **Fade** button. You should see the DSK source fade up over your video.
- 3 Switch at will.
- 4 Fade the DSK off by clicking the **Fade** button.

You can use the **S-M-F** buttons to control the speed of the fade. Just click on the speed that you want and then click **Fade**.

When you click the **Fade** button, the DSK source fades up to 100 percent. If you want to fade up to only about 80 percent to get a semi-transparent title or graphic, you must manually drag the fade gauge; don't touch the **Fade** button.

To fade and create a semi-transparent DSK

- 1 Click on the down arrow to choose the DSK source from the menu.
- 2 Drag the fade gauge to the desired percentage. (You won't see any actual numbers; you'll just have to make a guesstimate.)
- 3 Switch at will.
- 4 Fade the DSK off by clicking the **Fade** button.

You can combine any of these approaches. For example, you can immediately bring up the DSK by choosing **DSK** and then click **Fade** to fade the DSK off, and vice versa.

**NOTE**

You cannot use a DVE to remove the DSK, you must either choose **DSK Off** or **Fade**.

DSK Shortcuts

DSK shortcuts can make your workflow more efficient. Use the following keys on your keyboard to perform actions with the DSK:

- A:** A will apply Auto and Fade simultaneously. Hit A to fade the DSK source up or down at the same time that you dissolve between video sources.
- S:** S will perform a Take and bring up the DSK simultaneously. Hit S to activate or deactivate the DSK source at the same time that you cut between video sources.
- D:** D will activate or deactivate the DSK.
- F:** F will fade the DSK on or off.

EFFECTS BUS

The Effects bus lets you access transitions for switching. The Effects bus is on the far right of the Switcher panel when you use the six- or 16-input Switcher. It appears above your channels when you choose the 24-input Switcher. The transitions are digital video effects (DVEs), and Video Toaster [2] comes bundled with a whole herd of them. You can learn more about these DVEs in Chapter 12: DVEs and in Appendix C: DVE Descriptions.

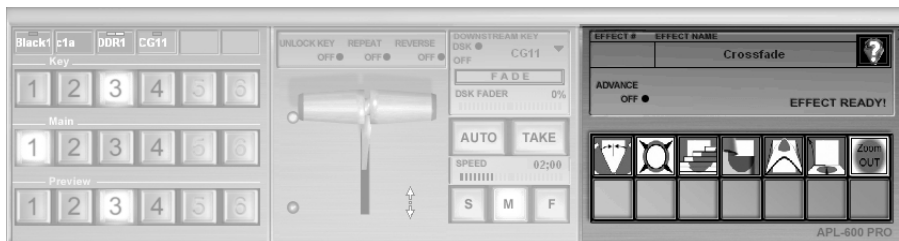


Figure 7.11. The Effects bus on the Switcher.

To load DVEs into the Effects bus

- 1 Double-click on an empty effects channel. The File Bin launches.
- 2 Browse to the DVE directory, which should be located within your Video Toaster directory. (If not, check your Preferences setting.)
- 3 Select the DVE that you want.

- 4 Double-click the DVE icon to add it to the Switcher, or select the DVE and click on the **Open** button at the bottom left of the the File Bin.

You can also choose a group of DVEs by CTRL-clicking or SHIFT-clicking.

USING DVEs WITH THE SWITCHER

You must directly select a DVE to use it as a transition. (However if you use the Advance option, you need only select a DVE once.)

To use a DVE with Switcher controls

- 1 Select the DVE in the Effects bus.
- 2 Drag the T-bar with your mouse or hit **Auto**. The Switcher will use the DVE to switch between the Main bus and the Preview bus. You can also use the spacebar as a shortcut for the T-bar.



HINT

Clicking **Auto** while a transition runs will stop the effect in its current state. You can use this to make a split-screen, then use SHIFT-Auto or SHIFT-SPACEBAR to reverse out to your Main source.

DVE Speed

You can choose one of the **S-M-F** buttons with **Auto** to apply a default speed to a DVE. You just choose your speed first and click **Auto**. You can also change the speed while a DVE is playing. Just click on the new speed that you want.



Figure 7.12. The S-M-F buttons and the speed gauge, which sits above the S-M-F buttons.



Hint

You can hold SHIFT and click **Auto** while a DVE runs to force it to run in reverse. On the keyboard, SHIFT-SPACEBAR has the same effect.

Speed Gauge

The **Speed** gauge lets you finely adjust the speed of a DVE. Select the DVE and then place the mouse cursor over the **Speed** gauge.

- Drag the mouse to the right to increase speed
- Drag the mouse to the left to decrease speed

To use a DVE with the right mouse button

- 1 Right-click on the DVE in the Effects bus.
- 2 Choose your speed: select **Launch DVE (Slow)**, **Launch DVE (Medium)**, or **Launch DVE (Fast)**.

When you right-click on the DVE, you also see some other management options. You can cut, copy, or delete the DVE and you can remove it from the Effects bus.

Advancing DVEs

Choose the **Advance** option if you want to move automatically to the next DVE for switching. With **Advance** off, you stay with the DVE you manually selected. With **Advance** activated, the Switcher proceeds through all DVEs available in the Effects bus. The Switcher keeps progresses through the DVEs as long as **Advance** is active.

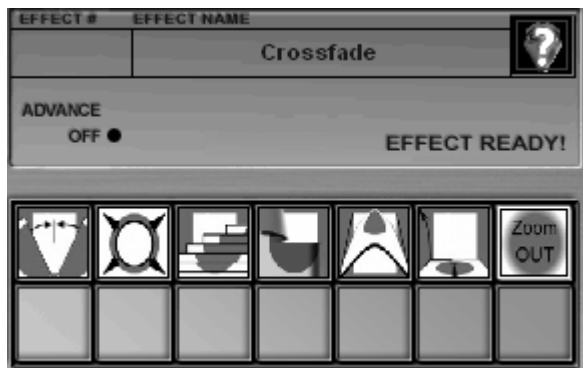


Figure 7.13. The Advance options sits above the Effects bus.



NOTE

For the Advance feature to work, you must specify the correct path to the DVE folder in the DVE Root Path in the Preferences panel. For example, if you move your DVEs to drive G, be sure the Root Path reads g:\DVEs\.

**HINT**

Remember that a DVE is available only if you've loaded it into the Effects bus.

DVE Shortcuts

DVE shortcuts let you launch a DVE and choose a speed at the same time. Use the following keys on your keyboard to launch a selected DVE:

Z: Use the DVE at S, or slow speed.

X: Use the DVE at M, or medium speed.

C: Use the DVE at F, or fast speed.

Hold the **SHIFT** key at the same time with any of the above keys and the DVE runs half as slow. Hold **ALT** and the DVE runs a third faster.

V: Use the last assigned variable speed to run the DVE.

SHIFT+V: Set the speed and then run the DVE.

For more information on DVEs see Chapter Twelve: DVEs and Appendix C: DVE Descriptions.

SWITCHER CONTEXT MENU

You open a context menu when you right-click on the Switcher. You see a different menu depending on whether you right-click on the Switcher busses or on an empty area of the Switcher interface.

INPUTS CONTEXT MENU

The list of options that appears when you right-click over a Switcher bus lets you load various sources or clear your inputs. The sources that you can load are categorized in the list—you can choose from computer-generated sources (e.g., Background Generator, Digital Disk Recorder) or Video Toaster Video sources (Composite, Component, S-Video, and SDI).



Figure 7.15. The context menu on the Switcher.

If you want to clear an input from a particular channel, you choose **Remove these inputs**. You must perform this action for every channel that you would like to clear.



HINT

Here's a quick way to clear a bunch of inputs on the Switcher: CTRL-click to select the inputs, drag them onto the desktop and then right-click on the desktop and choose Remove Icons.

PANEL CONTEXT MENU

The context menu for the Switcher panel lets you load and save panel configurations. This means that you can add sources to the Switcher and save those sources in a file that you can load later. The Switcher also saves all the processing amplifier settings for inputs connected to it when you save a panel configuration. Thus, when you load a Switcher configuration, you return all proc amp settings to those you defined when you set up the Switcher. For more information, see Chapter Eighteen: Processing Amplifier.

VIDEO TOASTER PANELS AND THE SWITCHER

All Video Toaster panels use tags for identification. When you save a panel configuration, you define the panel tag when you name it. Otherwise, Video Toaster labels the panel by assigning it a number. For example, if you opened more than one Digital Disk Recorder, Video Toaster would name those panels DDR1, DDR2, and so on.

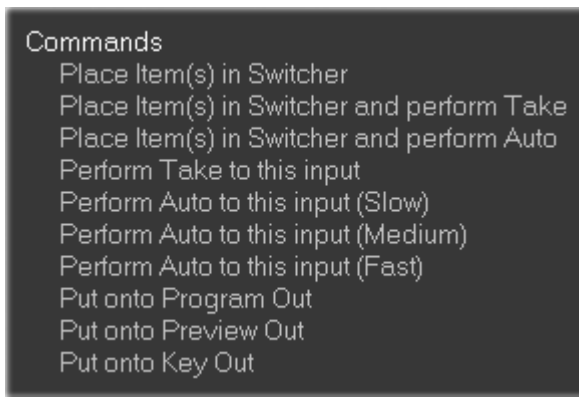


Figure 7.16. Switching actions available from panel tags.

You can right-click on the panel tag to instruct the Video Toaster to perform an action. When you right-click, a list of commands appears:

Place Item in Switcher: This action places the input in the next available channel on the Switcher.

Place Item in Switcher and perform Take: This action places the input in the next available channel and performs a cut from the current Main input.

Place Item in Switcher and perform Auto: This action places the input in the next available channel and performs a dissolve from the current Main input.

Perform Take to this input: This action performs a cut from the current Main input to your selection.

Perform Auto to this input (Slow): This action performs a slow dissolve from the current Main input to your selection.

Perform Auto to this input (Medium): This action performs a default dissolve from the current Main input to your selection.

Perform Auto to this input (Fast): This action performs a fast dissolve from the current Main input to your selection.

Put onto Main In: This action replaces the current Main input with your selection.

Put onto Preview Out: This action replaces the current Preview input with your selection.

Put onto Key Out: This action replaces the current Key input with your selection.

These commands are especially useful during live switching when you want to move quickly between inputs as you create them, and bypass the Switcher interface.

USING MULTIPLE CAMERAS

As stated earlier, you can see only two camera sources at one time while using the Switcher: the source on the Main bus and the source on the Preview bus. You can change the sources for Main and Preview, but you see only those two sources at any one time when you use the Switcher. You will not see the signal from your other cameras.

If you want to see the signal from more than two cameras, you can patch your cameras through a monitor before you connect them to the SX-8 breakout box. You can then use the monitors to preview cameras that are not chosen on the Preview or Main bus. To do this, you must attach the camera input to the monitor input and then feed the monitor output to the SX-8 breakout box.

LIVE SWITCHING

In live switching, you can broadcast and record an event and there's no need to edit later. You can incorporate several cameras, audio, titles, DVEs, and keying. You switch between your different sources and send a video signal for immediate broadcast or recording.

SWITCHER AND LIVE INTERNET STREAMING

Live streaming to the Internet gives you a worldwide audience for your content—you can broadcast lectures, presentations, and other events to millions of viewers on the Web, or you can stream preliminary footage for your client's approval across town or around the world.

You use the same inputs for Internet streaming as you do for any live switching: cameras, microphones, VTRs, Character Generator, and so on. The cameras and audio capture the video and sound that you want and feed it through the SX-8 breakout box. You switch and mix those elements in the Video Toaster and then encode the video and send it through Windows Media Player, or another encoder, to the Internet.

Remember that one of the major differences between broadcast and Internet streaming is quality. For Internet streaming, you can achieve only a certain measure of quality, namely 300K for consumer broadband such as DSL or cable modems. Consider this difference when you compress video for the Internet. For information and procedures on using the Video Toaster [2] for streaming media, see Appendix B: Streaming Media.

TASK: SWITCHER

This task introduces you to working with the Switcher. The following scenario is a basic arrangement for live switching. It uses only two cameras, a microphone, and the Digital Disk Recorder in Video Toaster. (Take out the microphone and it's even simpler, but then you'd have no sound from your guests.) For the sake of this example, we'll say that you're making a live talk show on a very tight budget.

Place cameras on the talent: one camera focused on the host and one camera on the guest. Place a microphone between your host and guest (or use lavalier microphones for each.) The third video input will be digitized from a video tape deck. Add these inputs to your SX-8 breakout box as explained in Chapter Two.

SET UP CAPTURE FROM THE SWITCHER

To record your switching, the Capture panel must be ready to go. This task covers a very basic set up. For more options, see Chapter Four. If you do not want to record your input, skip this task.

- 1 Click on **Capture** to open the Capture Panel.
- 2 Click on **Format** and choose the following options:
 - **NewTek RTV** for the Video Codec.
 - **NewTek RTV** for the Audio Codec.
 - **720 x 480i 29.97 fps** for format.



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- Now click on the **Options** tab and choose **Program Out** from the **Input** menu. You choose **Program Out** so that you capture transitions between sources.



- Click on the **Record** tab. At the bottom right of the screen, use the **Level** knob to adjust your audio volume.
- Enter a name in the **Filename** field and choose a location for your file by clicking on the drive where you want to store the file. We won't start recording until you get the Switcher ready, so keep this panel accessible.

ADD AND ORGANIZE INPUTS ON THE SWITCHER

A common use of the Switcher is to switch between live and taped sources as you record video. For this task, you will add your inputs to the Switcher and organize them for easy reference later.

- Add the two camera inputs and two microphones to the SX-8 breakout box.
- Click on Virtual BoB, Switcher, Digital Disk Recorder, Audio Mixer and ToasterVision to launch their respective panels.
- Select the Black Background for the Main bus on the Switcher.
- On the Virtual BoB, select the two camera inputs and add them to the Switcher. You can CTRL-click to select them as a group. First select the host camera, then the guest camera.
- On the Audio Mixer, the microphones automatically patch to the first two channels. Adjust the volume for these channels.
- Drag and drop the inputs onto the Switcher busses. The inputs are added in the order that you selected them, so the first input is added to the Preview bus, and the second is added to an available channel.
- On the DDR, load the MIAMINITE clip. Drag and drop the DDR tag onto the Switcher. Press the **Cue** button and keep this panel accessible.
- Let's color-code these inputs. Open the Color Picker and choose a red swatch.

- 8 Drag the red swatch onto the channel for the host camera. Do the same for the other inputs using a blue swatch for the guest input, and a yellow swatch for the DDR. We'll refer to these inputs by color from now on.
- 9 Now that everything is set up on the Sswitcher, go to the Capture panel and hit record to start recording. (Skip this step if you are not recording.)

SWITCH WITH AUTO, T-BAR, AND TAKE

- 1 Continue from the previous task. You should see only Black in ToasterVision.
- 2 Click the **Auto** button to dissolve from black to the Red Host input. The Red Host is now your **Main** source, and signal the host to begin speaking.
- 3 Click on **Preview** for the Blue Guest. The Blue Guest is now your Preview source. Yellow DDR waits on an available channel and now, so does Black.
- 4 Have the host introduce the guest, then click on **Take** to cut from the Red Host to the Blue Guest. You can then use **Take** to cut, **Auto** to fade or the T-bar to manually fade between the Blue Guest and the Red Host, as necessary.

SWITCHING AND DSK

- 1 Open the Character Generator and create separate titles for the host's name and the guest's name.
 - a. Choose **Text**, type in the host name.
 - b. Go to the Page tab, click **Add** to add a new page.
 - c. Return to the work area and type in the guest name.
 - d. Go the Page tab, choose the Host title, and click on the **Cue** button.
- 2 Your color-coded video sources and DVEs from the first tasks are still in the Switcher. Place the Red Host on the **Main** bus and the Yellow DDR on **Preview**.
- 3 Choose **CG** from the DSK menu.
- 4 Click **Fade** and the host's name appears on top of the Red Host input.
- 5 Hit the S key on your keyboard and you automatically cut to the Yellow DDR and deactivate the DSK.
- 6 In the Character Generator, choose the page for the guest's name, and click on **Cue**.

- 7 Place the Blue Guest on the **Preview** bus and hit the A key on your keyboard. You dissolve to the Blue Guest and at the same time fade up the DSK, now with the guest's name.
- 8 Hit the F key on your keyboard to fade off the guest name.

SWITCHING AND DVEs

- 1 Continue from the previous task. Place the Red Host should be on the **Main** bus and the Yellow VTR on **Preview**.
- 2 On the Effects Presets bus, double-click a channel to launch the File Bin.
- 3 Browse to the DVEs folder. It should be in the directory where Video Toaster was installed.
- 4 Choose the 2019_Curl from the 2000_Curls folder, and drag and drop it into the effects bus. Then choose the 4030_Zoom from the 4000_Fades folder, and drag and drop it into the effects bus.
- 5 Select the 2019_Curl DVE and click **Auto** to automatically fade from the Red Host to the Yellow DDR. You should see the DVE transition in ToasterVision. Because you activated **Cue** for the DDR, the DDR file began to play as soon as the transition finished.
- 6 After the DDR input has run for as long as you wish, select the 4030_Zoom DVE, click the **F** button and then click **Auto**. The Yellow DDR quickly transitions back to the Red Host using the DVE.
- 7 Click **Pause** on the DDR panel to pause the video clip. Click on **Cue** again.

ENDING WITH CG

- 1** Open the Character Generator and create a scrolling end page with credits. (For example, your lovely host and guest, you on camera, you editing, you for titles, and so on.)
 - a.** Create a new page and type in your credits.
 - b.** Under Direction, select **Scroll Up**. For Behavior, choose **Over**.
 - c.** Click on the **Cue** button.
- 2** When your host and guest are through talking, place the Character Generator on the Preview bus.
- 3** Click on **Take** to cut to the Character Generator and it should immediately start scrolling. Because you chose the **Over** behavior, the CG will stop on a blank frame.
- 4** Click **Stop** on the Capture panel to stop recording.

